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EVIDENCE BASE FOR COLLABORATING, LEARNING, AND ADAPTING

SUMMARY OF THE LITERATURE REVIEW, APRIL 2017

Contract Number: AID-OAA-M-14-00015

SUBMISSION DATE: APRIL 29, 2016
UPDATED: APRIL 2017

This publication was produced for review by the United States Agency for International Development. It was prepared by Dexis Consulting Group.

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A SUMMARY OF THE LITERATURE REVIEW
UPDATED APRIL 2017

Submitted to:

USAID

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DISCLAIMER:

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ACRONYMS

ADAPT	Analysis Driven Agile Programming Techniques
CLA	Collaborating, Learning, and Adapting
CoP	Community of practice
DAC	Development Assistance Committee
DFAT	Australian Department of Foreign Affairs and Trade
DFID	UK Department for International Development
EB4CLA	Evidence Base for CLA
GIZ	German Federal Enterprise for International Cooperation
ICT	Information and Communication Technology
IDB	Inter-American Development Bank
IRC	International Rescue Committee
KM	Knowledge management
M&E	Monitoring and evaluation
NGO	Nongovernmental organization
PPL	USAID's Bureau of Policy, Planning, and Learning
SIDA	Swedish International Development Agency
SRH	Self-rated health
TOC	Theories of Change
USAID/PPL	United States Agency for International Development Bureau of Policy, Planning, and Learning

PURPOSE OF THE LITERATURE REVIEW

The LEARN contract and the United States Agency for International Development/Bureau of Policy, Planning, and Learning (USAID/PPL) are managing an area of work known as the Evidence Base for Collaborating, Learning, and Adapting (EB4CLA). The purpose of this work is to answer the following key learning questions:

- Does an intentional, systematic, and resourced approach to collaborating, learning, and adapting (CLA) contribute to development outcomes?
- If so, how? And under what conditions?
- How do we know? How do we measure any contribution that CLA makes to development results?

As we began this work, we identified the need to conduct a literature review looking at these questions to understand what is known, what remains unknown, and how others have tried to answer these questions to date. We were primarily interested in answering this question: Has there been a comprehensive review of the evidence base on the effect or impact of collaborating, learning, and adapting (CLA), either separately or jointly, on development outcomes? In addition, we also considered:

- Is there evidence that collaborating, learning, and/or adapting impacts organizational effectiveness, development outcomes, or both? Does the literature identify any factors critical to CLA that are not currently included in the CLA framework?
- Who else is working on measuring the impact of CLA?

BUILDING THE EVIDENCE BASE

The literature confirms our collective experience that it is difficult to measure the CLA's impact or contribution on organizational effectiveness and development outcomes. Strengthening the evidence base around CLA's contribution is a key area for further research. To this end, USAID/PPL and the LEARN contract are pursuing an EB4CLA work stream that includes several complementary lines of inquiry, addressing the questions highlighted above. The work stream includes the following:

- **Updates to the literature review**: We will update our literature review semi-annually. We request that interested parties contact us with any articles that should be included or may have been missed at: info@usaidlearninglab.org, with the subject line: Evidence Base for CLA.
- **CLA Case Competition Analysis**: We will review cases submitted through the CLA Case Competition to analyze how the CLA approaches have contributed to organizational change and improved development results. The first Case Competition analysis will be released in the spring of 2017 and cover entries from the 2015 competition.
- **Learning Network for Implementing Partners**: USAID/PPL and USAID/E3/localworks, the LEARN contract, and the Knowledge-Driven Agricultural Development contract have convened and are facilitating a learning network aimed at developing methods to

measure CLA's contribution to organizational effectiveness and development results. Launched in November 2016, the learning network includes five grantees, whose learning will be synthesized and shared via the Learning Lab.

- **USAID Internal Learning Network**: USAID/PPL and LEARN collaborate with other operating units at USAID, including the Democracy, Human Rights, and Governance Center, localworks, the Office of Forestry and Biodiversity, and the Global Development Lab to address these key learning questions and leverage the knowledge each operating unit brings to bear, about CLA's contributions, what works in changing organizational processes and behavior, and so on.
- **Additional studies**: These studies, currently under development, will employ a range of methods, including evidence reviews, theories of change analysis, and contribution analysis, to compare strong CLA approaches with counterfactuals, negative cases, and/or alternative management approaches and thus address one of CLA's most difficult measurement challenges.

METHODOLOGY

We began the literature review by identifying and searching for keywords from the CLA framework. Recognizing that CLA is a construct used within USAID and among its stakeholders, the literature review also includes concepts beyond those found within the framework. After identifying keywords, researchers looked for summaries of existing grey and academic literature and prioritized articles related to the international development field. Additional resources were included based on relevant source references and continued keyword searches. Articles were organized according to the CLA framework in an annotated, searchable database with summaries of research methodologies and primary findings, and links to full articles, where possible.

CLA is a new and emerging concept in international development in many ways. As we neared the end of the initial literature review period (August 2016), we came across several grey literature resources that were being updated on a regular basis. As a result, for the first update in April 2017, the research assistant focused primarily on relevant grey literature published between August 2016-February 2017.

We imagine the field will continue to grow as more researchers and practitioners become interested in organizational learning and adaptive management in the international development context. Therefore, the literature review will be updated regularly by the LEARN team, and will continue to focus on both academic and grey literature.

KEY FINDINGS

Has there been a comprehensive review of the evidence base on the effect or impact of CLA on development outcomes? Is there evidence that collaborating, learning, and/or adapting impacts development outcomes or organizational effectiveness?

Overall, we found no comprehensive review of the evidence base on the effect or impact of CLA on development outcomes. However, there are discrete pieces of evidence pointing to the importance of collaborating, learning, and/or adapting on both development outcomes and organizational effectiveness. These discrete pieces of evidence are typically in the form of case

studies on development programs, though one recent empirical study from the World Bank found a significant and positive correlation between intentional, high-quality monitoring and evaluation (M&E) and development outcomes.

There are also some examples of a more systematic approach to organizational learning in the private sector (for example, Southwest, Ford Lean Manufacturing, Motorola Sigma, and so on), and how these approaches have impacted the effectiveness of these organizations. The most cited and famous example of a holistic approach to learning within an organization is the Toyota Way. This approach embodies a philosophy that aims at undergirding the company and can be summarized in two key areas: *kaizen* (the philosophy of continuous improvement); and respect for and empowerment of people. This approach is connected to the concept of "lean manufacturing" in the corporate sector. Despite these cases, most of the literature on CLA and its contributions towards organizational effectiveness and development outcomes remain predominantly theoretical or aspirational. Because of this, practitioners and researchers are calling for more comprehensive and credible studies on the effect and impact of CLA.

Difficulties in measurement are the main reason for the lack of comprehensive evidence about CLA's impact on organizational effectiveness and development.

