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Embracing Translational HRD Research for Evidence-Based Management: Let's Talk About How to Bridge the Research-Practice Gap

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In recent years, the debate about the purpose of Universities is increasingly visible in public fora. Universities are more frequently asked by government bodies and the public to 'account for themselves'. Evidence is demanded in answer to such questions as: 'if public funding is poured into university research, what does the public get for its money?' (Simons, 2010); how do specific pieces of research inform policy problems? (Lauder, 2014); or what is the value for money and impact of scientific research projects for the economy and society? (Science Foundation Ireland). The benefits of university research are asserted to be wide and influential and include innovation, new knowledge, improved business strategies and productivity and contributions to policy, among others (Khazragui & Hudson, 2015). However, such claims are insufficient without supporting evidence in a time of public debt and pressure to reduce spending (de Campos, 2010; Khazragui & Hudson, 2015). This debate now influences public policy in the UK where universities, for the first time in 2014, must demonstrate, under the Research Excellence Framework (REF), how faculty research impacts the economy and society (see Khazragui & Hudson, 2015 for a review).

These questions are put to Universities but there are also similar and more specific questions put to schools responsible for developing practitioners. Here we focus on the challenges put to business schools. The field of human resource development (HRD) is variously positioned in Universities around the world; sometimes in business schools and sometimes in schools of education. Irrespective of which school HRD is positioned in, the

questions, debates and criticisms levelled at business schools are relevant to the field of HRD as the field of HRD concerns itself with practice and practitioners.

The research that business schools produce has been soundly criticized for failing to create knowledge that turns management students into effective professionals and offers actionable guides for practice. Bennis and O'Toole (2005) argued that business schools emphasize research that speaks to the concerns of academics, while ignoring the connections to problems of management practice. According to their logic, by ending the knowledge generation process with articles that only other academics read, business schools are on a path to their own irrelevance. However, Bennis and O' Toole do not advocate a move back to the pre-World War II trade school paradigm. As one business school dean recently noted, "a business school which isn't built on a strong research foundation….which may be too reliant on isolated 'war stories', 'outdated theories' and 'collective wisdom'….is just plain wrong" (Courtney, 2013). Instead, Bennis and O' Toole urge for greater balance and connection between scientific rigor and practical relevance. Similarly, Nobel Laureate Herbert Simon in 1967 identified features required of business schools that educate professional managers. These features include "faculty research which would generate scientific knowledge to improve the world and guide managerial problem solving" (Rousseau, 2012a; p602). Yet, a decade after Bennis and O' Toole's work and 50 years after Simon's, not much has changed in today's business schools despite the rising decibel of criticism (Eckhardt & Wetherbe, 2014; Rousseau, 2012a). The common stance underlying these critiques is the fundamental value of synthesis in the study of theory and the problems of practice, as well as in the exchange of knowledge between academics and practitioners. To us, this demand for demonstrated research impact means that the time for translational research is here.

Translational research is classified into two distinct domains: *T1 research* refers to the "research-to-practitioner" enterprise of translating knowledge from the basic sciences into the

development of new interventions, models, guidelines or products; and *T2 research* refers to the translation of research into practice such that new interventions/products from T1 are *used* in everyday practice and decision making (see Woolf, 2008). T1 research requires researchers whom are experts in fields of science. T2 research requires researchers whom are masters of implementation; researchers whom can field and evaluate interventions, developed in T1 research, in real-world settings. For example, T1 HRD research might explore how to better motivate learning transfer and develop principles for practice. T2 HRD research might evaluate the effectiveness of these principles when used in real-world settings and how effectively they are applied under varying conditions. While the distinctions between T1 and T2 research is still debated (Woolf, 2008), the need for either and both forms of translational research is accepted in the medical field and demanded in the management field.

