# Knowing, Doing and Being: Transferable Competencies for the Research Management Profession

**Charmaine Williamson**
University of South Africa

**Karin Dyason**
Southern African Research and Innovation Management Association

**Abstract:** *This article focuses on the transferable (soft) skills articulated in a Research Management (RM) Professional Competency Framework (PCF). The Framework was developed, prior to COVID-19, from continentally anchored RM praxis in Africa. While the Southern African Research and Innovation Management Association (SARIMA) Framework (2016) includes nine key 'technical' competency areas for respective RM organizational levels (administrative, management and leadership), it is the RM transferable skills that have been brought to the forefront in the current complex COVID-19 environment. This article is therefore a timely focus on what RM practitioners offer as 'human-being' professionals and not only knowledgeable experts. The paper therefore contributes to novelty in terms of mindfully integrating the personal into the professional practice architectures, and, as such, reinforcing work-life integration based on what it means not only to "know" and "do" within a profession, but also to "be" a professional.*

Keywords: *Professional Competency Framework; Research Management and Administration (RMA); transferable (soft) skills; RMA praxis; Practice Architectures; COVID-19; sociomaterial praxis*

## Introduction

The debate should be settled in terms of whether research management and administration (RMA), a term recorded by Kerridge and Scott (2018, p. 2) and Viragh, Zsar, and Balazs (2019, p. 9), is an occupation or profession (Kirkland, 2005), and whether Research Managers and Administrators (RMAs) are professionals or practitioners. RMA does not lack the criteria required for a profession (Williamson et al., 2020), instead, its "visibility and recognition", as such, should be "formalized" (Viragh et al., 2019). What is therefore perhaps overdue, then, is to lay bare some of the praxis (practical application of know-how in the furtherance of action) of RMAs. As such, the study intends to provide a consciousness about how the RMA profession and professionals "act in the[ir] world, to practise, and to do" (Kemmis, 2010, p. 11), and expand on their work identities (Allen-Collinson, 2007). Given the proliferation of research, and the rapidly changing praxis and practices of research, precipitated by the COVID-19 pandemic (Dinis-Oliveira, 2020; Hedding et al., 2020), the people and systems of RMA are under pressure. There is a recent view that RMAs practicing the "fundamental research management principles

formulated in the past" might "no longer satisfy the changing research environment of today" (Viragh et al., 2019, p. 4). Noordegraaf (2020, p. 205-6; 219) has additionally recommended the "reconfiguration of professionalism." This is advocated through going beyond the technical qualities required by professionals, and exploring identity work (Allen-Collinson, 2007; Hockey & Allen-Collinson, 2009; Whitchurch, 2008; 2012; Shelley, 2010; Lintz, 2008). This article therefore advances the above-cited authors' work and delves into the domain of transferable skills that make up the identity of RMA professionals. Andersen et al. (2017) and Derrick et al. (2014), in their review of RMA competency models, also call for improved analysis of RMA frameworks. Additionally, in a systematic review on the role of RMAs (Derrick et al., 2014, p. 33-34), research gaps are highlighted, of which two motivate this study. First, they argue that a strong divide exists between the respective practice, alongside academic-based cultures in RM literature, which for RMAs might make them feel they exist in these parallel worlds—the importance is to bridge these worlds. In bridging these worlds, it would thus be useful to explore some of the less overt characteristics of successful research management (RM), such as the repertoire of soft competencies that achieve RM outcomes and impact in "evidence-informed research management practices" (Derrick et al., 2014, pp. 33-34). For the purposes of this article, and expanded on in the next paragraph, we coin the dimensions of these study gaps conceptually, specifically, as probing praxis as a sociomaterial expression (Hultin, 2019; Orlikowski, 2007), and broadly, how soft competencies populate RMAs praxis architectures.

Praxis, in this study draws from Kemmis (2010, p. 9) who melded views of Aristotle and Marx on praxis:

> Praxis has two principal meanings. According to the first, following the usage of Aristotle, praxis is 'action that is morally-committed, and oriented and informed by traditions in a field' (Kemmis, 2008, p. 4). According to the second, following the usage of Hegel and Marx, 'praxis' can be understood as 'history-making action.'

For RMA, we contend that praxis, therefore, is activity-based development that through both routine actions and reflection shapes a 'change-making' enactment of the RMA profession better to perform its role in a dynamic world. Praxis occurs in a sociomaterial world (Hultin, 2019; Orlikowski, 2007). The remit of sociomaterial, for this study, is adapted and appropriated from Hultin (2019) and refers to the inter-relationships between the social-human dimensions of a professional, and then the university which, from this viewpoint, is an academic and physical/material institution. The specific praxes we analyze are the transferable or soft skills (used interchangeably) that are advised for RMAs' competencies. Andersen, too, has made a recent contribution on 'Transferable Skills' (Andersen, 2017, p. 319-329; 320). In a book chapter, he reflects on RMAs who are often caught between a "rock and a hard place": the 'hard' material world of academia alongside the 'rock' of administration. He shows how RMAs adapt along the continuums of formal and informal power bases, drawing on their proficiencies to navigate such intersecting, and oftentimes, diverse worlds. In navigating these interstices and contradictions, RMAs employ a repertoire of 'soft/transferable' characteristics and skills, and therefore research should highlight the value of codifying these intangible assets such as we intend in the PCF and the article.

This article follows Jakkola's (2020) distinctions around conceptual, as opposed to empirical, articles, to attempt "theory adaptation". The "domain theory" is thus praxis (Kemmis, 2010, p. 9), where we revisit the extant praxis architecture of Kemmis to "provide an alternative frame of reference to adjust or expand [praxis architecture's] conceptual scope" (Jakkola, 2020, p. 23). Our intention is to translate Kemmis' model (See Figure 3) into a new field, RM as well as to highlight how RMAs may believe in the importance of what they personally bring to their work, in terms of transferable competencies, as system-changing praxis (See Table 2 as well as Figure 4).