These challenges include:

1. *Measurement.* Finding a way to measure the results of interventions—such as those that constitute CLA—that include relatively intangible aspects in a way that is meaningful and convincing;
2. *Attribution.* Making causal attributions between CLA and organizational effectiveness or achievement of development outcomes when a variety of other factors could be at play; and,
3. *Aggregation.* Because case studies are often the means by which CLA is studied within the international development context, it is difficult to aggregate across diverse case contexts to reach generalizable conclusions.

Does the literature identify any factors critical to CLA that are currently not included in the CLA framework?

The literature predominantly reinforces the components and subcomponents found in the CLA framework. However, leadership is treated in some of the literature as an independent factor that significantly enables CLA in organizations. The current CLA framework treats leadership as a part of culture (insofar as leaders promote or inhibit organizational norms that may support or hinder CLA efforts), rather than as a discrete influence. In addition, the current CLA framework does not explicitly place value on flatter organizations (which are believed to better support learning), though there is a focus on openness and relationship-building at all levels to support CLA. As it currently stands, the CLA framework does not explicitly address personality traits of team members and their competencies. Emerging literature suggests that both factors may play role in influencing the ability of teams to learn and adapt.

Who else is working on measuring the impact of CLA?

Several international development organizations and donors were found in the literature on CLA and development outcomes. While they are not specifically measuring CLA's impact on development, they are focusing on activities and ideas that are closely aligned with CLA such as feedback loops, knowledge management systems, learning culture, and so on. These include: the Asia Foundation, the Bill and Melinda Gates Foundation, Australian Department of Foreign Affairs and Trade (DFAT), the UK Department for International Development (DFID), Feedback Labs, the German Federal Enterprise for International Cooperation (GIZ)Harvard's Building State Capacity program, International Rescue Committee (IRC), Mercy Corps, Overseas Development Institute, Oxfam International, the Swedish International Development Agency (SIDA), the United Nations, and the World Bank. Specific sectors were also highlighted in the literature, including governance/public sector management, health management, and climate change.

What are the strongest pieces of evidence pointing to the difference that collaborating, learning, and adapting can make to development?

The literature indicates that CLA's impact on or contribution to organizational effectiveness and development outcomes is difficult to measure. Further, we could find no existing research that examines collaborating, learning, and adapting holistically, or looks directly at the combined effects of these approaches. As mentioned above, however, the literature presents evidence confirming that various *aspects* or *components* of collaborating, learning, and adapting matter to development outcomes and organizational performance. Therefore, to understand CLA's effects and effectiveness, it is necessary to combine and compare evidence across the different components or aspects of CLA to gain a more comprehensive understanding.

In gathering evidence, research assistants drew on research from multiple fields including business, development, economics, education, health, psychology and sociology. As this body of work continues to grow, we expect that new findings from multiple sectors will continue to shape and strengthen the evidence of CLA's impact on performance and outcomes. The key findings listed below represent the strongest pieces of evidence in support of aspects of CLA across sectors after the initial scan of the literature:

1. Leaders are essential to creating a learning culture, the foundation of learning organizations.
2. Taking time to pause and reflect on our work is critical to learning and improved performance.
3. M&E are positively and significantly associated with achieving development outcomes when incorporated into program management and designed to support learning and decision-making.
4. Strategic collaboration improves the bottom line.
5. Locally led development is most effective.
6. Teams that have high levels of trust and "psychological safety" tend to be better at learning and adapting.
7. Quality knowledge management (KM) systems have a significant impact on project performance.
8. Individuals who are curious, have "growth mindsets," and are able to empathize with their colleagues are generally better able to adapt to changing circumstances.

9. Adaptive management contributes to sustainable development particularly when it has leadership support, public support, and an adequate investment of time.

What are the implications of literature review findings on USAID's and LEARN's efforts to promote CLA?

Based on the findings below, USAID/PPL and LEARN have identified the following key implications for how we can promote greater CLA integration within USAID and among implementing partners, as follows:

Further invest in building the CLA evidence base: The literature identified deepening the CLA evidence base as an area for further research and, as such, it should be a priority moving forward. However, given the challenges in measuring CLA's effect or impact on, or contribution to development outcomes, we need to define what constitutes evidence for our interventions and our target audiences. As such, we will continue investing in the literature review updates and other work to build the CLA evidence base.

Address/consider major institutional barriers to further integrating CLA: The literature highlights certain attributes of learning organizations, such as flexibility in resources (including time), risk-taking culture, and flat (rather than hierarchical) organizational structures that may be at odds with USAID's existing culture for a variety of reasons. How can these institutional barriers be addressed or at least considered in planning? In addition, leadership and organizational culture are heavily emphasized in the literature. It is important to develop a clear strategy to address these aspects of the USAID system.

Focus on learning among local partners and communities. Thus far, KM and learning strategies in development have been based on private sector thinking that is organization-centric. Development, however, should focus on learning across all development partners and the field in general. In other words, "knowledge pooling" or knowledge sharing between development partners is encouraged. In addition, the literature speaks to significant power dynamics between northern and southern organizations when it comes to learning, and determining whose learning matters. As a result, USAID's CLA efforts should continue to encourage a move away from knowledge flowing only from north to south, and instead support USAID in working more closely with local partners and individuals, and building local knowledge into programs and plans. As part of this process, jargon surrounding learning and KM needs to be reduced to be accessible to those both within and outside USAID, including local partners.

Incentivize CLA among implementing partners: The literature highlights the drawbacks of some current donor practices, particularly those for M&E, that focus on accountability rather than learning. This practice often leads to targeting static results that are not easily adjusted during implementation. As a result, implementing partners are not properly incentivized to learn and adapt, for fear of losing future funding. For CLA to advance at the activity level under USAID funding, implementing partners will need appropriate incentives and encouragement from USAID counterparts.

Consider implications of differences in personality traits: Ultimately, it is individuals who take on the CLA work within organizations and across partner organizations. However, individual personality traits, habits, and competencies can affect who are more likely to take on these behaviors; these habits and competencies need to be considered and intentionally nurtured through coaching and training to incentivize behavior change. As with any change effort, generating trust and buy-in from stakeholders will be critical for CLA. USAID/PPL and

LEARN can look to change management champions' literature to more fully understand these implications.

Where is there evidence that collaborating, learning, and/or adapting make a difference?[1]

- has **benefits** within and between organizations, such as increasing efficiency, knowledge pooling, and building trust
- is linked with an **organization's ability to share knowledge and learn**
- **encourages innovation and boosts employees' overall performance and loyalty**
- improves team performance through a process of **building collective capacity and social capital**
- **delivers best results** when carried out strategically.

The literature reviewed provides evidence of the benefits of collaborating within and between organizations. Much of the reviewed literature focuses on the relationship between the production and transmission of knowledge—both explicit and tacit—through collaboration.[2] The benefits of knowledge transmission through collaboration include supporting creativity and innovation, which afford opportunities to adapt and facilitate the capacity to absorb this knowledge. These benefits are linked to improvements in the ability of individuals, teams, and organizations to perform their tasks. Often an additional link, both implicitly and explicitly made, is that performance

[1] These takeaways synthesize lessons from numerous articles reviewed for the literature review. While in-text citations identify the most pertinent articles that contributed to each takeaway, they are not an exhaustive list of articles found in the literature review.

