Conducting Action Research

CEP Publication

G 11-19 (607)

Alec R. Levenson

Center for Effective Organizations
University of Southern California
Marshall School of Business

Wenhong Zhang

School of Business
Nanjing University

September 2011
Conducting Action Research

Prepared for *Human Resource Management Journal*

Alec R. Levenson  
Center for Effective Organizations  
Marshall School of Business  
University of Southern California

Wenhong Zhang  
School of Business  
Nanjing University

September 1, 2011

We would like to thank two anonymous reviewers, Deborah Dougherty, and participants at the 2010 International Association of Chinese Management Researchers conference in Shanghai, China for helpful comments on an earlier, and much different, version of this paper. All errors are our own.
Abstract

We provide a review of and guide to conducting action research: what it is, the benefits of it, examples, and how to do it. Special attention is paid to the kinds of research questions that are more likely to benefit from taking an action research approach, and the risks of not taking an action research approach when investigating organizational phenomena. Guidance for those interested in trying action research for the first time is provided.
1. Introduction

It is widely acknowledged that the relevance gap between traditional management research findings and the knowledge that is truly useful to organizations is large and only continues to grow (Mintzberg, 1977; Lawler, et al., 1985; Daft and Lewin, 1990; Hambrick, 1994; Argyris, 1996; Mohrman, et al., 2001; Rynes, et al., 2001; Starkey and Madan, 2001; Keleman and Bansal, 2002; Pfeffer and Fong, 2002; Bennis and O’Toole, 2005; Ghoshal, 2005; Rousseau, 2006; Cohen, 2007; Latham, 2007; Rynes, 2007; Rynes, et al., 2007; Rousseau, at al., 2008; Kieser and Leiner, 2009). The gap applies equally to cross-cultural and cross-national knowledge, and to both developed and developing economies. There have been numerous and recently growing calls to close the gap between research and practice. This article addresses a key tool available for doing so, action research, providing a review of what it is, its benefits, and guidance on how to do it.

There is a long literature about the nature of action research, what it is and how it should be undertaken (Lewin, 1946; Huxham and Vangen, 2003; Reason and Bradbury, 2006; Eden and Huxham, 2006; Huxham and Eden, 2007). The growth rate of the literature, in particular in the areas of the theory and practice of action research, has accelerated recently with the foundation of three dedicated field journals, Systematic Practice and Action Research in 1987, Action Research in 2002, and International Journal of Action Research in 2005, and the publication of two recent handbooks: Reason and Bradbury (2006) and Noffke and Somekh (2009). More recently, the term “collaborative research” (Shani, et al., 2008) has been used to define a broad set of management research approaches of which action research is a core approach, though not the only one.
For our purposes, we define action research as “a research process that collaboratively involves the subjects under study in the process with an explicit objective of using the research learning to influence organizational outcomes.” The essential thrust of our definition is shared by the field of organization development (OD; Cummings and Worley, 2008), though OD also focuses on the change process. Our view of action research is that it more generally focuses on actionable knowledge, and not necessarily the processes that turn knowledge into action.

Given our objective of providing a primer on action research, throughout the article we focus primarily on concepts and examples that will enable the researcher who has never conducted action research to see a (hopefully) clear path toward his or her first action research project. We do not provide a thorough review of the literature on action research, though some references are provided in cases where we draw directly and heavily from other authors’ work. Instead, we review the processes and tools of action research, and provide examples drawn from our personal experience as well as the literature. We also discuss the strengths and weaknesses of, and options for, using action research to address different types of management research topics. We highlight the benefits that, we believe, the vast majority of traditional researchers would reap should they join us in pursuing more action-oriented research agendas.

Our argument that more researchers should adopt an action research approach is not meant to detract from the importance of traditional research methods. Traditional research methods are strong in scientifically valid and statistically robust empirical approaches. They also provide a foundation for building theory that is based on the collective learning of generations of research that came before. Contrary to the views of some critics, however, action research does not require abandoning such principles. Action research has a comparative advantage in the qualitative and case studies arenas; yet this is hardly the sole advantage. Action research also is
better suited for identifying aspects of the macro- and micro-organizational environment that are likely to drive behavior, and for linking theoretical constructs and empirical impacts that “matter” from a business perspective – whether measured in strategic or financial terms.