In management and HRD research domains, there are illustrations of translational research from which we can take inspiration. For example, Frank Yates's Cardinal Rules (2003) is a rubric for decision-making, which practitioners can use to help build processes that improve decision quality in complex decision-making. Or, psychologist Michael Frese converted his own basic research on proactivity (Frese, Garst & Fay, 2007) into an intervention demonstrated to increase the proactive problem solving of entrepreneurs (Glaub, Frese, Fisher & Hoppe, 2014). In another example, Barling, Weber and Kelloway (1996) investigated the effects of a transformational leadership training programme designed to capitalize on existing research evidence regarding how to transfer effects of training to real world settings. Using both attitudinal and financial outcomes, they conducted a field experiment. The study found support for the effectiveness of training managers in transformational leadership, as compared to not training them, in terms of certain attitudinal and financial outcomes. Additionally, this study provides insights to practitioners about how to design an effective training intervention. More HRD examples of efforts to bridge the

scholar-practitioner divide, engage with real-world problems and explore how HRD theory and research were applied, extended or used to inform practice are presented in a special issue by Scully-Russ, Lehner and Shuck (2013). For example, in this special issue, Gedro and Wang (2013) drew on a framework for understanding and addressing organisational incivility to help a practitioner develop a system-wide training intervention to help people respond to incivility. Busch (2013) conducted a large scale research project which resulted in a new competency framework to support an emerging occupation in an organisation. As in all these examples, translational research takes research conducted by management researchers and, via field tests, presents it in forms readily adapted to practice.

Good signals exist that greater synthesis is possible between science and practice and for the mutuality of academic and practitioner needs. Good signals exist that the extent of academic engagement in translational research can be progressed. Good signals also exist that practitioners can utilise and their practice can benefit from engaging with translational research. These signals come from medicine and the myriad of scholars whom recognise that, like medicine, management is a profession and as such business schools can learn from medical schools (Barends, ten Have & Huisman, 2012). Academic medical schools integrate research with practice through translational research. Medical practitioners then take the latest scientific techniques from translational research to answer questions they encounter in practice via an approach referred to as evidence-based medicine. The concept of evidence-based management (EBMgt) is an adaptation of this approach to the field of management. EBMgt is the systematic, evidence informed practice of management, paying careful attention to the quality of evidence available from science, the local practice setting and practitioner experience in making decisions (Rousseau, 2012b). Hamlin (2002) defined evidence-based HRD as the conscientious, explicit and judicious use of the best available evidence in developing people and organisations and integrating individual HRD practitioner

expertise with the best available external evidence. Professional managers and HRD practitioners, like physicians and others in allied fields, need to be able to rely on scholars to both conduct rigorous scientific research on important industry-oriented problems and then to translate their findings into actionable knowledge.

So what does this mean for HRD researchers who want to make a greater impact? We highlight four avenues here: 1. undertake rigorous, high quality research that resonates with real world problems; 2. provide summaries and syntheses in the form of meta-analyses and systematic reviews that identify what we know and what requires further research; 3. translate the results for practitioner readability in the abstract and implications for practice sections; and 4. translate the results into actionable knowledge, in tangible forms like tools, decision rubrics, and action guides.

Implications for Research Design

The realisation of EBMgt and evidence-based HRD cannot be achieved without the existence of 'best evidence' derived from substantial bodies of translational management and HRD research. This 'best evidence' can only be achieved through the use of rigorous and appropriate research designs by academic researchers. Numerous guidelines and frameworks enable academics to evaluate the rigour of research designs. Evidence-based management practitioners too need to be able to identify the most appropriate scientific evidence to ensure that the information underlying their decisions is trustworthy (Kepes, Bennett & McDaniel, 2014). This 'best evidence' also needs to be relevant, that is, focused on a practice-oriented research question. Unfortunately, as Hamlin and Stewart (1998) note, HRD to date lacks a sound and sufficient base of relevant and generalized empirical research capable of supporting evidence-based HRD practice. For example, while there is a solid body of empirical research about leadership development programmes, it indicates both significant

successes and significant failures in such programmes (Collins & Holton, 2004; House & Aditya, 1997; McCall, 2004; Raelin, 2004). Thus there is difficulty extracting a consistent, reliable and valid set of conclusions for practice. So how do we progress?

The first issue of concern is the quality of the primary studies in HRD. Such quality is a function of whether (a) the research design and measures match the questions being asked, (b) the data are reliable, (c) the results valid and generalizable, and (d) the study is replicable. The Journal Article Reporting Standards (JARS) of the American Psychological Association (APA) and the webpage of the Center for Evidence-based Management provide guidelines and questionnaires of value to academics and practitioners seeking to appraise primary research against such factors. The appraisal of these factors tests both academic rigor and the extent to which the 'evidence' produced is trustworthy for practice.