[2] For an original definition of this distinction see M. Polanyi, 1966, *The Tacit Dimension*, University of Chicago Press: Chicago.

improvements derived from collaboration also correlate with improvements in outcomes (Zwarenstein, Goldman, & Reeves, 2009; Romer, 1990).

Three additional themes also emerge from the reviewed literature on collaboration, as follows:

- First, scholars have also noted the challenge of developing an evidence base on collaboration due to its multifactorial nature. Although there are attempts at measurement, it remains an area for further development (Mitchell, Shakleman, & Warner, 2001; Ansari, Hammick, & Phillips, 2001).
- Second, while the literature discusses the myriad benefits of collaboration, scholars have also noted the inherent challenges in ensuring the right balance of collaboration between organizational needs, goals, and incentives (Cross, Rbele, & Grant, 2003; Andersson, 2003).
- Third, collaboration's importance is closely linked to the ability of organizations to collectively learn from each other, a concept noted in the literature on learning organizations (Senge, 1990; Garvin, 1993).

The literature reviewed provides evidence for the role of **internal collaboration** among individuals and groups for innovation, knowledge production, and diffusion. Much of the literature tends to focus on the benefits of staff interacting with one another and transmitting knowledge (Kelly & Schaefer, 2014; Phelps, Heidl, & Wadhwa, 2012; De Meuse, Tang, & Dai, 2009; Hackman, 2002; Katzenbach & Smith, 1993; Rubin, Plovnick, & Fry, 1997). The processes that facilitate collaboration are rooted in psychological and sociological literature that discuss the role of memory, perception, and cognition when processing information with others. One example of this is the ability of staff to develop "transactive (or shared) memory systems," which facilitate group goal performance, or the ability of groups to "sense-make" within an organization (Austin, 2003; Lewis, 2004; Kanawattanachai & Yoo, 2007; Zhang, Hempel, & Tjosvold, 2007; Weick, 1995).

In the **development sector**, documented evidence in support of internal collaboration remains relatively underdeveloped. However, qualitative case studies are beginning to illustrate the indirect benefits of collaboration in facilitating relationship building that, in turn, can spur innovation. For example, in the 2015 ADAPT (Analysis Driven Agile Programming Techniques) program—launched by the IRC and Mercy Corps to research and field test adaptive management techniques in the sector—found that, "relationships and common identity built across the team, including outside work hours, can facilitate collaboration. Quarterly reviews, weekly staff meetings, and even daily briefings provide further opportunities to reinforce this culture" ("Adapting Aid," 2016, p. 6). In

Much of the literature on collaboration focuses on the benefits of staff interacting with and transmitting knowledge among themselves.

one case study that the report analyzed, for example, collaboration across three different teams helped the RAIN program in Uganda develop new loan products.

In the **business sector**, in contrast, there is substantial documented evidence that companies with better collaborative management capabilities achieve superior financial and economic performance. Collaboration encourages innovation and boosts employees' overall performance and loyalty (Dewar, Keller, Lavoie, & Weiss, 2009; Roghe, Toma, Kilmann, Dicke & Strack, 2012).

The evidence in support of collaboration spans sectors and settings as diverse as schools, hospitals, factories, offices, and battlefields, given the increased ability of groups to sense-make.

In the **healthcare sector**, however, synthetic research has also found that interprofessional rounds, interprofessional meetings, and externally facilitated, interprofessional audits can lead to improvements in patient care, such as reductions in drug use, length of hospital stay, and total hospital charges. The literature suggests the need for additional research in this area to validate this finding (Zwarenstein, et. al, 2009).

And in the **education sector**, working collaboratively has consistently been linked to professional and student achievement. This change has often been attributed in part to the collective capacity or social capital that is built as a part of collaboration (Ronfeldt, Farmer, McQueen, & Grissom, 2015; Nelson, 2012). A 2010 McKinsey report that analyzed 20 school systems around the world noted that one trait that all the systems studied had was that teachers share and seek to improve their skills together: "School-level flexibility and teacher collaboration become the drivers of improvement because they lead to innovations in teaching and learning" (Barber, Chijoke, & Mourshed, 2010, p. 44).

EXTERNAL COLLABORATION

The literature reviewed also provides evidence for the benefits of collaboration outside an organization, either within the same sector or across sectors (Faustino & Booth, 2014; Booth, 2016; Booth, 2015; Drew, 2002). The mechanisms cited by the literature are often clearly linked to information sharing, "knowledge pooling," and skill transmission between organizations (Barnard, 2003).

In the **development sector**, however, emerging research emphasizes the need for approaches that are embedded in local context, and negotiated and delivered by local stakeholders. This type of development emphasizes learning partnerships between donors and local actors that are based on trust and transparency and where differences in power between actors are acknowledged and addressed. The literature emphasizes "thinking politically," "politically smart," and "locally driven development." Iterative, flexible, and politically informed programming should be pursued. Case studies of development initiatives showed iterative problem-solving, stepwise

learning, brokering relationships, and discovering common interests were key to success, allowing actors to understand the complex development challenges they face, identify and negotiate ways forward, and find solutions that were both technically sound and politically feasible. The literature emphasizes the need for locally-led approaches that are embedded in the local context, and are locally negotiated and delivered. The literature suggests that using a facilitative approach—one that focuses on indirect interventions at strategic points within a system to strengthen the system and align the interests of system actors—can lead to more effective and sustainable development results.

In 2015, AidData released "Listening to Leaders: Which Development Partners Do They Prefer and Why?" which found that when development practitioners put the "locally led development" principle into practice, they are usually able to yield greater influence, whereas reliance on technical assistance impedes an implementing partner's ability to shape and implement host government reform efforts (Custer, Rice, Masaki, Latourell, & Parks, 2015). The study also found that host government officials rate multilaterals more favorably than Development Assistance Committee (DAC) and non-DAC development partners on all three dimensions of performance: usefulness of policy advice, agenda-setting influence, and helpfulness during reform implementation. Moreover, the study found that official development assistance that is allocated to technical assistance was negatively correlated with *all three indicators* of development partner performance. These findings lend strong support to an emerging consensus in the donor community that technical assistance alone is a generally ineffective form of aid delivery because, in comparison to locally-led approaches, it weakens country ownership and diminishes incentives for host governments to pursue broader reform efforts.

In the **business sector**, however, external collaboration is associated with obtaining information from outside the organization to improve performance and promote innovation. This information is often linked to benefits such as higher returns on research and development investments and the discovery of new, innovative approaches (Cassiman, Bruno, & Veugelers, 2002; Morgan & Berthon, 2008). The literature suggests that often the types of knowledge that are exchanged vary from the transfer of skills to tacit knowledge. Similar to internal collaboration, the literature notes the difficulties in benefiting from knowledge outside of an organization (Escribano, Fosfuri, & Tribó, 2009; Cassiman, et. al, 2002).

Technical assistance alone is a generally ineffective form of aid delivery because it weakens country ownership and diminishes incentives for host governments to pursue broader reform efforts.