Moreover, it is easy to use both rigorous and valid survey and data analysis methods when conducting action research. The issue is which methods are selected, and the process by which they are identified, which is more inductive in action research. A robust agenda for virtually any management research discipline should make ample use of both traditional and action research approaches.

2. The benefits of action research

Traditional academic research methods yield important insights about organizational behavior, but without necessarily ensuring a direct link between those insights and knowledge that organizations can use to improve effectiveness. The concern about the gap between theory and practice in academic research is decades old (Susman and Evered, 1978, Lawler, et al., 1985, Hambrick, 1994, Huff, 2000, Starkey and Madan, 2001, Shani, et al., 2008). There is little contention that the disconnect between the knowledge generated by academic researchers and the knowledge that practitioners need to improve organizational effectiveness has not narrowed in recent years.

If anything, the gap has increased as both the population of academic researchers and the number of academically-oriented journals grow larger. New Ph.D.s seek to find a research niche they can exploit to define a unique voice and publication record for themselves. This often entails taking an even more “scientific” approach than their predecessors, typically with an emphasis on greater and greater rigor in measurement design, a more narrow refinement of narrowly focused (derivative) theoretical approaches, or both. Such approaches can maximize
the likelihood of getting tenure, and thus are perfectly rational. However, they also typically ensure the largest gap between the academic’s research orientation and the knowledge organizations need to improve effectiveness.

The problem is not unique to management research and is found in nearly all fields in which there are both researchers and practitioners (Rynes, Bartunek and Daft, 2001). However, the existence of the gap is particularly troubling in the field of management research, which presumes to investigate the factors that lead organizations to succeed or fail as a core objective. Studying nuances about employee attitudes, or group behaviors, or supervisor-subordinate relationships, or knowledge sharing, etc. can be quite useful for practice if framed appropriately and addressed within the context of overcoming bottlenecks to business performance. However, to accomplish this objective, the researcher needs to meet the practitioner at least halfway to determine what the business needs are and make an earnest attempt to address those needs in the course of doing the research.

Many researchers worry that doing so would distract from the traditional organization science approach of isolating variables, standardizing measures, and assessing causal relationships (Gergen and Thatchenkery, 1996). We believe that the conflict is more perceived than real. The researcher needs to understand how information is interpreted and implemented by practitioners, which requires a collaborative approach (Argyris, 1996; Mohrman, et al., 2001). This is particularly important for researchers studying complex and dynamic topics such as organizational design, effectiveness, change and innovation, as these are among the most complex phenomena that encompass large parts of organizations, necessitating the greatest cooperation from organizational members to collect the data needed for insightful analysis.
Schein (2006) notes that taking a traditional research approach can lead to insufficiently comprehensive data collection and misdiagnosis of the drivers of behavior in a system. Schein relates a specific action research example in which he worked with a company to determine the cause of a failed technology implementation. The initial diagnosis – consistent with a traditional research approach – identified a “no layoffs” policy as the barrier to success. That is the point at which the traditional approach would have stopped. But because the researcher was engaged in an action research relationship, the inquiry continued and Schein was able to collect additional data that identified “deeper conceptual problems with the entire socio-technical system, specifically an inability to visualize a less hierarchical system in which bosses might play more of a consultant role to highly paid professional operators … In fact, the no layoff norm might have been a convenient rationalization to avoid having to change deeper cultural assumptions about the nature of work and hierarchy in this bank.” (p. 192) A researcher following the traditional approach would have stopped after the initial diagnosis even though that diagnosis ultimately proved to be incorrect. This highlights a potential further weakness of taking only a traditional approach: partial or incomplete data collection that can lead to misdiagnosis of the drivers of behavior in the system.