In helping HRD become a field where evidence-based practice can readily take place, a quality research design is such that it a) produces the best 'evidence' and b) is appropriate to the research question being asked and the context of the study. For questions regarding "what works" or "does X cause Y", a general hierarchy of evidence, originating in medicine (Sackett, Straus, Richardson, Rosenberg & Haynes, 2000) and adapted by Kepes et al., (2014) can help ascertain quality. Meta-analytic or systematic reviews, (discussed in more detail below), are at the top of the hierarchy and thus represent the best scientific evidence particularly where they make clear the level of confidence warranted by the body of evidence they review. The next two levels include control studies which provide the strongest evidence about causality. Below these are longitudinal studies which provide greater indications as to causality than cross-sectional survey designs as they track changes over time. Cross-sectional survey designs are at the next level; these are commonly used designs but they cannot make inferences about causality. The second lowest level relates to case studies which describe events or phenomenon without controls or typically statistical analyses. They are more prone

to bias in interpretation and reporting. The lowest level represents the experiences and opinions of experts or authorities. This is at this lower level as these judgements are subject to confirmation bias and may not be validated by independent evidence. Figure 1 displays this hierarchy (adapted from Brannen, 1992; Popay, 1998; Rousseau, 2013) and its relationship to validity and causality.

HRD questions which are interested in the quality of the intervention implemented, the processes by which outcomes were achieved and the context in which it occurred are likely to come from other research designs (Petticrew & Roberts, 2003). Practitioners and policy makers may also be particularly interested in such matters as cost-effectiveness (is X_1 more cost-effective than X_2 in achieving a given change in Y?), and meanings (how have X or Y been viewed or experienced?), which prompt cross-sectional survey and qualitative designs, respectively. Failure to conduct research on questions pertinent to practice runs the risk of what Shapiro, Kirkman & Courtney, 2007) refer to as "lost before translation" where academic research fails to address questions critical to practice. In asking questions of value to practice, it is critical that HRD researchers align their questions and their methods. For this reason, we expect to see more diversity in research methods as academic researchers concern themselves with impact.