- from **good quality M&E** is positively and significantly associated with project outcomes.
- that **focuses on underlying causes, assumptions, and systems** is often linked to the ability of individuals, teams, and organizations to adapt programming in the most effective and sustainable way.
- through the use of **organizational assessments, evaluations, and reviews** can lead to improved understanding and adaptation.
- is considerably constrained when tools such as a **theory of change are viewed as accountability mechanisms** rather than learning processes.
- occurs through **communities of practice that form organically** and to reflect and learn as a group.

The reviewed literature provides evidence of the role of learning under four areas of the CLA maturity tool: M&E for learning; scenario planning; theories of change; and technical evidence base. Beyond this literature, it is important to note that evidence suggests that there are myriad benefits to organizational learning in general, including adapting to changing conditions and improving organizational performance, which often begins with the individual and team benefits of providing purpose and mastery through learning (Schon, 1973; Senge, 1990).

When placed at the center of program design and performance management, learning has a significant impact on individual, team, and organizational outcomes.

The modern M&E movement has its roots in the educational and social sectors as a means to track and understand the impact of programs (Hogan, 2007; Stufflebeam, Daniel, Madaus, & Kellaghan, 2000). Almost all organizations that work with international development donor funding are required to carry out M&E in conjunction with their implementation. The literature reviewed identifies the various potential uses of M&E data to improve team and organizational performance (Pritchett, et. al., 2013; Solomon & Chowdhury, 2002; Willemijn, 2010; Wallace & Chapman, 2003; Savedoff, Levine, & Birdsall, 2006). However, despite M&E producing a variety of data and information, it often does not provide opportunities for learning and adaptation. Putting learning at the center of program design and performance management is consistent with a well-established field of rapid-cycle evaluation, sometimes referred to as developmental evaluation (Patton, 2011). However, this approach is fundamentally different from the results-driven agenda that has dominated many donor agencies over the last decade or so.

In the **development sector**, for example, M&E processes often encourage what is known as "single-loop" learning, addressing specific problems and symptoms rather than trying to understand why the problems came up in the first place, a practice known as "double-loop" learning. Double-loop learning focuses on underlying causes, questions assumptions, and seeks to understand systems. Double-loop learning is often linked to the ability of individuals, teams, and organizations to adapt programming in the most effective and sustainable way (Agric & Schön, 1978).

Factors that contribute to good quality M&E are: integrating M&E into programming; using M&E to inform decision making; and using an M&E design that is relatively simple and straightforward.

The literature identifies organizational assessments, evaluations, and reviews, especially by external organizations, as pivotal tools for learning. For example, a devastating external review of ActionAid led to the development and launch of their successful Accountability, Learning, and Planning System in 2000 (Scott-Villiers, 2002). A June 2016 World Bank study quantitatively analyzed the correlation between the quality of M&E and project outcomes (Raimondo, 2016). It found that good quality M&E is positively and significantly associated with project outcomes. The World Bank report identified a set of simple factors that can improve M&E quality including ensuring that M&E is incorporated into project management and not viewed as a separate activity. Those factors are: M&E is used for learning that informs decisions and enables adapting when necessary; M&E design is not overly complex and is aligned with existing management information systems; data collected are controlled for quality to ensure credibility and ultimately its usability for performance management; and M&E is not an operational afterthought but is supported by a clear division of labor between the World Bank team, clients, and implementing teams.

In the **business sector**, however, the closest corollary to M&E in the reviewed literature would be the philosophies and methodologies of Total Quality Management or Continuous Quality Improvement, Lean, Agile and Six Sigma, the main commonality being the intentional collection of data and information related to processes and outcomes to inform decision-making related to processes, including manufacturing, software development, and customer-centered industries including health and management consulting. Evidence exists in a variety of places that demonstrates the organizational performance benefits of this approach including improved financial, project management, and health-related outcomes (Fullerton & Wempe, 2008; Dyboa & Dingsoyr, 2008; Vest & Gamm, 2009). As GE's 1997 annual report states, "Six Sigma, even at this relatively early stage, delivered more than $300 million to our 1997 operating income. In 1998, returns will more than double this operating profit impact" ("GE Annual Report," 1997, p. 5).

SCENARIO PLANNING

Scenario planning, originating in the development of military technologies, was introduced as an organizational strategy tool in the 1960s. The use of scenario planning is most often associated with Royal Dutch/Shell during the early 1970s (Wack, 1985; Wilkinson & Kupers, 2014). It has evolved into a process employed by the private sector, and nongovernmental and community organizations.

In the **business sector**, for instance, the literature is conflicted on the value of scenario planning; however, recent evidence suggests that scenario planning can improve financial performance while others note that the value of scenario planning does not lie so much in the creation of scenarios, but in the discussion of consequences (Phelps, Chan, & Kapsalis, 2001; Miller & Cardinal, 1994).

The value of scenario planning does not lie so much in the creation of scenarios, but in the discussion of consequences.

Based on an initial review of the literature, the practice of using TOCs emanates from an evolution of concepts drawn from the practices of evaluation and informed social action. Some have argued that the tendency to view a TOC as predominantly an upward accountability mechanism considerably constrains attempts to learn from the process. Instead, it is suggested that TOCs be seen as a tool of communication and learning, rather than a method of securing funding. TOC rarely unfold as predicted; they must be adapted and reworked as new information emerges. Moving beyond single- to double-loop learning should be a key element of a TOC.

Viewing a theory of change as predominantly an upward accountability mechanism considerably constrains attempts to learn from the process.

Double-loop learning will not take place if underlying assumptions and theories are not revisited regularly and critically. While one of the biggest benefits that TOC may bring is greater organizational learning, it requires commitment to a broader model of adaptive and reflective practice (Vogel, 2012; Valters, 2014; Valters, Cummings, & Nixon, 2016). As Craig Valters describes, “a TOC approach needs to focus on process rather than product, uncertainty rather than results, iterative development of hypotheses rather than static theories, and learning rather than accountability” (Valters, 2014, p. 19).

It is also important to note that much of the literature in favor of the TOC approach tends to focus on the perceived benefits for the creator and users of TOC. This situation often relates to the fact that the term “TOC” has often had varied meanings. Stein and Valters note that TOC can serve multiple purposes for the creator and user including strategic planning, M&E, description of the change process, and as a learning tool (Stein & Valters, 2012).

TECHNICAL EVIDENCE BASE

The cultivation of a technical evidence base stems from the recognition in the **health sector** of the need to make healthcare decisions based on evidence; this term has since spread to other areas of social fields.[3] Based on an initial review of the literature, there appears to be a tension between cognitive learning, which is unobservable, and behavioral learning, which is observable, or between knowledge as an object that can be passed from person-to-person versus knowledge as something that is created in the interaction between people. Essentially, there is a tendency to reduce learning down to observable behaviors precipitated by new systems and requirements, but less focus appears to be made in the literature on knowledge being created (Huber, 1991; Chen & Edgington, 2005; King & McGrath, 2003). Limiting learning to downward flows of knowledge does not seem to be effective.