Another benefit of action research is the ability to make a more direct link between the research study and outcomes that matter from the organization’s perspective. By engaging organizational stakeholders in the process of identifying and designing how the research results will be used to influence practice, the researcher directly gathers information on the outcomes the organization wants to achieve (Liu, 2008). The researcher also creates a business case for getting access to the operational measures used by the organization to measure the outcomes, so they can be incorporated into the research process. This increases the likelihood of addressing
the “so what” question that often bedevils traditional research projects – and which can help an author distinguish his or her contribution’s importance relative to the different theoretical and empirical approaches in the published literature that do not use an action research approach. It also makes it much easier to conduct multi-level research projects (Coghlan, 2002) that use team, unit or organization level outcome measures that reflect actual business processes and objectives, versus group-level attitudinal measures that are purely survey based.

Most organizations that are willing to participate in traditional research projects are willing to participate in action research projects because the latter promise deeper learning and more relevant information for the organization. The converse, however, is definitely not the case: there are many, many organizations that refuse to participate in traditional research projects but which are quite open to action research. This means that combining traditional and action research approaches expands the population of organizations from which data can be collected, providing a more comprehensive and representative view of organizations and management issues. Figure 1 illustrates the point. Thus the overall quality of results, depth of meaningful insights, and contributions to scientific knowledge, should be higher on average for action research over traditional research.

Action research is particularly well suited when the issue under study is large scale organizational change (Ledford and Mohrman, 1993a). Such settings are characterized by highly dynamic and complex environments in which the number of possible causal and confounding factors are too numerous to specify ahead of time. It is only through working collaboratively with the organization that the researcher can most effectively narrow down the potential factors to be studied to a manageable set. The same holds for innovation, particularly for innovation
generated within large organizations that involves a myriad of contributors and stakeholders from a wide number of disciplines and functional areas (Mohrman, Gibson and Mohrman, 2001).

3. Action research: What and How

A defining aspect of action research is that it is impossible to fully specify ahead of time all aspects of the research process, data and models that will be collected. The research process directly involves the subjects and organization being studied in defining the scope of the work, details of how it will be carried out, and how the knowledge will be used in practice (Fricke, 2006). If this sounds like a consultative process, that is not a coincidence. Action research from the organization’s perspective often look likes consulting, albeit consulting that typically is more scientifically rigorous and objective than what is offered by consultants who are not research oriented (Tenkasi and Hay, 2008; Werr and Greiner, 2008). It is the researcher who takes the responsibility of ensuring that the process of working with the organization yields scientifically useful data, whether derived from interviews, case studies, surveys, archival data analysis, or some combination of these.

The beginning of the action research process starts with a conversation between the researcher and the organization to identify the intersection between the researcher’s interests and the organization’s business challenges. As Greenwood, Whyte and Harkavy (1993) note, “No one may mandate in advance that a particular research process will become a fully developed participatory action research project. Participation is a process that must be generated. It begins with participatory intent and continues by building participatory processes into the activity within the limits set by the participants and the conditions.” The initial conversations may lead to a full blown research study, or they may lead to the conclusion that there is insufficient overlap between the researcher’s interests and the organization’s needs to warrant collaborating.
Because of this inductive and iterative process, action research is best viewed as a complement to traditional research methods, not a substitute. There are strengths and weaknesses of both approaches (see Table 1). Action research is extremely well suited for qualitative and case study approaches. But that does not preclude action research from being strong in the statistical methods used, including survey design and analysis (Pasmore and Friedlander, 1982; Ledford and Mohrman, 1993b). Action research is also very well suited for collecting and analyzing in depth data across multiple levels within an organization, particularly where individual employees or roles are a key unit of analysis. The action research process maximizes engagement with key company stakeholders. This often ensures maximum cooperation and access to data that otherwise might be restricted by company gatekeepers looking to justify spending large amounts of time and internal resources working with an outside research team.