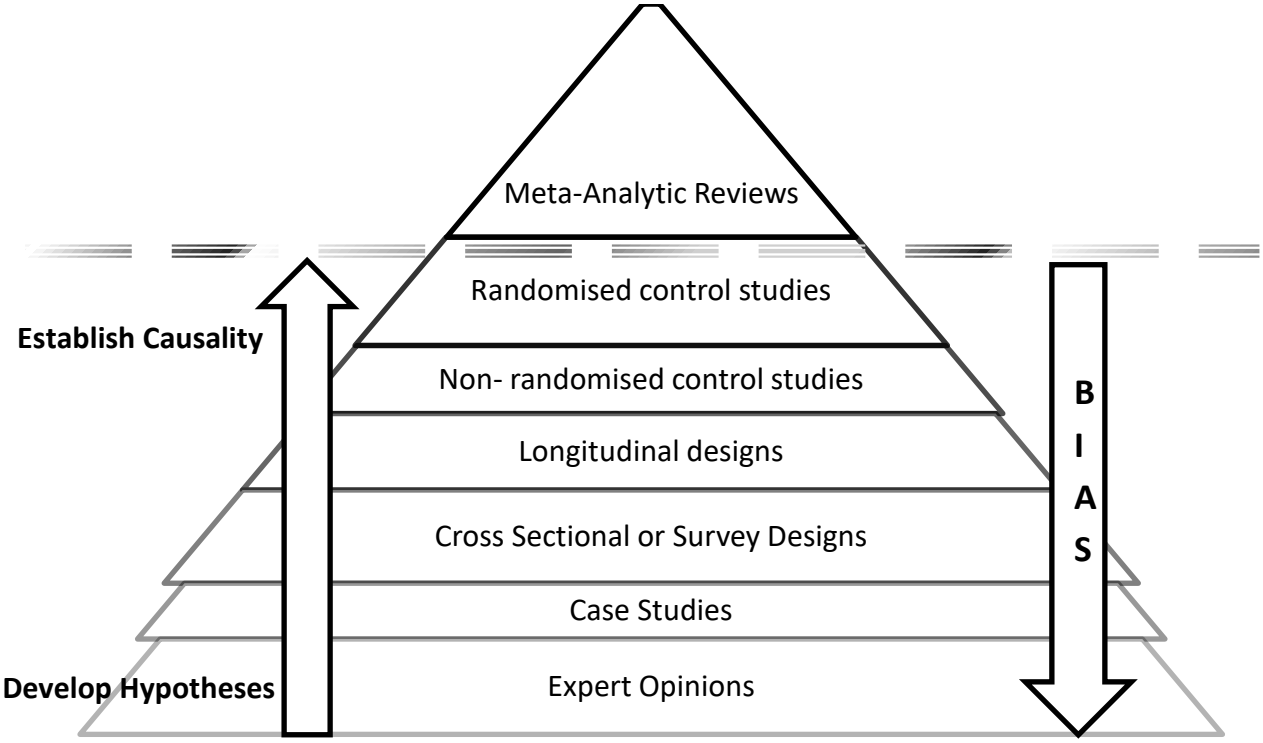

Figure 1. General Hierarchy of Evidence based on Research Design

Meta-analyses and systematic reviews. No single study is large enough to establish a scientific fact. A body of individual studies, considered together, is required to establish the credibility of the overall evidence and to reach general conclusions that can reasonably be used to predict future events (Briner & Denyer, 2012; Rousseau, Manning & Denyer, 2008). Two kinds of 'studies of studies' exist: meta-analyses and systematic reviews.

Meta-analysis is a technique used to quantitatively combine the data from comparable individual studies containing quantitative analyses on the same topic in order to determine the extent to which the effects are consistently found in order to reach some general conclusions. In a meta-analysis, studies are identified and reviewed and data from each individual study is coded and interpreted using statistical methods similar to those used in primary studies. Therefore, even where individual studies have insufficient power to make generalisations about effects, when combined with other individual studies, consistent effects can be identified (Ohlsson, 1994). In addition to meta-analyses revealing consistent effects, they also highlight possible avenues for further or more in-depth research or perhaps research using

alternative designs. Further still, meta-analyses are at the top of the hierarchy of evidence for practitioners as they identify and draw conclusions regarding the accumulated scientific evidence on a topic. Hence, practitioners informed by evidence from meta-analyses are using better (more accurate) evidence than can be found in a single study. Although meta-analyses are increasingly available in management, their extent is more limited than in the field of medicine; hence there is a need for academic researchers to conduct meta-analyses. In the field of HRD, examples do exist. Collins and Holton (2004) conducted a meta-analysis of studies from 1982-2001 to evaluate the effectiveness of managerial leadership development programs, while Avey, Reichard, Luthans and Mhatre (2011) conducted a meta-analysis of studies to evaluate the impact of positive psychological capital on employee attitudes, behaviours and performance. Meta-analyses have the power to be invaluable in highlighting future research opportunities and providing general consistent conclusions, based on academic cumulative knowledge. However, to deliver on their promise, meta-analyses need to adhere to methodological standards (Meta-Analysis Reporting Standards (MARS)).

Where qualitative or mixed method studies are concerned, a systematic review methodology is needed to integrate the findings from a body of studies. Systematic reviews permit a body of studies using quantitative and qualitative methods or qualitative methods alone to be interpreted and synthesized. At present, systematic reviews in HRD are lacking, although the array of research methods used in the field indicates that these would have considerable value. As in the case of meta-analyses, syntheses follow a structured methodology (Higgins & Green, 2011).

Notable factors in both review syntheses and meta-analyses are commencing with a clear research question and then conducting a comprehensive, systematic, transparent and replicable literature search. This search will require identification and clarification of all related terms and measures. This should be followed by a transparent and replicable process

of interpreting and synthesizing findings. It is also important to ensure that the primary samples included are comparable so that aggregate effect sizes are not misleading. Other considerations relate to validity (is the number of studies included large enough to be credible?), generalizability (are multiple populations included?), reliability (are primary samples comparable?) and quality (are all decision rules detailed?) (see Kepes et al., 2014). The strength of the conclusions drawn varies depending on the extent to which these considerations are addressed.