Communities of practice are most effective as a tool for reflection and learning when they form organically.

One attempt noted in the literature at bridging this divide is the formation of groups of experts or practitioners known as Communities of Practice (CoPs). CoPs are collaborative, interactive networks of individuals within a generally defined topic of knowledge. CoPs arose as a tool to facilitate knowledge sharing in a learning environment. The literature found that CoPs are more effective as tools for reflection and learning when they form organically. However, the literature also notes that leaders need to facilitate these organically formed learning groups, bringing them out of silos, supporting them, and disseminating their knowledge across the rest of their own and other organizations (Wenger, 1998; “Project-based Learning,” 2001; Moreno, 2001; “Doing the Knowledge,” Wesley & Buysse, 2001). This support includes resources such as time and administrative support and recognition such as rewards. The literature recommends that for learning to take place, interactions should be emphasized and all individuals should learn from each other.

In the **development sector**, however, procedures set up in NGOs and development organizations to promote organizational learning often consider knowledge more as an object that can be transferred from one person to another rather than something that is created in interactions. The organizations have difficulty moving from cognitive information management to people-centered learning processes. A recent study of NGOs concludes that the “widespread and tangible outputs of knowledge and learning work tend, thus far, to be based on improved information systems, rather than improved processes or changed behaviors,” and that, as a consequence, their learning structures are “more supply-led than demand-driven” (Ramalingam,

[3] For one of the seminal inspirations, see A. Cochrane, 1972, "Effectiveness and Efficiency: Random Reflections on Health Services" (PDF), the Nuffield Provincial Hospital Trust. Retrieved February 1, 2014.

2005, p. 14). A tendency was noted among these organizations to "point to information systems as the "'end product" rather than specific processes for knowledge and learning" (Ramalingam, 2005, p. 15). An example of a people-centered process is the Inter-American Development Bank (IDB) Bank Networks (CoPs) that emerged organically around different themes/sectors. These groups are self-organized, set their own objectives, and their membership is largely voluntary and self-selected. They offer a space for dialogue among those working on similar issues, and there is a general belief among network participants that fostering these communities will result in more rapid organizational learning, more effective decision-making use of lessons learned, and more rapid and effective problem solving (Moreno, 2001).

To share and create knowledge, teams must intentionally set aside time to learn from one another, a procedure that may be integrated into existing meetings and processes.

In the **business sector**, in contrast, some have noted the benefit of research and development in supporting organizational learning by increasing the company's "absorptive capacity," that is, its ability to assimilate knowledge from its environment (Cohen & Levinthal, 1990). As such, CoPs appear in the private sector with a variety of terms used to describe them. The often-cited example in the private sector of a CoP in action is a group of photocopier technicians within Xerox discussing problems with colleagues in the warehouse or over a coffee and receiving information for effective solutions (Seely Brown & Duguid, 2000).

- that occurs on **organizations and teams that apply more data-driven and adaptive leadership practices perform better** compared to those which focus less on those practices.
- in project management, **can be achieved, but only slowly, with the key ingredients** of leadership, data, patience, and public support.
- is **highly related to individual personalities,** which in turn drive office culture and institutional appetite for change.
- is carried out most effectively by **individuals who have "growth mindsets"** rather than "fixed mindsets," are inquisitive by nature, trusting, and have flexible competencies and skill sets.
- is facilitated by **group reflection which builds mutual understanding and shared trust** that aids collaboration and increases evidence-based decision-making.

The literature reviewed provides evidence in favor of adapting in response to new information and changing circumstances. Adapting or adaptive management can be traced back to ideas of scientific management pioneered in the early 1900s. Various perspectives on adaptive management are rooted in parallel concepts found in the business sector (such as total quality management and learning organizations), industrial ecology, systems theory (for example, feedback control), software development (for instance, agile methods), and experimental science (for example, hypothesis testing). The concept has attracted attention across sectors as a means of linking learning with policy and implementation. Although the idea of learning from experience and modifying behavior based on that experience has long been reported in the literature, the specific concept of adaptive management as a strategy has gained traction in the past few decades.

ADAPTIVE MANAGEMENT

A growing body of evidence suggests that aid agencies are most successful when they are able to operate flexibility and manage adaptively ("Managing Complexity," Valters, Cummings, & Nixon, 2016; Allan & Curtis, 2005; Jones, 2011). Adaptive management is an approach that combines appropriate analysis, structured flexibility, and iterative improvements in response to contextual complexity. It requires an agile and enabling culture that helps organizations use rapid feedback loops to continuously and efficiently process and build on new information to achieve their goals.

In the **development sector**, for example, practitioners are calling for new ways of working to be effective in complex and changing environments. There is a small but growing trend in the field to create programs that are more dynamic, flexible, and attuned to realities on the ground, but there is sparse evidence in support of this approach. However, there have been several case studies that demonstrate the potential of adaptive programming as a development approach. For example, the aforementioned 2015 ADAPT program launched by the IRC and Mercy Corps set out to research and field test adaptive management techniques in the development sector. The research found both positive and negative aspects of adaptive practice in each case. However, the study identified a set of five factors across six cases that form the basis for an initial set of lessons about making adaptive management a reality. These factors are: dynamic and collaborative teams; appropriate data and reflective analysis; responsive decision-making and action; agile and integrated operations; and trusting and flexible partnerships ("Adapting Aid," 2016).

Five factors that facilitate adaptive management are:

1. ***Dynamic and collaborative teams***
2. ***Appropriate data and reflective analysis***
3. ***Responsive decision making and action***
4. ***Agile and integrated operations***
5. ***Trusting and flexible partnerships***

The study found that successful adaptation was more likely to occur on teams that placed decision-making authority as close to the frontline staff and partners as possible and kept organizational boundaries between implementing partners and donors permeable. The research also found that the teams that could plan for adaptation in budgets and reporting (two of the biggest constraints on adaptation); bridge the gaps between programs, operations, and finance teams; and create mechanisms for rapid procurement, grants, and contracts, could better adaptively manage in the face of changing circumstances.

Solution/recommendation: USAID can continue to build in time and budget space for adaptation through pilot/inception phases that enable a range of strategies to be tested in "small bets."

Although these findings are just an initial set of lessons, they corroborate research that has been conducted in the **business sector** on the effect of adaptive management on team performance and outcomes from the use of Lean, Six Sigma, and Agile methodologies. In many ways, insights from the business and natural resource management sectors parallel much of the debate in development practice. One study recently found that companies that apply more data-driven and adaptive leadership practices perform better compared to those which focus less on those practices (Akhtar, Tse, Khan, & Nicholson, 2016). Another study found that change brought about by adaptive management can be achieved, but it can only be achieved slowly, with an adequate investment of time, and it requires key ingredients. Those key ingredients are: leadership, data, patience, and public support (Franklin, Helsinki, & Manale, 2007).

An individual's cognitive skills/traits (that is, attitudes towards using evidence and intrinsic learning motivation) affect a person's willingness and ability to learn and adapt. Some individuals may get defensive and closed to the idea of change when presented with reflection and learning opportunities.