What distinguishes action from traditional research is the process through which the surveys are designed and the results interpreted. The traditional research approach relies solely on theory and organizational context to dictate how a survey should be designed, administered and interpreted. Action research also heeds these, but adds a third dimension: how useful the survey results will be in helping the organization to gain meaningful insights and to accomplish meaningful change. This may mean scaling back how ambitious (long) a survey is to increase stakeholder buy-in and response rates; adding questions that are used purely for feedback purposes (but which the organization views as critical); and building in feedback sessions as part of the process which seek to not only report out the survey results, but also maximize the probability the results are used to influence key decision making. Table 2 describes the range of ways that traditional researchers can incorporate action research methods into their approaches.
Making “concessions” such as these may seem anathema to traditional researchers, yet these are sound principles that can be justified on purely scientific grounds. Shorter surveys can reduce the bias from low response rates. Adding questions deemed important by the organization and focusing on how the results are used can increase the organization’s willingness to provide access to key personnel and actively encourage their participation in the study, which in turn can increase response rates and the thoughtfulness and accuracy of the respondents. Thus, incorporating action research principles into traditional survey research can be justified in part for purely scientific reasons.

For those researchers schooled in traditional approaches who may be less familiar with action research methodologies, it is worth noting the parallels and overlap with grounded theory approaches to conducting research (Glaser and Strauss, 1967; Miles and Huberman, 1984). Grounded theory takes an inductive approach to identifying the theories that have the potential to explain an observed empirical phenomenon or system. It has been applied in numerous settings and uses many of the same qualitative and quantitative approaches that are often found in action research (Martin and Turner, 1986; Strauss and Corbin, 1994; Vlosky, and Wilson, 1997; Maznevski and Chudoba, 2000; Locke, 2001; MacLean, et al., 2002; O’Connor, et al., 2003; Suddaby, 2006; Sousa and Hendriks, 2006; Fendt and Sachs, 2007).

What distinguishes grounded theory from action research is that the former does not require direct collaboration with the organization (e.g. Dunn and Swierczek, 1977) under study, though it often does include collaboration; the latter, in contrast, requires collaboration. Despite that apparent (minor) difference, however, there typically is much more overlap than dissimilarities between grounded theory and action research. Both approaches derive meaning directly from interacting with (data representing) the organization and processes under study.
Both require flexibility on the part of the researcher to adapt the theoretical framework applied to suit the context as dictated by the data and observations.

4. Guidance for conducting action research

Coming to a shared understanding between the researcher and the organization around what are the strategic issues facing the organization – both real and imagined – is the first critical step. The second critical step for the researcher is to identify common ground for conducting the research project (Vickers, 2007), even if that means addressing the supposedly inconsequential issue about urbanization and the government’s response. Without that focus the researcher runs the risk of both not understanding the real factors driving decision making and outcomes in the organization, and engaging in a research process that will be entirely delegitimized from the company’s viewpoint. That delegitimization in turn could severely impact the quality of data collected.

For example, Levenson, Van der Stede and Cohen (2006) took an action research approach when analyzing the business impact of managerial competencies. What enabled the research to be conducted was a collaborative relationship between the researchers and the company. The genesis for the research was a request from the company to the Center for Effective Organizations at the University of Southern California for help evaluating the design and impact of a managerial competency system. In order to engage with the company to do the work, however, the researchers had to make sure to satisfy both their own research interests and the company’s need for a program evaluation. This necessitated a close working relationship to identify the issues to be addressed, and the optimal way to balance scientific validity and the company’s business needs. Taking an action research approach like this is a core philosophy of
work done with companies at the Center for Effective Organizations; and it was the reputation for such work that led the company to approach the Center in the first place.

The power of this action research approach in terms of the quality of the research data that was gathered emerged only as the study got underway, however. It was only after agreeing to do the work that the researchers were granted sufficient access to the company to fully understand the design of the competency system and the system’s potential for impacting the company’s bottom line. Two key features of the system emerged in the process of doing extensive site interviews with both the competency system participants and the corporate and local leadership: (a) that people were often promoted out of the competency system to the local leadership teams without achieving the highest level in the system, and (b) that the smaller sites were simple enough that the local leadership could solve many problems by bypassing the managers in the competency system. This directly informed the regression models used to conduct the site level analysis that identified a business impact of the competency system only at the medium- and large-size sites.