The study, therefore, follows "praxis-related research" which Kemmis (2010, p. 17) indicates is "research nearer" to the discipline or profession's praxis, as per the Swedish conception of "praxis-close research". Kemmis (2010, p. 17), referencing a paper by Mattsson and Kemmis (2007), indicates that praxis-related research intends to problematize the traditions or patterns of a discipline, and, through practical interrogation, empower the disciplinary community through communication, solidarity, and reflection to advance that discipline. As such, there is potential or impetus for changes in accepted praxis. Kemmis is echoed by Jakkola (2020, p. 23) who states that theory-adapting papers should problematize "a particular theory or concept" in order to expand the application of that theory for different disciplinary communities to achieve theoretical and practical value. Kemmis (2010, p. 17; 21) nuances the argument further by stating that 'traditional' research develops knowledge and theory "about praxis rather than in praxis". Research done by those within the praxis is thus different from conventional research, based on their unique insider insights and their "collective care" inculcated by that very closeness to their praxis.

As a research aim, the study takes the form of a conceptual mapping of the 'insider' views of transferable skills included in a competency framework for RMA professionals (SARIMA, 2016) against an existing praxis framework (Kemmis, 2008, p. 21). We inquire into these soft skills, following praxis-related research (Kemmis, 2010), which is explained more fully in subsequent sections. Praxis-related research is used as both a methodology and theory for this exploration. While transferable skills have been conceptualized for different professions and for RMA, as provided by Derrick et al. (2014, p. 33-34), a review that makes specific philosophical-praxis linkages has not been covered to date. The article also contributes to praxis-related research within a specific profession, and its professionals (Derrick et al., 2014, p. 33-34), as opposed to a discipline (Kemmis, 2010).

## The SARIMA RMA Framework

The study focusses on transferable skills of the Southern African Research and Innovation Management Association (SARIMA) Professional Competency Framework (PCF) (2016). The PCF emanated from a credible RMA Association (Kirkland, 2005, p. 65) that investigated RM dispositions, engagements and activities and then systematized the findings. The PCF followed a project cycle that included: a needs analysis, consultation with RMA professionals, action research methodologies, quality assurance, reporting, peer review and accountability to governance structures. Williamson et al. (2020) covered the rationale for, and development of, the framework. Their article also explains the contents of the framework and makes the case for its role in scaling up the professionalization of RMA. With hindsight, we propose that the research

informing the PCF was praxis-close in that the professionals drove it themselves, through action research, and has contributed to developing a spirit of inquiry as well as creating system changes to modes of praxis (See Annex B for the methodology for the development of the framework, drawn from Williamson et al., 2020). This article will not cover that ground again.

The PCF covers 1) key (substantive knowledge and performance areas of RMAs), and 2) transferable (cross cutting) competencies. The latter are further identified as "soft/interpersonal skills" (SARIMA, 2016). The framework identifies three levels of RMA: 1) leadership/strategic; 2) management; 3) administrative/operational. For each of these levels, key, and transferable competencies (cross cutting, soft skills) are provided in distinct detail. In addition to differentiating the competencies for each level, the PCF also provides a composite list of transferable skills that are assumed to be practiced at all three the levels (See Annex A). The Williamson et al. (2020) article includes a stronger focus on the nine key competencies. Their article, however, does not cover the second dimension of the framework, the transferable skills in any detail. Yet, Matteson et al. (2016, p. 71) emphasize the importance of attending to such skills in understanding people at work and in professions. They highlight those transferable skills often fall into "fuzzy" or "murky" formulations. It is therefore important to clarify this domain of competencies. Matteson et al.'s work (2016) explains the meaning of "soft skills", and how it is a struggle to fit these skills into typologies and taxonomies (such as frameworks), notwithstanding that there might be a commonly 'agreed-to' list and documented evidence of such skills. They conclude that there are apertures in intellectually grasping these skills, how they contribute alongside the more technical skills, and, discerningly, what are their meanings and impact. This means that it is a struggle to attain their recognition, standing and traction in workplaces. Therefore, from a professionalization perspective, RMA soft skills do need to be tabled and debated in the repository of knowledge related to RMA. We therefore recognize their inclusion in the SARIMA PCF and hone in, conceptually, on these very skills.

Given the limitations of space for this article, we have focused on the composite list of skills in the SARIMA PCF and not the skills at the various levels of RMA. See Figure 1 which includes the numbering of the skills for ease of reference (For the expanded explanations of the skills, See Annex A).


*Figure 1.* Transferable/Cross Cutting Competencies Across All Levels of RMA

Lester (2005) indicates the importance of practical frameworks within research and disciplines as presenting the accumulations of practice-based knowledge, drawn from lay and academic sources. These models, however, he claims, should also be complemented by conceptual frameworks so that the practice-based work is framed for external role-players and macro perspectives. In the furtherance of this idea, the conceptual framework for the study therefore is hereto shown and explained.

## Literature Review and Conceptual Framework for the Study

The conceptual framework folds into the review of relevant literature (below) as well as being a 'softly-constructed' depiction of the relationships of justification and motivation for the study (Lester, 2005, p. 460). Some central concepts of Figure 2 have already been introduced above, with Figure 2 additionally providing a bird's eye orienting view. The review of the literature of the conceptual framework follows, excluding the section on praxis-related research which is covered in the methodology segment