In the **development sector**, however, one of the clearest findings of the 2016 research that the BEAM Exchange conducted was that the ability to be flexible and adaptive is highly related to individual personalities, which, in turn, drive office culture and institutional appetite for change (Byrne, Sparkman & Fowler, 2016). The research suggests that there are many reasons for this, but a good starting point is to understand what individual behaviors are rewarded and sanctioned in the office (such as having all the answers versus adapting in response to new information). This study also found that because a culture conducive to adaptive management is both personality-driven and decentralized, it is extremely difficult to replicate. Therefore, if adaptive management approaches are considered desirable, then clear signals need to be given to indicate this (such as praise in meetings for changes based on new information, leadership encouragement of trying new things, and so on).

In addition to having a high comfort level with "not knowing all the answers," the report, "Doing Development Differently," found that individuals that function well in highly complex and fluid environments, "rarely work alone and have strong teamwork skills, working collectively to solve problems inside and outside their institutions" (Bain, Booth, & Wild, 2016, p. 24). The report also references the work of neuroscientists who found that highly adaptive individuals have "growth mindsets" rather than "fixed mindsets" (Dweck, Walton, & Cohen, 2014). Similarly, the 2015 ADAPT study found that hiring those with "adaptive mindsets" (such as being inquisitive by nature and able to ask the right questions, and having flexible competencies and skillsets) as well as hiring local had an impact on a team's ability to effect change ("Adapting Aid," 2016).

Solution/recommendation: When hiring for key positions, place value on an adaptive mindset, soft skills, and change management experience.

Moreover, a 2016 study on DFID-funded adaptive programming in practice found that the effectiveness of an adaptive approach depends critically on getting the right staff. For example, SAVI (a DFID-funded program in Nigeria) recruited staff who had a strong commitment to reform, and were able to facilitate rather than direct, to work as part of a team, and to develop relationships of trust. SAVI also prioritized recruiting staff from the state they were working, meaning that team members had a personal stake in reform. They found that these character traits and competencies (such as curiosity, facilitation, teamwork, the ability to trust, and so on) were directly related to the ability of teams to achieve their outcomes. When reflecting on their collective approaches, the SAVI and LASER programs concluded that, "overall, the human element is critical to effectiveness" (Derbyshire & Donovan, 2016, p. 30).

The literature discusses the importance of reflecting often and changing course and adapting as needed to improve outcomes (Hilden & Tikkamaki, 2013; Andrews, 2012). The adage, "experience is the best teacher" is not entirely true. Researchers have found that it is reflection on experience that teaches the most (Di Stefano, 2015). Reflective practice requires development stakeholders to: reflect on development processes; challenge previous assumptions and instill dynamism in discourses; include multiple voices through a critical view of power relations; facilitate the creation and actualization of multiple approaches at the local level; and create opportunities for these local imaginings to be synthesized at regional and global level, to enable a better understanding of global issues and advocate for the transformation of global regimes (Jakimov, 2008).

The literature found that organizations and projects are much more likely to be successful if they adopt such practices and increase their agility. In addition, public reflection by individuals and

government agencies is a useful strategy to enhance accountability and create a stronger onus for change (Raelin, 2001).

Reflection on experience is a more useful learning practice than the accumulation of additional experience.

Recent discoveries in the **health sector**, specifically in the field of neuroscience, further support the need for group reflection within organizations. We now know from research on how our brains process information and that we are vulnerable to confirmation bias.[4] We mistake the repetition of the same thing over and over as confirmation of its truth. According to the latest research, our brain has two systems for processing information: system 1 (fast), and system 2 (slow). System 1 thinking is stored in the associative memory part of the brain and so processing is pretty much automatic and subconscious (for example, making first impressions). While system 2 thinking requires deeper concentration to understand different viewpoints, examine assumptions, and negotiate solutions. System 1 thinking is automatic while system 2 thinking is effortful. Unless intentionally called forth, our brains will revert to using system 1 thinking over system 2, opting for quick fixes over deliberative decision-making. Research has found that groups are better than individuals when it comes to avoiding the biases and errors of system 1 thinking. That's because it is much easier to "identify a minefield when you observe others wandering into it than when you are about to do so" (Kahneman, 2011, p. 417). The literature shows that reflecting as a group builds mutual understanding and shared trust that aids collaboration and evidence-based decision-making.

When properly implemented, feedback loops can be a tool for learning and adapting as well as for reporting and accountability. Several studies have sought to measure the impact of feedback loops and citizen engagement on democratic and development outcomes. So far, evidence for feedback loops has not yet caught up to theory or practice, but it is slowly beginning to emerge.

In the **development sector**, for example, the strongest evidence for feedback loops exists in the area of community-based monitoring. A 2016 report published by Feedback Labs outlines the ways in which feedback loops have directly and indirectly contributed to development outcomes (Sarkisova, 2016). In one study covered in the report, a citizens' report card in Uganda led to a 16 percent increase in utilization of health facilities and a 33 percent reduction in under-five child mortality (Bjorkman & Svensson, 2007). In another experiment in Uganda, a report card initiative that allowed constituents to design their own indicators outperformed the standard one. Researchers attribute the success of the participatory scorecard to the fact that it encouraged participants to "constructively frame the problem" by identifying the underlying

[4] Confirmation bias is the tendency to search for, interpret, favor, or recall information in a way that confirms our preexisting beliefs and prejudices, while giving little consideration to contrary evidence.

causes (such as, teacher assignments, housing, and so on) and not just the symptoms (for example, teacher absenteeism) of development challenges.

This finding also supports a movement in the **health sector** toward "self-rated health" (SRH) and in the psychotherapy field towards "feedback-informed treatment," which is the practice of providing therapists with real-time feedback on patient progress through the entire course of treatment but *from the patient's perspective*. Studies have shown that "asking patients to subjectively assess their own wellbeing and incorporating this feedback into their treatment results in fewer treatment failures and better allocative efficiency" (Minami, Tak & Brown). The emerging results from "feedback-informed treatment" suggest that when patients self-rate and participate in their own diagnosis and treatment, this can lead to positive behavior change which contributes to improved outcomes. These findings also support emerging evidence coming out of the health sector on the effectiveness of using multi-dimensional self-assessments for measuring outcomes (Benyamini, 2011).

While these studies show promise, it is important to note that feedback loops are not always effective and can sometimes do more harm than good (Bonino & Warmer, 2014; Holloran, 2014). The latter is especially true when feedback loops don't "close," meaning that people's voices were solicited but not acted on in a way that changed their circumstances. In other instances, feedback loops can be closed but factors such as personal bias, access to information, and technical know-how have reduced or negated any possible positive impact (Sarkisova, 2016). To capture local knowledge and voices, the 2016 Feedback Labs report suggests that feedback loops are "smart" when the donor and/or government agency has the willingness and capacity to respond, when people are sufficiently empowered to fully participate, and when contextual factors—such as personal bias, access to information, and technical expertise—are taken into consideration.