While researchers taking a traditional approach could have identified the driving factors in the organization linking the competency system to business impact if presented with all the data, the action research approach was required to gain access to the data in the first place. In fact, the company representatives included a practitioner with a Ph.D. in I-O Psychology who was very familiar with traditional academic research approaches and was very reluctant to collaborate with traditional academics on the study. Thus the action research approach was key to both getting access to the company to conduct the study, and to collecting the data needed to gain the insights regarding the link between the competency system and business impact.
Finding a common language between researchers and practitioners and engaging in direct dialog play critical roles in the process of action research (Foss and Moldenæs, 2007). They also are perhaps the most straightforward way for traditional researchers to extend their paradigm for doing research in a way that does not require adopting a radically different approach. Action research can mean something as simple as having conversations and iteratively working with the organizations and individuals being studied to make sure that the data are collected in a way that is meaningful to both the research and practice objectives. For example, Prell, Hubacek, Quinn and Reed (2008) found that involving organizational stakeholders in the interpretation of their social network analysis results led to a second round of analysis and better selection of the research participants, which enabled the analysis to better meet the needs of the stakeholders and the research project.

Selecting a topic to be pursued with an action research approach can be more difficult than choosing a traditional research topic. There is a type of chicken-vs-egg challenge (which one comes first): how to know in which domains action research can be more easily conducted, and having the relationships with organizations to explore those domains. We have found that more experience doing action research leads to both a deeper understanding of how to craft acceptable topics, and deeper relationships with organizations willing to host the exploration of such topics. Indeed, it is hard to separate the two issues from each other.

This means that the researcher who is new to conducting action research has three avenues for developing a productive action research agenda. The first option is to partner with someone who is experienced in conducting action research to learn the tricks of the trade firsthand in an apprentice-type role. The second option is to take a general research agenda and shop it around to organizations that might be interested, until one is found. The third option is to
focus on developing relationships with one or a small number of organizations with an aim of jointly identifying topics that are of interest to both the researcher and the organization(s).

There is a lot of overlap between the second and third options in the type of response and adaptation the researcher needs to consider in the design of the research agenda and choice of specific topics. It is rarely ever the case that a research topic conceived in a vacuum (i.e. in the absence of dialogue with an organization) will find a match with an organization willing to host it without adaptation to the organization’s context and pressing business needs; the implication for the second option is that the more willing the researcher is to make changes to the original research agenda, the fewer the number of organizations that will need to be screened (and less time taken) before finding the right match. Similarly, the more willing the researcher is to search for a research agenda that fits the context and needs of organizations with which there are existing relationships (third option), the quicker a suitable action research topic will be identified. In both cases, taking an adaptive approach to identifying the research topic to be pursued lowers the time needed and maximizes the probability of finding a viable action research topic.

5. Conducting action research in fast growth, high change environments

Fast growth, high change environments are populated by organizations that have to be agile in order to survive. In such situations, the pace of change is so rapid and touches so many parts of the system, an action research approach may be needed even more than in settings where the rate of change is less rapid, pervasive and complex. The reasons are twofold. First, organizations’ needs to respond as quickly as possible to the external environment lessen their ability to engage in research for research’s sake: if they spend too much energy engaging in issues unrelated to the factors directly related to their survival, they run the risk of missing key
signals to which they must respond. Second, a traditionally-oriented, disengaged researcher will be at even greater risk of formulating research questions that are unrelated to the factors directly responsible for organizational success because of lack of direct access to the information in the environment to which the organization is responding.

The high technology sector is a leading example of such an environment, with rapid rates of change, disproportionately high levels of organizational birth and death, and innovation cycles that are among the shortest on the planet. As the impact of technological change spreads more deeply throughout traditionally non-technologically oriented segments of the economy, the types of volatility typically seen in the high tech sector become more likely in traditionally “sleepy” (slow growth, low rates of change) industries. A similar impact occurs as trade barriers fall and the level of international competition rises: both increase the risk of reading environmental signals wrong and lower the effective response time organizations have to ensure survival and longevity. All together, these factors raise the profile and importance of action research as a lens into the soul of organizational success in all corners of the economy.