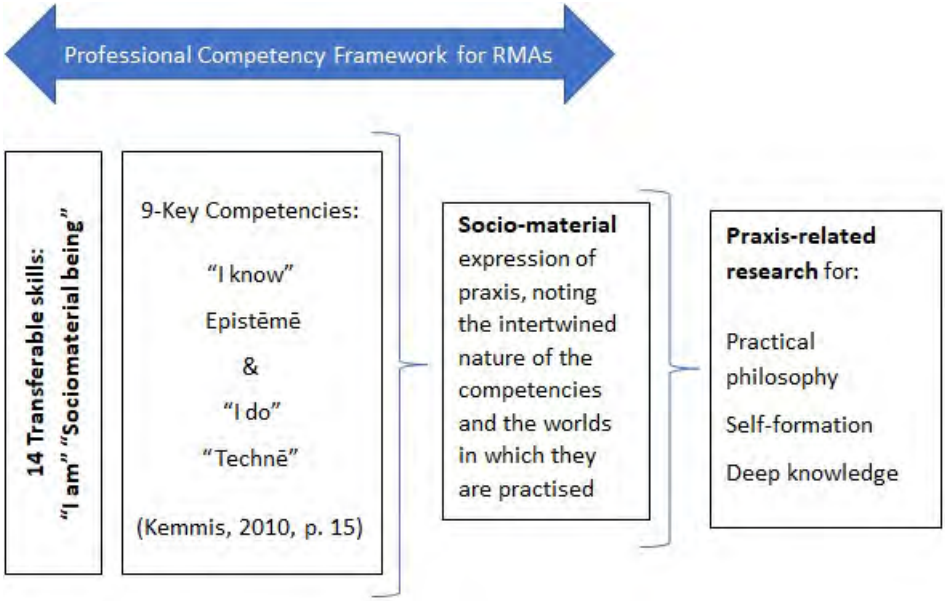


*Figure 2.* Conceptual Framework Informing the Study

## Review of Frameworks and Professional Competency Frameworks

Frameworks, it is posited, place RMA in managerial and "quasi-market" actions (Shelley, 2010) with research integrally linked to productive forces of capital, therefore making it necessary to examine the philosophies behind RMA praxis. Frameworks are also linked to social innovations and their successes (Williamson & Shuttleworth, 2021; Olsson & Meek, 2013).

As was established by Williamson et al. (2020, p. 64), both the Associations that develop frameworks and the frameworks themselves formalize professionalization and provide a departure from RMA as an occupation. They show how documenting elements of a profession as well as making competencies explicit, gives agency and definition to a profession (Williamson et al., 2020, p. 51). The PCF was confirmed as responding thus to membership and broader stakeholder needs. The SARIMA PCF took its place alongside other RMA frameworks (See Table 1 as sample), thus complementing the architecture that guides RMAs in specific contexts (See SARIMA's claim for [Southern] African dynamics), as well as the profession, globally. SARIMA thus set out to develop a framework that was "regionally relevant as well as globally applicable" (Williamson et al., 2020, p. 53; 64), and, as such,

> ...embolden[ed] the agenda of research management... [through] 1) providing a defined professional and practical competency framework as well as 2) tracing the meta narrative of the project to build the bodies of knowledge on professionalization [and the] methodology of framework development.

*Table 1.* Purposive Sample of RMA/related frameworks

| **Sample of Organizations** | **Name** | **Differentiated technical and soft competencies named as:** | |
|---|---|---|---|
| SARIMA | Professional Competency Framework | Key | Transferable/crosscutting |
| Association of Research Managers and Administrators (ARMA) | Professional Development Framework | Functions | Indicative skills<br>Underpinning knowledge<br>Examples of behaviors which underpin effective performance |
| European Association of Research Managers and Administrators (EARMA) | Professional Development scheme (follows ARMA) | Functions | Indicative skills |
| Society of Research Administrators International | Programs/Courses | Integrated: Micro-credentialing on programs and courses | |
| TDR, the Special Programme for Research and Training in Tropical Diseases ESSENCE on Health Research | Various toolkits and manuals | Integrated | |
| VITAE | Researcher Development Framework | Integrated: Domains and sub-domains that integrate 'technical' and 'soft' competencies | |
| National Council of University Research Administrators (NCURA) | National Standards for an Effective Research Compliance Program; Unit-Level Standards for Effective Sponsored Program Operations: Research Unit/School/College Focus; and Central-Level Standards for Effective Research Administration | Standards: The standards are differentiated per National, Central and Unit levels.<br>Technical and soft competencies are integrated into the different standards | |

The SARIMA Handbook for RMA (Johnson et al., 2017/2018, p. 19) covers a range of frameworks and/or professional standards to enable RMA. In terms of SARIMA's own PCF, the Handbook recommends that "stakeholder organizations and individuals may use the PCF to help them assess skills levels, write job descriptions, plan professional development and career paths, benchmark practices, design organizational training interventions, ensure considered succession planning, and guide individual professional development". Derrick et al. (2014), in a comprehensive systematic review that covers 98 articles, note that frameworks provide a basis for strategy, monitoring and evaluation towards research and RMA success. Green and Langley (2009, Section 4.13), in a seminal commissioned study on RMA frameworks, report on the intentions of developing RMA frameworks, as well as on the lack of standardization of RMA frameworks. They conclude that there is "appetite for... a... comprehensive framework... that engages with current providers and senior staff... to develop good practice, greater consistency and a network of Research Management professionals". Yet, they assert that the substance of frameworks is "less obvious," as this article explores in depth, specifically, in terms of the intangible skills. Furthermore, through our viewing frameworks as sociomaterial, the work of Hockey and Allen-Collinson (2009) is pivotal. They reflect on the ingenuity of RMAs' informal and tacit knowledge, and practices, which are used alongside the formal, technical job descriptions. Their work states that it is the soft skills (and characteristics) that are critical for success, yet these are often overlooked, when people see the task performances of RMAs

## Review of Transferable Competencies and Deep Knowledge as Sociomaterial Expressions of Praxis

Somewhat divergently, but with a strong invocation to "stay in sync with the pulse of our time," Macher et al. (2019, p. 151) focus on a transferable skills competence framework in the automotive industry. COVID-19 has profoundly underlined the necessity for society to remain relevant and 'in sync' with turbulent times (Lund et al., 2021). In noting the need to remain current, and how soft skills might be a vehicle for relevance, we therefore review briefly how transferable skills (noting the interchangeable naming) are seen as central to the RMA profession. To this end, however, we note the implications of COVID-19, but do not focus specifically thereon.

Andersen (2017, p. 320) indicates that transferable skills acumen goes beyond the technical proficiency of RMA. Aside from interpersonal communication and presentation abilities, he highlights "diplomacy, team-working, a good sense of humor and self-insight." Transferable skills enable RMAs to be versed in the complexities of their work environments, and, he argues, are strongly needed for ambiguous, in-between spaces, as well as along the task continuum of formal and informal dynamics that are inherent in the profession. UNICEF (2019, p. ix; 1) defines transferable skills interchangeably "as life skills, 21st century skills, soft skills, or socio-emotional skills" which enable people "to navigate personal, academic, social, and economic challenges; [they] include problem solving, negotiation, managing emotions, empathy, and communication". Notwithstanding the practice, UNICEF (2019, p. ix) does opine such skills are the "magic glue" that connects skilled people systemically to other skills. Additionally, the World Economic Forum (2020) covers the top ten skills needed for workers by 2025, all of which are higher order thinking and soft skills, such as those found in the SARIMA PCF for RMAs.