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ENABLING CONDITIONS WITHIN THE CLA FRAMEWORK

The following section covers the enabling conditions within the CLA Framework: culture, processes, and resources. Enabling conditions directly and indirectly influence CLA and play a role in determining CLA success and sustainability in different contexts. The evidence on enabling conditions reiterates some of the points made earlier, which lends credence to the notion that these factors are all interrelated.

CULTURE

- on teams that encourages **honest discourse and debate and provide an open and safe space** for communication is positively linked with innovation and improved performance.
- **is primarily defined by leaders** and “learning leaders” are the foundation of learning organizations.
- that fosters **team psychological safety**, the belief that a team is safe for interpersonal risk-taking, is **positively linked to learning behavior**, which in turn affects team performance.
- that encourages individuals to trust one another is critically important because **high trusting teams are generally also high-performing**.
- that rewards team members who show **sensitivity to feelings and needs and practice conversational turn taking** leads to improved performance.

The management theory literature points to an organization's culture as central to institutionalizing change. Behaviors must be rooted in social norms and shared values to take hold (Kotter, 1995). Culture is key, and leaders shape culture. The literature discusses the importance of a learning culture as the foundation for learning organizations and the role that leadership plays in fostering a learning culture (Schein, 1992; de Wet & Schoots, 2016; Faustino & Booth, 2014; Hailey & James, 2002; Su-Chao & Ming-Shing, 2007; LaFasto & Larson, 2001; Lencioni, 2002; Dewar, et. al., 2009; Blanchard & Waghorn, 2009). The literature discusses how organizations that encourage honest discourse and debate, and provide an open and safe space for communication tend to perform better and be more innovative. Leaders are central to defining culture, and "learning leaders" are generally those that encourage non-hierarchical organizations where ideas can flow freely.

Culture is key to institutionalizing change. Behaviors must be rooted in social norms and shared values to take hold.

Requirements for a learning culture include:

1. ***Decentralized/non-hierarchical decision-making processes***
2. ***Availability of slack resources (including time)***
3. ***Communities of practice; strong and enabling leadership***
4. ***A risk-taking culture (experimentation)***
5. ***Knowledge management and sharing systems.***

At the heart of a learning organization is a learning leader who enables non-hierarchical relations. Leaders are, of course, particularly influential members of an organization, and their opinions and moods are quickly picked up by other members. Their views therefore permeate most organizational processes. Requirements for a learning culture include: decentralized/non-hierarchical decision-making processes; availability of slack resources (including time); communities of practice; strong and enabling leadership; a risk-taking culture (experimentation); and KM and sharing systems. Southwest, Netflix, and other companies were successful because their leaders created a culture that was conducive to collaboration, learning, accountability, and adaptability.

In the **development sector**, for instance, the 2016 BEAM report on adaptive programming found that practical leadership that inspires adaptive programming has the following qualities: insistence on substantive engagement by all staff; an open embrace of failure; an ability to create incentives for internal reciprocity and integration; celebration of staff who are willing to be honest about results when speaking with leadership; and an overriding curiosity and enthusiasm for the task of adaptive programming that demonstrates desired behaviors in way that instructions cannot (Byrne, Sparkman, & Fowler, 2016).

Research conducted in the **business sector**, in contrast, suggests that one of the most important characteristics of a learning leader is an ability to understand and work within a changing and complex environment. Indeed, research has shown that this ability is far more important than the specific learning strategies that they advocate. Some of the learning leaders emphasized formal learning, others emphasized informal processes, while yet others focused on learning from new technologies and applied research. However, the result they were able to produce was similar in all cases, namely: their organizations were able to respond to changing circumstances to carry forward their vision (Hailey & James, 2002; Hovland, 2003).

One of the most important characteristics of a learning leader is an ability to understand and work within a changing and complex environment.

Managing adaptively requires a level of group tolerance for risk-taking, which by extension is contingent on teams having trusting relationships. Organizational behavioral scientist Amy Edmondson quantitatively measured the connection between "team psychological safety," learning behavior, and team performance.[5] She found that team psychological safety is positively linked to learning behavior, which in turn affects team performance. Examples of learning behavior include seeking feedback, sharing information, asking for help, talking about errors, and experimenting. Teams with high levels of psychological safety are more likely to participate in risk-taking learning behavior and, by extension, proactive learning-oriented action, because they trust that the team will not embarrass, reject, or punish someone for speaking up (Edmondson, 1999). Not only is this finding consistent with organizational learning theory, but it also received consistent empirical support across several analyses and independent measures. The cross-cutting theme of "trust'" is prominent in the general management literature as well as in development-specific theory and practice (Bouckaet, 2012; Gulrajani & Honig, 2016; Byrne et al., 2016).

Trust on teams is positively linked with increased learning behavior, such as seeking feedback, sharing information, asking for help, talking about errors, and experimenting.

The importance of team psychological safety and trust is further supported by the research conducted by Google's Project Aristotle. Researchers found that the highest performing groups were those that had the following characteristics: psychological safety; dependability; structure and clarity; meaning of work; and impact of work. The study also found the psychological safety and emotional behavior were related; as such, conversational turn- taking and showing

[5] Team psychological safety is defined as a shared belief that the team is safe for interpersonal risk-taking.

sensitivity to feelings and needs established team productive norms that promoted team psychological safety and contributed to improved performance (Duhigg, 2016).

This outcome aligns with what other studies have found across sectors—that high-trusting teams are generally also high-performing (Hakanen & Soudunsaari, 2012; Costa, 2003; Erdem, Ozen, & Atsan, 2003). This is, in part, because trust is associated with the release of oxytocin in our brains, meaning that the more we trust, the higher satisfaction levels we experience, which relates to an improved propensity to collaborate and perform well on teams (Zak, 2017).

Research conducted in the **business sector**, however, has found that components of successful teamwork include: external orientation; continuous learning; "straight talk" (honest, direct communication); and team orientation (De Meuse, Tang, & Dai, 2009; Hackman, 2002; Katzenbach, 1993; Rubin, 1997; LaFasto & Larson, 2001; Lencioni, 2002). Effective teams are built on applying outstanding functional skills to address complex challenges or opportunities and leveraging strong, trusting relationships to deliver innovation and results.

Learning is more likely to take place in organizations that empower their workers, and where critical thinking, analysis, and creativity is encouraged and rewarded.

Organizations with rigid hierarchical decision-making may hamper learning. Learning is more likely to take place in organizations that empower their workers, and where critical thinking, analysis, and creativity is encouraged and rewarded (Su-Chao & Ming-Shing, 2007; McGregor & Doshi, 2015). A foundational culture of investigation, debate, and agility needs to be supported and reinforced by a broad set of tools (both technical and managerial), processes (such as recruitment) and systems (such as finance, procurement and M&E).

PROCESSES

- that can **generate, capture, share, and utilize knowledge effectively** make teams more productive, innovative, and successful in achieving their goals.
- in the form of quality knowledge management systems have a **significant impact on project performance.**
- are **influenced by interpersonal characteristics and relationships**; high levels of trust and emotional intelligence correlate with high levels of knowledge sharing.