More generally, any research question focused on young, fast growing and/or entrepreneurial firms stands to gain from adapting an action research approach. The small firm sector in general is characterized by higher rates of organizational births and deaths than the large firm sector (Davis, Haltiwanger, and Schuh, 1998). Young companies and industries are less likely to have experience working with the tools of management research and organization behavior and thus may be more resistant to embracing such an external perspective without the benefits provided by an action research approach.

A big strength of action research is that it is ideally suited for situations of high complexity and rapid change (Yorks and Nicolaides, 2007). In such settings, it can be very hard
for the researcher to know before engaging with an organization which theories are the ones that are most relevant for testing (Shotter, 2007). Has the organization undergone a recent disruptive change in the industry or its business model? Is it looking to overcome an episode of failed leadership? Has it gone through a period of unsuccessfully trying to align its systems and processes? Is there a history of operational excellence but low creativity? Is the organization excellent at coming up with new product ideas before its competitors but falls short in capturing significant market share with the new ideas before they are copied by other organizations?

All of these are examples of highly salient questions that define the reality in which an organization and its stakeholders perceive themselves to be operating. Yet, strikingly, it is these kinds of details that traditional researchers often downplay when evaluating whether an organization is suitable for testing the predetermined theories they want to evaluate (for a counter example, see Edwards, Belanger and Wright, 2002). Such researchers strive to find the organizational factors that enable them to claim that the results can be generalized to other organizations and settings – which often means downplaying the rich details of each case. We do not disagree that it is important to understand what factors in a situation can be interpreted more broadly. Our concern is that traditionally-oriented researchers often focus too much on what can be generalized and miss the important parts of what makes each case unique.

A similar issue exists in fast-growing emerging markets like Brazil, China, India and Indonesia. Beyond the rapid rates of change and evolution, conducting management research in such environments may pose particular challenges that further highlight the potential importance of taking an action research approach. The fundamental and rapid economic changes occurring simultaneously include (a) industrialization and urbanization, (b) maturation of industries from simple assembly and low value added to complete value chain including R&D, (c) simultaneous
influx of foreign multinational corporations and development of domestic champions, (d) regulation and legal system evolution, and (e) transformation of industries from state run to private enterprise. The rapid rates of change endemic in the emerging markets put companies in an unusually precarious position. A heightened sense of urgency over the economic environment should reduce their willingness to engage in any research process that is not perceived as directly contributing to the knowledge they need to survive.

For example, we are familiar with a company in China that is a national leader in an industry that is a “hot” area of research internationally. A prominent researcher from a developed country sought to engage with the company to do a case study. The company refused, however, because the researcher did not sufficiently address the company’s needs for actionable knowledge that could help it overcome its current pressing business issues. A separate group of researchers, consisting of both native Chinese and foreigners, throughout this period consistently maintained a good working relationship with the company – including access for conducting case study research – because they provided advice that the company used to improve its operations.

Based on these experiences and our reading of the literature, we have come to the conclusion that there is a pressing need for research in emerging markets that is more firmly rooted in action research. To get a more concrete sense of the potential need and role for action research with organizations in emerging markets like China today, we conducted interviews with an opportunity sample of ten companies operating in the Shanghai, Nanjing and Beijing regions in China. The companies ranged in size from very small (handful of employees) through very large (market leading position in national industry) spanning a variety of industries (textile manufacturing, consumer goods, chemicals, business services and telecommunications). The
interviews focused on the current business challenges facing each organization, and their interest in partnering with outside researchers.