Engaging in Practice-Oriented Research Questions

Alongside research design considerations is a need to ensure a focus on practice-oriented research questions; questions which managers need evidence for. Translational research, by definition, is about practice-oriented research undertaken to provide scientific knowledge to inform practice (Rousseau, 2012b). Research results are considered practically relevant if they influence management practice in the form of changes to, modification or confirmation of how managers think or behave (Astley & Zammuto, 1992; Nicolai & Seidl, 2010). Engaging in practice-oriented research has two translational purposes: 1) to find solutions to practical problems, often by translating scientific findings into forms practitioner can use, and 2) to ease their adoption by identifying supports and barriers which affect implementation (Rousseau, 2012b). Conducting practice-oriented research requires that researchers spend time in the field working to better understand the practice setting. It is also aided by building high quality relationships with practitioners in the conduct of the research. For example, a research case study was conducted to explore the enablers and barriers to a practice problem about 'capturing' experts' tacit knowledge (Gubbins et al., 2012). The practitioners involved in the project wanted mechanisms for capturing 'tacit' knowledge. The academic researchers, based on their theoretical knowledge, foresaw challenges with the approach proposed by the

practitioners given the complexity of human behaviour and the partially subconscious nature of 'tacit' knowledge. Both parties engaged in a field investigation and collected qualitative data which revealed the enabling and hindering factors which would affect implementation of the proposed tacit knowledge 'capture' mechanism. The product of this research was a process for capturing tacit knowledge supplemented with brief face-to-face training support for the tacit elements which cannot be 'captured'. Two forms of practice-oriented research designs have long existed in management research; these are action research and design science. We briefly describe each here to stimulate HRD researchers to explore alternative avenues to impact practice.

Action-research is based on a collaborative problem-solving relationship between researchers and clients (Coughlan, 2011). It aims to "contribute to both the practical concerns of people in an immediate problematic situation and to the goals of science" (Rapoport, 1970; p499). To achieve this aim, action researchers must engage in the multi-disciplinary nature of 'real-life' problems (Kieser, Nicolai, & Seidl, 2015). Academic researchers tend to be disciplinary, functional and, further still, topic specialists (see Agarwal & Hoetker, 2007). However, in the drive for practice-oriented research such specialisation is not reflective of 'real-life problems' which managers face. Real-life problems cut across disciplinary boundaries and solving them requires "research expertise from any and all academic and research locations relevant to the problem at hand e.g engineering, science, ethics and education etc." (Greenwood, 2012, p.127). Action research is grounded in two of Lewin's (1951) principles which suggest a bridge between academia and practice: "nothing is as practical as a good theory" and "the best way to understand something is to try to change it" (Greenwood & Levin, 1998; p.241). Consequently, action research commences with practical problems being defined so that researchers can deal with them, then action researchers go to organisations to solve the practitioner problems in collaboration with them and finally

identifying the learning and general findings from the research (Levin & Greenwood, 2001; Reason, 2006; Susman & Evered, 1978). In a 1996 editorial for Human Resource Development Quarterly (HRDQ), McLean encouraged continued use of the action research methodology in the study of organisational development. Now, almost 10 years on, we repeat this call and emphasise its increased relevance given the external drive for translational research.

Design science is a collaborative approach involving practitioners and researchers to develop practical knowledge out of scientific research. It field tests research-based principles and develops its own "grounded technological rules" to be used in designing, configuring and implementing solutions to specific problems (Rousseau, 2012b). Design science draws on the disciplines of medicine and engineering for inspiration. These disciplines use knowledge produced by research to create 'preferred futures'. For example, 'preferred futures' in engineering and medicine might look at the design of a more fuel efficient car or restoring health after a serious illness. The core research aim therefore moves from that of describing and explaining 'what is' to designing and evaluating 'what can be' (van Aken & Romme, 2012). The former explanatory research approach is driven by a quest for knowledge as the end in itself. A causal model is assessed in terms of its descriptive validity and its explanation of the observed world. However, design science research is driven by real world problems which need to be improved. The output is thus a well-tested solution, tested in the lab and in the field, and which creates a 'preferred future'. The 'technological rules' emerging link an intervention with a desired outcome and are constructed as "if you want to achieve Y in situation Z, then perform action X" (van Aken, 2005; p.23). For example, in social science, researchers may look at identifying patterns and regularities in human behaviour and using these, as far as possible, to predict the outcomes of interventions.