Authors such as Whitchurch, 2012; Williamson et al., 2020; Viragh et al., 2019; Andersen et al, 2017; Kerridge and Scott, 2018; Cloete et al., 2015; Campo, 2014; Deng et al., 2014; Derrick et al., 2014; Hockey and Allen-Collinson, 2009 respectively cover specific and convening views that argue that the quality and essence of professionalism is compromised without a substantive employment of a range of interpersonal attributes including those in leadership roles of RMA (Campo, 2014). The central message is that such skills are paramount for survival, to the success of academic endeavors as well as being energized and committed to the work at hand. In this light, transferable skills have been taken up in summative terms such as "broker"; "diplomacy"; to "mirror and match" stakeholders (Andersen et al., 2017, p. 330); "third space" professionals (Whitchurch, 2008, p. 378; 2012); "invisible intermediaries" (Derrick et al., 2014, p. 11), and in creative 'elastic' (Williamson et al., 2020) and "balancing" roles (Lintz, 2008, p. 78). In his book for RM leaders, Johnson (2013) details that RMAs often must use the skills of corporate executives, while also being exacting bureaucrats. Over and above these two demanding yet opposite roles, RMAs are also expected to be academically inclined and produce publishable research. Skills are even placed on par with being a prophetic Odyssean mentor (Mullen, 2009). On a more applied level, these vivid demands lead to a consideration that transferable skills may equate to having "deep expertise" (Ramachandran, 2010, p. 27; 34). Deep expertise is developed through deliberate practice which evolves over time and stages (likened to the medieval apprentice-to-mastery model) and hones specialization. Yet, it also specifically exceeds specialization and skills to "encompass behaviors, experiences, connections and [powerful] networks" (Ramachandran, 2010, p. 27; 34).

The practicing, and robust existence of transferable skills within frameworks for professions and RMA, points to sociomaterial praxis. Sociomateriality includes "the intimate entanglement of non-human and human elements in the construction of sociomaterial realities" (Hultin, 2019, p. 23) with "practices of knowing and being" as inseparable (Barad, 2007, p. 185). Therefore, knowing, doing and being, within a university system, are all mutually constitutive in living out the role of an RMA professional. Kemmis (2010), referencing Aristotle, and critiquing Flyvbjerg, highlights how knowledge and practice may be shaped by epistēmē ('we know': knowledge based on theory or contemplation) and techniquē ('we do': practical doing, technical craft). We state that transferable skills ('we are': interpersonal relational skills) are the sociomaterial expression of praxis, noting the intertwined nature of the socio-based competencies and the material worlds in which they are practiced.

## Methods: Praxis-Related Research

The research is framed in the paradigm of praxis-related/close research which attempts to bridge the theory-practice divide. Such research straddles and encompasses praxis and research as concepts. The mode is to do action research intricately endogenous to the practice community which informs it. It intends to both draw on everyday life, while also informing everyday life with universal principles. As such, it allows academic and practitioners to enter one another's "province of meaning." There is a "praxis-knowledge" that is co-created with theoretical knowledge and which extends both into transformative outcomes (Mattsson & Kemmis, 2007, p. 5; 10).

The methodology for the development of the PCF including the transferable skills is provided in full in Williamson et al., 2020 (see also Annex B). This current paper clearly draws on the outcomes of the action (praxis-close) research used for the PCF's development. Where we do diverge from this afore-cited paper, method-wise, is the new focus on the transferable skills and mapping those skills upon Kemmis' (2008, p. 21) practice architectures, as reproduced (with permission) below.

*The Dialectic (Mutual Constitution) of Action/Praxis and Practice Architectures*

| Action and praxis | Dimension/medium | Practice architectures (mediating preconditions) |
|---|---|---|
| "Sayings" (and thinking) | The cultural-discursive dimension (in the medium of language) | Cultural-discursive structures, practices and relationships |
| "Doings" (and 'set-ups') | The material-economic dimension (in the medium of work) | Material-economic structures, practices and relationships |
| "Relatings" | The social-political dimension (in the medium of power) | Social-political structures, practices and relationships |

Kemmis, 2008, p. 21: Used with permission

*Figure 3.* The Dialectic of Action/Praxis and Practice Architectures (used with permission)

## Findings

We reviewed the numbered transferable competencies (See Figure 1: 1-14) in relation to the theory of practice architectures advanced by Kemmis (2008, p. 21). Given the intertwined conceptualization of this study, we advance that all competencies apply to all of Kemmis' dimensions (See Figure 3, specifically, column 2). We conclude this from working within the connotative meanings of all the competencies. The competencies are interrelated in a complex system of what and who make up RMAs, as human, and as engaging in a sociomaterial world.

Yet also, interpretively, we 'stick out our necks' to rationalize the competencies around definitiveness or primacy of the respective competence, based on the full wording as denotatively most applicable to the respective three existing dimensions of Kemmis' theory (2008, p. 21). We provide an additional fourth dimension as postulated through our conceptual analysis. We link the specific competency to the now-four dimensions, through using the bold numbers. We also offer, in line with praxis-close research, a synoptic explanatory narrative in terms of our inferences.

*Table 2.* How the Transferable Competencies Integrate with Kemmis (2008) Practice Architecture with the Additional Dimension of 'Being' Included

| **No.** | **"Action and Praxis" drawn from Practice architectures 1-3 (Kemmis, 2008, p. 21)** | **Dimension and Medium (Kemmis, 2008, p. 21, column 2)** | **Transferable competencies (SARIMA, 2016)** | **Explanatory narrative** |
|---|---|---|---|---|
| 1 | Sayings (language) | The cultural-discursive dimension (in the medium of language) | All and with **primacy of 1 and 6** | Interactive communication clearly aligns to sayings; with negotiating, valuing diversity, and teamwork and collaboration also being strongly reliant on cultural-discursive dimensions |
| 2 | Doings (work) with inclusion of sociomaterial elements | The material-economic dimension (in the medium of work) | All and with primacy of **5; 6; 7; 10; 12; 13; 14** | This dimension, in its action orientation and work ethic, would prioritize a number of primary competencies |
| 3 | Relatings (power) | The social-political dimension (in the medium of power) | **All** and with primacy of **2; 3; 9** | If we follow the emancipatory premise that 'power' underpins all dimensions, then All in bold makes sense, together with specific consideration of how power mediates negotiations and diversity issues |
| **Novel contribution: Additional dimension of "being" included to extend the conceptualization of Kemmis (2008, p. 21)** | | | | |
| 4 | Being (sociomaterial) (Additional to Kemmis, 2008, p. 21: Practice Architecture) | "Practices of knowing and being" as inseparable (Barad, 2007, p. 185); & Interrelated competencies constituting a complex human and sociomaterial system | **All** and with primacy of **4; 8; 11** | If we follow the premise that 'being' cuts across all the dimensions, then All in bold makes sense, together with specific consideration of how personal effectiveness, attention to detail and adaptability refer acutely to the state of being of a professional |