The interview results revealed a fairly uniform pattern that is consistent with our hypotheses about the role that action research can play in emerging markets. First, all of the companies were struggling with significant business challenges and recognized the potential usefulness of partnering with outside experts who might be able to help them solve the challenges. Yet despite this, they all expressed little desire in partnering with typical business school faculty, unless the faculty would be willing to directly address their pressing business issues. Partnering on research topics that were more tangential to their pressing business issues was a much, much lower priority.

6. Conclusion

We have outlined the contributions that traditional and action research can make, and have argued that researchers should not be forced into choosing only one approach or the other. Rather, a mixed approach has the greatest potential to yield the insights needed to improve both theory and organizational decision making. Moreover, there is a range of ways that traditional researchers can incorporate action research principles into their research agendas. We are confident that if management researchers adopt these principles, they will find the return more than justifies the effort.

References


Figure 1

- Companies that will participate only in traditional research
- Companies that will participate in both traditional and collaborative action research
- Companies that will participate only in collaborative action research
- Companies that will not participate in any research
Table 1. Comparing the traditional and action research approaches

<table>
<thead>
<tr>
<th></th>
<th>Traditional research approach</th>
<th>Action research approach</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Theory development</strong></td>
<td>• Rely on existing literature</td>
<td>• Rely on existing literature</td>
</tr>
<tr>
<td></td>
<td>• Not limited by phenomena observed in organizations</td>
<td>• Rely heavily on phenomena observed in organizations</td>
</tr>
<tr>
<td></td>
<td>• Identify opportunities for new theory development by looking for published anomalies in research or practice arenas</td>
<td>• Identify opportunities for new theory development by working directly with organizations</td>
</tr>
<tr>
<td><strong>Empirical design / Qualitative vs. quantitative</strong></td>
<td>• Emphasize analytic rigor</td>
<td>• Emphasize both rigor and relevance</td>
</tr>
<tr>
<td></td>
<td>• Construct validity</td>
<td>• Case study work is part of the researcher’s toolkit</td>
</tr>
<tr>
<td></td>
<td>• Large number of items per construct</td>
<td>• Surveys can play just as central a role, but they are designed with an eye toward impact on practice</td>
</tr>
<tr>
<td></td>
<td>• Look for organizations with willingness to administer long surveys</td>
<td>• Limit survey length if necessary to increase response rates and generalizability to the population</td>
</tr>
<tr>
<td></td>
<td>• Deemphasize qualitative and case study aspects</td>
<td></td>
</tr>
<tr>
<td><strong>Impact on practice through the research process</strong></td>
<td>• Wait until research is completed</td>
<td>• Engage organizational stakeholders in the research process to build buy-in and alignment from the outset</td>
</tr>
<tr>
<td></td>
<td>• Maybe make general statements about how the results could be used in practice</td>
<td>• Work iteratively with the organization to ensure that applicability is maintained during the research process</td>
</tr>
<tr>
<td></td>
<td>• No validation with practitioners that the results are actionable in actual organizations</td>
<td></td>
</tr>
<tr>
<td>Extent of integration</td>
<td>Integration examples</td>
<td></td>
</tr>
<tr>
<td>-----------------------</td>
<td>----------------------</td>
<td></td>
</tr>
</tbody>
</table>
| Light                 | • Researcher makes genuine effort at end of project to ensure the results can be fully understood and incorporated by organizations into decision making  
• Researcher uses the results of the dialog about usefulness of research findings to alter future research programs to increase their perceived relevance by organizations |
| Medium                | • Researcher works collaboratively with organizations to find mutual ground in formulating and executing a research agenda, while guiding the outcome toward topics the researcher identified ahead of time as relevant  
• Researcher includes as part of the research process regular feedback loops with the organization to maximize stakeholder engagement with and participation in the research process  
• Researcher makes some adjustments as needed in the research design to improve perceived usefulness of the research process to the organization and its stakeholders |
| Heavy                 | • Researcher and organization jointly identify and decide the domain for the research process, with equal input to the domain decisions  
• Primary, but not exclusive, importance in the research design process is given to the organization’s ability to use the research results to drive effective decision making  
• Research tools are adapted to ensure usability of the results, while maintaining scientific validity |