Usability of Abstracts and Implications for Practice

Recognising that many HRD studies are more exclusively academically motivated, scholars still have two opportunities to translate their research and enable practitioner use—their article abstracts and implications for practice sections. First and foremost, it is important to recognise that Google Scholar and other on-line databases increasingly make scholarly articles available to the general public. The most readily accessible part of the articles managers can find is the abstract, often available even when the article itself is behind a pay wall. Therefore, making the abstract readable to practitioners is of utmost importance. This means putting critical information in plain language and describing its structure in the form of the Population-Intervention-Comparison-Outcome-Context (PICOC) framework recommended by Rousseau and Barends (2011). The PICOC framework requires answering the following questions: What Population is studied (organisations or individuals)?; Is there an Intervention whose effects are studied?; Is there a Control or contrast group and what is its make up?; What Outcome variables are examined?; and Are specific Contexts (e.g. governmental organisations, non-profit) studied?. It is also useful to specify what kind of study it is (empirical vs meta-analysis) and its design (quasi-experiment, survey, case study).

The second opportunity for translating research and promoting practitioner use of scholarly research is via the 'Implications for Practice' section of articles. If the truth were told, most academic researchers are not particularly comfortable writing this section of their publications. This often mandated section is often just an after-thought (Leung & Bartunek, 2012). In their analysis of the 'Implications for Practice' section of journal articles, Bartunek and Rynes (2010) observe that academics appear unfamiliar with the practitioner context, find it difficult to determine their study's relevance and struggle to find the right words to communicate with practitioners. Importantly, they report that such implications were only included in 32% of articles reviewed in 1992-1993 and in 51% of articles reviewed in 2003-

2007. This pattern suggests greater recognition of the need to pay attention to practice, while the actual value and use of such sections may not yet meet our aspirations. Here, we explore some steps academics can take to better translate their results for practitioner use.

Good research ideas can be presented in two languages. In a review of two papers by Brown and Eisenhardt (1997) in *Administrative Science Quarterly* (ASQ) and Eisenhardt and Brown (1998) in *Harvard Business Review* (HBR), Kelemen and Bansal (2002) illustrate how the language and style was changed to most effectively communicate the same study to academic (ASQ) and practitioner (HBR) audiences. For example, while academic papers' research aims centre around description (in the case of inductive research) or prediction (in the case of deductive research), practitioner papers emphasise prescription i.e. how managers should act in the real world. By re-packaging and singling out the success stories garnered from the empirical research, Eisenhardt and Brown introduce practitioners to 'best practices' or 'blue-prints' for successfully managing change. Conversely the academic paper is more abstract and focused on illustrating alternative perspectives on organisational change theory. A review of the use of prescriptive language within academic papers revealed that of 5 top-tier journals, 55% of the implications for practice sections included prescriptive language; the Journal of Organisational Behaviour has the highest incidence of use of prescriptive language at 64% (Bartunek & Rynes, 2010).

Readability is a huge factor to consider in preparing 'implications for practice' sections of papers. The education level required to read this section increased from 16.6 years in 1992/1993 to 17.5 years in 2003-2007 (Bartunek & Rynes, 2010). Readability is usually measured by the number of syllables in words and the number of words in sentences. However, this does not take into account that many terms used in academic papers are unfamiliar to practitioners (Bartunek & Rynes, 2010), which further reduces readability. Latham (2007) suggested that academics need to become bilingual, that is become experts in

scientific language and in the translation of that language for practitioners. As such he suggested that when he communicates with practitioners he translates his scientific terminology to practitioner terminology e.g. hypotheses become ideas, results of structural equation modelling become graphs that show 'what happened where we did' versus 'what happened where we did not' implement our ideas. Rousseau and Boudreau (2011) make a number of suggestions to enhance readability, including expressing clear core principles in plain language and familiar analogies. An example is how the principle of goal setting can be expressed as a fact: Specific goals tend to lead to higher performance than do general, "do your best" goals (Locke & Latham, 1984). This phrase is direct and uses plain language. However the use of language such as 'tend to' is conservative. This conservatism is a crucial tenet of scholarly writing, which is required to carefully qualify findings with conditions and caveats. Such plain language statements are best placed in the 'implications for practice' sections of papers. A second suggestion is to describe causal processes and mechanisms through which a principle works in plain language and familiar analogies. They suggest identifying the mechanism underlying a finding and presenting it in a way that is analogous to mechanisms practitioners already understand. For example, Boudreau and Ramstad (2007) illustrate that while leaders may be unconvinced about the value of strategic decisions about human resources because 'people are too unpredictable', they are accepting of strategic decisions about marketing and products which are ultimately grounded on the same 'unpredictable people'. Here, reframing research on HR as similar to research in a domain which is already accepted by practitioners, helps them see how the research is useful.