## Discussion

Based on managerialist framework-thinking (Shelley, 2010), there is the potential to review the competencies within a framework adopting a technical orientation. This could entail offering commentary on the actual competencies selected and included their suitability for the job at hand, and speculations on how they are applied in practice. This is not the intention of the current review. The praxis-related research methodology already asserts the substantive credibility of the contents, suitability, and application in practice. Williamson et al., (2020, p. 64) indicate thereto that a "bold process of self-determination" for RMAs included "expert views… purposively sampled. The voices of the participants are translated into the text of the PCF. [As such it is a] consultative framework that may be used with ease." Therefore, the article does not challenge whether RMAs have these transferable skills, but contends that, given that RMAs themselves have identified and included these skills, that they deeply know that they use all, or some of these abilities, in the outcomes of their profession. RMAs therefore provide 'insider' praxis, as argued in this article. Independently, Andersen (2017, p. 319-332) and Viragh et al. (2019, p. 30) confirm the relevance of all these competencies.

The study sought instead to probe into philosophy of practice of RMA, moving beyond the technical knowledge and craft (nine key competencies) and into interpersonal attributes (transferable, cross cutting competencies) of what makes RMAs as 'human-being' professionals and not rooted, simply, in literal functionary roles, within their expertise. In doing RMA, therefore, the professional is a 'saying-being,' adaptively communicating within discursive-cultural contexts that include different media, active listening and engaging open, cross-functional communication using appropriate channels. Additionally, RMAs intricately interpret, and are "into play in the doing" (Kemmis, 2010, p. 25) of social-political dimensions, as 'relating-beings'. On a day-to-day level, RMAs lead, as well as manage or administer around the nine key competency areas. Additionally, RMAs prevent or resolve conflicts; "do" politics; and explore alternatives to negotiate outcomes with diverse parties. Daily work includes strategic and operational material-economic outputs, outcomes, and impact. As such, RMAs practice research stewardship for productive relationships within the goals and systems of their respective organizations. They are aware of, and work within, inter- and intra-organizational relationships. Inclusive to these workings is the accountable, discreet, and sound management of resources. In doing so, the RMAs work, as individuals or, collaboratively, within teams, within a planning and organizing framework. Their work involves technological acumen and a nurturing of innovation, both for the research that they support and within the performance of their dedicated functions. They are 'doing-beings.'

These dimensions are integrated into a complex system of human and sociomaterial dynamics as RMAs are 'being-beings.' Specifically, they show personal effectiveness and resilience and achieve RMA through attention to detail, while also remaining open to being adaptable. This has specifically been shown in the current environment of COVID-19 that has entailed dramatic paradigm-altered work contexts. While we have noted that this article is not targeted specifically at a COVID-19 focus, proximate media such as blogs and organizational reports did reflect on how human adaptivity was pushed to the limit. From a positive perspective, challenges were

reframed as resilience and adaptability including the notion of re-creating or re-generating. The Society of Research Administrators International specifically reflected on how value-driven work took center stage, with people drawing on deeper value systems to render services. RMAs not only anchored value principles to fulfil their work, but also had to make difficult decisions about which services could still be provided, the degree of services and who could provide them to whom. These decisions brought change management to the level of daily struggles and clearly drew on human ecological skills beyond the technical application of such skills, in both routine and crisis circumstances (Zink, 2021a; b). The application of their skills amounts to deep expertise (Ramachandran, 2010, p. 27; 34). While the above rendition might appear to present the RMA professional as a 'super-being', self- reporting would indicate that these competencies are a combination of realized as well as aspirational reality (Viragh et al., 2019). The competencies also do confirm Kemmis's (2008) theory of practice architectures that includes culture, politics, and economics in a discursive, social, and material world.

The most critical finding relates to muddling the neat and linear conceptual framework to show that RMA displays "messy" (Williamson et al., 2020, p. 54), "hybrid" (Noordegraaf, 2020, p. 205-6; 219) and inter-connected ways of professing and being. As such, the conceptual framework has thus been updated to show the broader systemic manifestation of RMAs knowing, doing and being in the fulfilment of their profession.


*Figure 4.* The Conceptual Contribution of the Current Study as a Re-Worked Conceptual Framework

Figure 4 sums up the contribution of the article. It shows cascading personal and professional identity propelling both inward to the individual and outward to broader forces. At the core, are the subjective attributes of the persona, who enters the field with the ability to be or become the RMA professional, envisaged in the PCF's transferable competencies. Through a process of socialization (practice architecture), experience, training, and education/qualification, the RMA professional additionally acquires the nine key competencies, which enable the person to know and do, alongside living out their transferable skills to perform their complex work successfully. Their composite work creates foundations for system changes akin to history-making paradigm shifts. RMAs, providing services in support of the vision of others, namely academia, perhaps seldom see their agency in bringing about grander scale change. Following Jakkola (2020, p. 23), we therefore have used "theory adaptation", addressing an extant grand theoretical term such as 'praxis' and its architecture (Kemmis, 2010), to illustrate how RMAs' transferable competencies indeed set up service-oriented cascading ripples for research that does change the world (See Figure 4).

We posit that RMAs may, through the Framework and this study, become more conscious of the weight and significance of their transferable skills and therefore develop these more deliberately and/or use them with enhanced insight, knowing that soft skills are as much a part of their jobs as are their knowledge and expertise. They may usefully review the transferable skills in the SARIMA PCF and use the list to assist them to plan for their professional development, deliberately to demonstrate their solid value and worth to the university, to populate job specifications and CVs as well as to argue, if necessary, for deepened insights into why they hold a credible place within the organizational structure. Their stakeholders may also usefully recognize the same as they receive the RMA services and are recipients of RMA outcomes and impact.

## Limitations and Recommendations

In working referentially (using the previous paper which reported on the SARIMA PCF) and conceptually, the research team lay themselves open to empirical challenges that require a more grounded approach to explore or 'test' the assumptions and claims made in the article. There is room for research projects that engage with RMAs directly in terms of their current and anticipated articulations of the transferable skills in their respective and current/future COVID-19 contexts. Some skills might even be seen as redundant. A conceptual study prompts thought and reflection, yet also prompts a petition for actual, 'hard' cases obtained through qualitative, quantitative, and mixed methods research. Furthermore, while the study describes different soft skills frameworks, there is no direct comparison in terms of their contents or underpinning philosophies. Comparative studies of this nature would provide valuable benchmarking evidence for the profession. In addition to the skills that apply across all competences as SARIMA posited in the PCF and contained within this article, is the differentiated application of different competencies to various levels of RMA. The description of the various levels of RMA (leader, manager, administrator), exists in a variety of the frameworks described in Table 1. Additional studies may build on this descriptive base to extend the work of the organizational responsibilities of professionals within their institutions. There is also ample impetus to compare the transferable

competencies across a range of different professions and their respective frameworks. As often noted, different conceptual frameworks provide different lenses and there is a plethora of theories in relation to competency frameworks that would add to the body of knowledge.

## Conclusion

This study has provided a contribution to transferable skills in the RMA profession in terms of exploring these skills in relation to "practice architecture" (Kemmis, 2008, p. 21), which included a sociomaterial lens. It has therefore explored early and modest insights as to how skills may be viewed through change-making traditions inclusive of mindfulness of how culture, discourses, economics, materiality, politics, and the social are integrated into daily and strategic work. Furthermore, it reminds the profession not to atomize the work of a professional when confronted with competency frameworks, and to position and enact their work through deliberately considering fluid, complex, sociomaterial interpretations of the world of work. It has extended the work of Kemmis (2008; 2010) through including, within praxis-related and practical philosophy research, the notion of "being", alongside "saying" and "relating" (Kemmis, 2008, p. 21) as well as the "knowing" and "doing" (Figure 2; Kemmis, 2010) in disciplines and professions.

The study was predicated by two areas of recommendation for future research which it has addressed in terms of practical philosophy. The first was how to ensure academic studies provide pragmatic evidence from the professionals themselves as co-contributors to the knowledge base. Transferable skills data drew exclusively from the action research project that formulated the PCF. We extend the knowledge base of transferable skills through fully incorporating that data in this paper. The second was to probe attributes of RMA teams and individuals so that the contours of professionalization are expanded. We therefore build on Andersen's (2017) work to bolster not the kinds of transferable skills that are present or needed, but to argue for their complex interplays within the system of RMA. These skills extend professionalization in terms of rupturing the technical-epistemological surfaces of professionalization frameworks to suggest deep knowledge that also comes from a state of being in a sociomaterial world.

At the time of this study, the SARIMA PCF has been several years in the making, fielded six years of existence (2016-2021), and now encounters a world that has irrevocably changed in terms of the competencies required for RMA. While there is always room to learn and adapt, the PCF provides a viable basis for consolidating the gains of the profession while providing spaces for re-imagining RMAs, and their being, within the ever-present and contradictory churns of traditional and historical forces.

## Authors' Note

SARIMA acknowledges with appreciation the financial support from the Department of Science and Innovation, South Africa; Special Programme for Research and Training in Tropical Diseases (TDR) hosted at the World Health Organization (WHO) and co-sponsored by the United Nations Children's Fund (UNICEF), the United Nations Development Program (UNDP), the

World Bank and WHO; and ESSENCE on Health Research initiative in the development of the PCF-RMA. We also acknowledge support from the TDR/WHO in the preparation of this article (Project P20-00003).

SARIMA and the authors are especially grateful to the following persons: We thank Professor Stephen Kemmis, upon whose work we have drawn, and who read our draft article to provide prompt, valuable guidance, and suggestions, in relation to our ideas.

Internal reviewers who provided constructive comments and recommendations are Dr Garry Aslanyan, Manager of Partnerships, TDR/WHO and ESSENCE on Health Research Coordinator; Dr Kimberly Cornfield, Head of European Research and Innovation, University College London, United Kingdom; and Dr Deborah Farmer, Head: Science Office, Africa Health Research Institute (AHRI), South Africa.

Members of the Reference Group who provided comments on the manuscript are Dr Awie Vlok (Business Management, Stellenbosch University, South Africa); Dr Changu Batisani (Research Coordinator, Botswana Open University, Botswana); Dembo Kanthe (West Africa Platform Coordinator, MRC Unit at The Gambia at London School of Hygiene and Tropical Medicine, The Gambia and Assistant Secretary General of the West African Research and Innovation Management Association); and Takatso Semenya (Director of Research, Sol Plaatje University, South Africa).

**Charmaine Williamson**
Department of Financial Accounting, College of Accounting Sciences, University of South Africa
P O Box 392, Pretoria, 0003, South Africa
+27 (0) 82 448 1195
charmwilliam@gmail.com

**Karin Dyason***
Southern African Research and Innovation Management Association
PostNet Suite 310, Private Bag X25, Lynnwood Ridge, Pretoria, 0040, South Africa
+27 (0) 82 820 3500
karin@sarima.co.za

Correspondence concerning this article should be addressed to Karin Dyason, Dr, Southern African Research and Innovation Management Association, PostNet Suite 310, Private Bag X25, Lynnwood Ridge, Pretoria, 0040, South Africa, +27 (0) 82 820 3500, karin@sarima.co.za

## References

Allen-Collinson, J. (2007). Get yourself some nice, neat, matching box files! - Research administrators and occupational identity work. *Studies in Higher Education, 32*(3), 295–309. https://doi.org/10.1080/03075070701346832

Andersen, J. (2017). Transferable skills. In Andersen, J., Toom, K., Poli, S. and Miller, P. F. *Research management: Europe and beyond* (pp. 319-332). London, UK: Academic Press.