It is insufficient to stop at enhancing readability; to ensure research results are impactful, used, understood and remembered, the manner in which they are translated needs to be 'sticky'. Sticky findings are research results that grab attention, gain credibility and are readily shared (Rousseau & Boudreau, 2011). A method to ensure ideas 'stick' is that of

storytelling (Heath & Heath, 2008). Stories provide simulation or knowledge about how to act as they detail a day-to-day event. Stories provide inspiration or motivation to act as they illustrate a challenge and how a character overcame that challenge. The narrative of stories has an emotional component which offers the reader the possibility of seeing themselves in the situation described (Bartunek, 2007) and is more persuasive in how it facilitates understanding and obtains buy-in to a new practice (Giluk & Rynes-Weller, 2012). A brief case study derived from qualitative data provides the material to present such a story. The case study is based on quantitative data but the qualitative data provides depth to enable better understanding of the quantitative data and better enable its translation for practice. Ultimately, the knowledge or management principle which the practitioner needs to use lies in the story. It is simply packaged in a way to make it memorable, understandable and actionable (Giluk & Rynes-Weller, 2012).

Beyond, how we write our 'implications for practice' sections of academic papers are a myriad of initiatives which can facilitate the translation of academic research for practitioner use (see Leung & Bartunek, 2012). First is the use of models. Models can be in the form of a series of steps such as Kotter's (1996) eight steps for organisational change. Alternatively, a model may present a series of questions organised around a framework to facilitate practitioners in a process of systematic diagnosis such as that used in Weisbord's six box model or Harrison and Shirom's (1999) sharp image diagnosis model. Relatedly, Rousseau and Boudreau (2011) suggest explicating the conditions of use of a finding as this makes implementation seem possible. They suggest the use of tools and frameworks such as decision trees. Where authors can present their findings hierarchically from the more general to the more detailed, practitioners can engage with those findings at a level that is commensurate with their interest and expertise.

Summarising our Conclusions for *HRDQ* Authors

Drawing on the preceding discussion about translational research, we suggest six avenues in which HRD researchers may engage in translational research or better translate research for evidence-based management. These are as follows:

Conduct meta-analyses and systematic reviews. We encourage HRD researchers to conduct quantitative meta-analyses and mixed methods or qualitative systematic reviews to help make clearer what is known from scientific HRD and related research, what needs further study, and where trustworthy information is available to inform practice.

Conduct more rigorous research on important "what works" questions. Where there is not a solid research base for practitioner-proposed problems, we encourage HRD researchers to engage in such research and identify a suitable and rigorous research design through which to address the problem question. Also, given that longitudinal and control studies produce greater insights on causality, are less prone to bias and can result in evidence more suitable for evidence-based management, than case study designs, such research designs are to be encouraged.

Identify ways in which core findings in an area of scholarly expertise might be made easier to apply and test their application. We suggest that HRD researchers work with interested practitioners to develop tools, rubrics, frameworks or action guides that help translate core principles into action. These knowledge products can be field tested and evaluated, for the purposes of research and practice, in terms of issues of use and effects.

Diversify the research methodologies used to better align with practice-oriented questions. Many practitioner-related questions are not addressed in published research. For example, How do employees, managers, and other stakeholders react to HRD practices? Do some practices advantage one group while creating difficulties for others? Are there political issues, cost concerns, or other factors affecting implementation? Such questions require deeper inquiry, often through using multiple research methods and drawing on multiple research disciplines.

Build quality relationships with practitioners as a basis for improved research process and question formulation. We encourage HRD researchers to engage with organisations, collaborate with practitioners, identify the problems HRD practitioners face and investigate if there is 'scientific evidence' available through which to inform those practice problems. Quality conversations between scholars and practitioners can provide important opportunities for mutual learning, new research avenues and dissemination of research.

Write abstracts and implications for practice sections with the practitioner in mind. We encourage contributors to *HRDQ* to more carefully develop and structure their abstracts and 'implications for practice' sections. Provide evidence-based managers with information in abstracts that helps them appraise the relevance and quality of the research for professional practice. Present practice implications in the form of plain language statements of core principles and use examples to describe alternative uses. Lastly, we suggest contributors obtain practitioner feedback on what they have written to further develop their dissemination capabilities.

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