Andersen, J., Toom, K., Poli, S., & Miller, P. F. (2017). *Research management: Europe and beyond*. London, UK: Academic Press.

Barad, K. (2007). *Meeting the universe halfway: Quantum physics and the entanglement of matter and meaning*. Durham: Duke University Press.

Campo, M. A. (2014). Leadership and research administration. *Research Management Review, 20*(1), 1-6. Retrieved February 25, 2021 from https://www.ncura.edu/Publications/ResearchManagementReview/Archives.aspx

Cloete, N., Maassen, P., & Bailey, T. (Eds.). (2015). *Knowledge production: Contradictory functions in African higher education*. Cape Town: African Minds.

Deng, L., Thomas, A., & Trembach, S. (2014). Shaping the 21st-century information professional: A convergence of technical and "soft" skills for workplace success. *Proceedings of the American Society for Information Science and Technology, 51*(1), 1-4. https://doi.org/10.1002/meet.2014.14505101128

Derrick, G., Nickson, A., & Hons, M. (2014). Invisible intermediaries: A systematic review into the role of research management in university and institutional research processes. *The Journal of Research Administration, 45*(2), 11–45. https://www.srainternational.org/HigherLogic/System/DownloadDocumentFile.ashx?DocumentFileKey=7291be3d-e8f6-c499-012c-871f8d9888a2&forceDialog=0

Dinis-Oliveira, R. J. (2020). COVID-19 research: Pandemic versus "paperdemic", integrity, values and risks of the "speed science". *Forensic Sciences Research, 5*(2), 174-187. https://doi.org/10.1080/20961790.2020.1767754

Green, J., & Langley, D. (2009). *Professionalising research management*. London, UK: Higher Education Funding Council for England (HEFCE). Retrieved March 1, 2021 from https://snowballmetrics.com/wp-content/uploads/2009-professionalising-research-management-2.pdf

Hedding, D. W., Greve, M., Breetzke, G. D., Nel, W., & Van Vuuren, B. J. (2020). COVID-19 and the academe in South Africa: Not business as usual. South African *Journal of Science, 116*(7-8), 1-3. https://doi.org/10.17159/sajs.2020/8298

Hockey, J., & Allen-Collinson, J. (2009). Occupational knowledge and practice amongst UK university research administrators. *Higher Education Quarterly, 63*(2), 141–59. https://doi.org/10.1111/j.1468-2273.2008.00409.x

Hultin, L. (2019). On becoming a sociomaterial researcher: Exploring epistemological practices grounded in a relational, performative ontology. *Information and Organization, 29*(2), 91–104. https://doi.org/10.1016/j.infoandorg.2019.04.004

Jaakkola, E. (2020). Designing conceptual articles: Four approaches. *Academy of Marketing Science Review, 10*, 18-26. https://doi.org/10.1007/s13162-020-00161-0

Johnson, A. M. (2013). *Improving your research management: A guide for senior university research managers*. The Netherlands: Elsevier.

Johnson, B., Williamson, C. W., & Drennan, R. (2017/2018). *A handbook for Southern African research management offices*. Pretoria, South Africa: Southern African Research and Innovation Management Association. Retrieved March 1, 2021 from https://www.sarima.co.za/resources/research-management/#07

Kemmis, S. (2008). Practice and practice architectures in mathematics education. In Goos, M., Brown, R. and Makar, K. (Eds.), *Proceedings of the 31st Annual Conference of the Mathematics Education Research Group of Australasia: Navigating currents and charting directions, 28 June-1 July 2008*, MERGA (Inc.), Adelaide, 1-613. Retrieved March 1, 2021 from https://eric.ed.gov/?id=ED503747

Kemmis, S. (2010). Research for praxis: Knowing doing. *Pedagogy, Culture and Society, 18*(1), 9–27. https://doi.org/10.1080/14681360903556756

Kerridge, S., & Scott, S. F. (2018). Research administration around the world. *Research Management Review, 23*(1), 1–34. https://www.ncura.edu/Publications/ResearchManagementReview/Archives.aspx

Kirkland, J. (2005). University research management: Towards a global profession? *International Journal of Technology Management & Sustainable Development, 4*(1), 63–5. https://doi.org/10.1386/ijtm.4.1.63/3

Lester, F. K. (2005). On the theoretical, conceptual, and philosophical foundations for research in mathematics education. ZDM - *International Journal on Mathematics Education, 37*(6), 457–67. https://doi.org/10.1007/BF02655854

Lintz, E. (2008). A conceptual framework for the future of successful research administration. *Journal of Research Administration, 39*(2), 68–80. https://www.srainternational.org/HigherLogic/System/DownloadDocumentFile.ashx?DocumentFileKey=8088ec13-2b0f-fed5-3874-74dca472bd5b&forceDialog=0

Lund, S., Madgavkar, A., Manyika, J., Smit, S., Ellingrund, K., Meaney, M., & Robinson, O. (2021). *The future of work after Covid-19*. McKinsey Global Institute. Retrieved March 4, 2021 from https://www.mckinsey.com/featured-insights/future-of-work/the-future-of-work-after-covid-19

Macher, G., Brenner, E., Messnarz, R., Ekert, D., & Feloy, M. (2019). Transferable competence frameworks for automotive industry. In Walker, A., O'Connor, R., and Messnarz, R. (Eds.), *European Conference on Software Process Improvement EuroSPI 2019: Systems, Software and Services Process Improvement 18-20 September 2019*, 1060. Springer. https://doi.org/10.1007/978-3-030-28005-5_12

Matteson, M. L., Anderson, L., & Boyden, C. (2016). Soft skills: A phrase in search of meaning. *Portal: Libraries and the Academy, 16*(1), 71–88. John Hopkins University Press. https://doi.org/10.1353/pla.2016.0009

Mattsson, M., & Kemmis, S. (2007). Praxis-related research: Serving two masters? *Pedagogy, Culture and Society, 15*(2), 185–214. https://doi.org/10.1080/14681360701403706

Mullen, C. A. (2009). Re-imagining the human dimension of mentoring: A framework for research administration and the academy. *The Journal of Research Administration, XL*(1), 10–31. Retrieved March 4, 2021 from https://www.srainternational.org/HigherLogic/System/DownloadDocumentFile.ashx?DocumentFileKey=4f4f8696-236b-7b88-f33b-6142cdce77da&forceDialog=0

Noordegraaf, M. (2020). Protective or connective professionalism? How connected professionals can (still) act as autonomous and authoritative experts, *Journal of Professions and Organization, 7*(2), 205–23. https://doi.org/10.1093/jpo/joaa011

Olsson, A., & Meek, L. (2013). *Effectiveness of research and innovation management at policy and institutional levels: Cambodia, Malaysia, Thailand, and Vietnam*. (Programme on Innovation, Higher Education and Research for Development [IHERD]). OECD. Retrieved February 25, 2021 from https://www.oecd.org/sti/Effectiveness%20of%20research%20and%20innovation%20management%20at%20policy%20and%20institutional%20levels_Meek%20and%20Olsson.pdf

Orlikowski, W. J. (2007). Sociomaterial practices: Exploring technology at work. *Organization Studies, 28*(9), 1435–48. https://doi.org/10.1177/0170840607081138

Ramachandran, R. (2010). The power of deep expertise! Developing expertise in a corporate environment. *The MASIE Center's Learning*. Retrieved March 1, 2021 from https://www.nigelpaine.com/book/learning-perspectives-2010-masie-center/

SARIMA. (2016). Annexure A, Professional competency framework [Unpublished]. Retrieved March 6, 2021 from https://www.sarima.co.za/resources/research-management/#01

Shelley, L. (2010). Research managers uncovered: Changing roles and "shifting arenas" in the academy. *Higher Education Quarterly, 64*(1), 41–64. https://doi.org/10.1111/j.1468-2273.2009.00429.x

UNICEF. (2019). *Global framework on transferable skills*. New York: UNICEF. Retrieved May 6, 2021 from https://www.unicef.org/reports/global-framework-transferable-skills

Viragh, E., Zsar, V., & Balazs, Z. (2019). *Research management and administration: A profession still to be formalized*. Budapest, Hungary: HÉTFA Research Institute and Center for Economic and Social Analysis. Retrieved March 9, 2021 from http://hetfa.eu/wp-content/uploads/2019/04/Research-managers_final_0408.pdf

Whitchurch, C. (2008). Shifting identities and blurring boundaries: The emergence of third space professionals in UK higher education. *Higher Education Quarterly, 62*(4), 377–96. https://doi.org/10.1111/j.1468-2273.2008.00387.x

Whitchurch, C. (2012). *Reconstructing identities in higher education: The rise of 'third space' professionals*. New York: Routledge.

Williamson, C., Dyason, K., & Jackson, J. (2020). Scaling up professionalization of research management in Southern Africa. *Journal of Research Administration, 51*(1), 46–72. Retrieved May 2, 2021 from https://www.srainternational.org/blogs/srai-jra1/2020/05/03/scaling-up-professionalization-of-research-managem

Williamson, C., & Shuttleworth, C. (2021). A social innovation model as bridge-builder between academia and research management. *Journal of Research Administration, 52*(2), 100–127. Retrieved November 23, 2021 from https://www.srainternational.org/HigherLogic/System/DownloadDocumentFile.ashx?DocumentFileKey=ea640b98-6c10-ae11-e59b-56bfe727b0fc&forceDialog=0

World Economic Forum. (2020). *The future of jobs report 2020*. Geneva: World Economic Forum. Retrieved May 8, 2021 from https://www.weforum.org/reports/the-future-of-jobs-report-2020

Zink, H. R. (2021a, June 4). Adaptive work in research administration during COVID-19: Part 1 [Message posted to *SRAI News*]. https://www.srainternational.org/blogs/srai-news/2021/04/06/adaptive-work-in-research-administration-during-co

Zink, H. R. (2021b, November 5). Adaptive work in research administration during COVID-19: Part 2 [Message posted to *SRAI News*]. https://www.srainternational.org/blogs/srai-news/2021/05/11/adaptive-work-in-research-administration-during-co

**Annex A: Full verbatim description of the transferable/cross cutting competencies across all levels of RMA (SARIMA, 2016)**

1. Interactive communication (listening to others, clearly conveying information and ideas through different media to individuals or groups in a manner that is engaging, foster open communication).
2. Negotiation (effectively exploring alternatives and positions to reach outcomes that gain the support and acceptance of all parties).
3. Conflict resolution (using a variety of approaches to manage and resolve concerns, disagreement, and conflict, facilitate the prevention, management and/or resolution of conflicts).
4. Personal effectiveness (maintaining effective behaviour in challenging situations having the resilience to bounce back in the face of setbacks; demonstrating a strong desire to advance, recognising personal strengths and gaps and engaging in ongoing development, self-motivated, honesty, and integrity in professional conduct).
5. Researcher focus/stewardship approach (strong commitment to responds to and anticipates needs of researchers, striving to ensure satisfaction with the delivery of services and support and developing and sustaining productive relationships).
6. Organisational awareness (awareness of organisation's research goals, understanding the organisation's formal and informal systems, maintains cross-functional focus, and uses the most appropriate channels to communicate within and between departments/divisions/units, awareness of organisational relationships and external influences).
7. Manage resources/stewardship of resources (demonstrates accountability, discretion and sound judgement in managing organisational resources for research).
8. Attention to detail (thoroughness in accomplishing tasks, monitors and checks work or information, and plans and organises time and resources efficiently).
9. Value diversity (appreciate and leverage capabilities, insights and expertise in an inter/multi/trans-disciplinary manner, values and incorporates contributions, demonstrates respect for opinions and ideas of others).
10. Plan and organise (ability to effectively plan and organise to achieve goals, sets priorities, allocate time and resources to achieve maximum productivity).
11. Adaptable (maintaining effectiveness when experiencing major changes in the work environment; adjusting effectively to work within new work structures, systems, processes, requirements, or cultures).
12. Teamwork and collaboration (fostering teamwork, working toward solutions which generally benefit all involved parties, developing and using collaborative relationships to facilitate the accomplishment of goals).

13. Leverage technology (seeks out ways to employ technology to optimise organisational and individual research performance).
14. Nurture innovation (applies original thinking to job responsibilities to improve processes, methods, systems, or services).

**Annex B: Methodology for the formulation and write up of the SARIMA Professional Competency Framework (Williamson et al., 2020, p. 55).**