KNOWLEDGE MANAGEMENT

The literature discusses how organizations that can generate, capture, share, and use knowledge effectively are more productive, innovative, adaptive, and successful in achieving their missions (Ramalingam, 2005; Cummings, 2003; Barnard, 2003; King & McGrath, 2003). KM) facilitates reflection and learning, and is important for making good decisions and designing effective programs. The current literature agrees that KM improves various dimensions of organizational performance, such as innovativeness, competitiveness, and ultimately, financial performance (Andreeva & Kianot, 2016). However, there is a shortage of studies examining the interrelations of several KM practices in their contribution to organizational performance. The role of information and communication technology (ICT) has received a lot of attention in this field, but the literature cautions against making KM only about technology and information storage. Instead KM should be people-centric and include a focus on knowledge utilization.

People act as knowledge nodes. As such, human interaction is the basis of knowledge-sharing.

A recent study conducted by RWTH Aachen University in Germany (Bubwolder & Basse, 2016) quantitatively tested the proposed relationship between KM and ramp-up performance.[6] The study showed a significant effect of KM on the success of ramp-up projects. The study findings are in line with KM theory—as researchers found strong linear relationships between the elements constituting KM (knowledge accumulation, creation, sharing, internalization, and utilization).[7]

This finding suggests that learning from previous ramp-up projects is a potential resource in increasing the understanding and eventually performance of such projects. The study found that it was not beneficial to skip parts of KM (accumulation, creation, sharing, internalization and utilization) to save effort, as it may harm the entire result. Moreover, the study also found that the most important indicator for an increase in ramp-up performance was knowledge accumulation, followed by knowledge creation, knowledge sharing, and knowledge internalization. While this study focused solely on small and medium manufacturers in Germany, it found that potential factors, such as company size, product complexity, or applied technology, did not reveal significant influence on outcomes (Bubwolder & Basse, 2016).

[6] "Ramp-up" performance is a term used in economists to describe an increase in production ahead of anticipated increases in product demand.

[7] The study used the definitions of the terms knowledge accumulation, creation, sharing, internalization, and utilization outlined in, K.C. Lee, S. Lee, and I.W. Kang, 2005, "KMPI: Measuring Knowledge Management Performance," Information & Management, 42(3), 469-482. The authors acknowledged other KM frameworks, such as the one USAID commonly uses, but explained that they chose this framework given its use in other similar studies. Knowledge creation deals with a variety of knowledge, whether tacit or explicit and is accelerated by interrelations of individuals from diverse backgrounds. Knowledge accumulation is the process of gathering and storing knowledge. Knowledge sharing promotes the diffusion of knowledge and contributes to making work processes knowledge intensive. Knowledge utilization occurs at all levels of management activities and involves putting knowledge into practice. Knowledge internalization occurs when individual workers discover relevant knowledge, obtain it, and then apply it. In that way, internalization may give rise to new knowledge and provides a basis for active knowledge creation.

Research has shown that knowledge sharing is positively related to reductions in production costs, faster completion of new product development projects, team performance, firm innovation capabilities, and firm performance, including sales growth and revenue from new products and services (for example, Arthur & Huntley, 2005; Collins & Smith, 2006; Cummings, 2004; Hansen, 2002; Lin, 2007d; Mesmer-Magnus & DeChurch, 2009). While many organizations have invested considerable resources in KM systems, at least $31.5 billion has been lost per year by Fortune 500 companies because of failure to effectively share knowledge (Babcock, 2004). Studies suggest that one important reason for this failure is a lack of consideration for how organizational and interpersonal characteristics influence knowledge sharing (Carter & Scarbrough, 2001; Voelpel, Dous, & Davenport, 2005).

Knowledge sharing on teams is positively related to the following factors:

- ***Innovation culture***
- ***Commitment to learning***
- ***Open-mindedness***
- ***Shared vision***
- ***Expectation of reciprocity***
- ***Management support***
- ***Less-centralized structure***
- ***Non-monetary rewards***
- ***High number of interpersonal relationships***
- ***Integration of different skills across the team***

A recent study conducted by the Applied Science University in Bahrain, the Institut fur Fernstudien in Switzerland, and Hashemite University of Jordan, found that certain environmental factors such as the organization's knowledge values, its cultural and structural characteristics, and the characteristics of individuals and teams help promote knowledge sharing (Kharabsheh, et al., 2016). In addition, the study found a positive relationship between knowledge sharing and the following factors: the existence of an innovation culture; a commitment to learning; open-mindedness; a shared vision; an expectation of reciprocity among colleagues; management support (implicit and explicit); a less-centralized structure that creates opportunities for social interactions; facilitative leadership (rather than impositional leadership); non-monetary rewards (such as recognition and appreciation); a higher number of interpersonal relationships; and better integration of different skills of a person on a team (Kharabsheh et. al., 2016).

Higher levels of trust on teams correlates with higher levels of knowledge sharing.

Among the factors that aid knowledge sharing, researchers emphasized trust, which also emerged as an important factor in creating a culture conducive to learning and adapting. They found that higher levels of trust among colleagues led to higher levels of knowledge sharing. As discussed in the above section on culture, studies have found that, "it is critical to establish a trustful and caring environment for knowledge sharing, since individuals that feel safe and trusted are more likely to share knowledge"

*(*Kharabsheh et al., 2016, p. 5)*.* The literature reviewed also found a positive correlation between knowledge sharing and job satisfaction, suggesting that knowledge sharing contributes to improved team performance by increasing job satisfaction (Kianto, 2016; Kasemsap, 2014). Another empirical study conducted by the University of Pannonia in Hungary found a positive relationship between emotional intelligence and willingness to share knowledge among colleagues, further emphasizing the role that interpersonal relationships and skills play in knowledge sharing (Obermayer & Kovari, 2016).

RESOURCES

- needed to support collaboration, learning, and adapting is **relatively sparse in the literature**.
- strongly influence **power dynamics in funding relationships** that affect the implementation and impact of collaborating, learning, and adapting.
- that support **mutual learning partnerships and projects rooted in local knowledge** and adapted to local contexts are emphasized in the literature.
- when leveraged strategically, are positively linked with significant gains in **social capital and knowledge sharing by collaborating**

Studies conducted in the business sector have found and that an initial resource investment in collaboration can result in profitable returns.

The CLA framework identifies organizational resources such as staff time allocations and financial support as important enabling conditions for effective CLA integration. The existing literature on the resources needed to support CLA, however, is relatively sparse.

In their study of "How DFID Learns," the Independent Commission for Aid Impact noted that the agency made considerable financial and staffing investments to prioritize organizational learning, but few efforts reviewed the costs, benefits, and impact of these investments ("How DFID Learns," 2014). Other studies have focused on the benefits of resource investment in CLA approaches. For example, Todeva and Knoke's (2005) literature review of corporate strategic alliances and models of collaboration highlighted the significant gains that collaborating partners received from leveraging resource capabilities, social capital, and knowledge sharing. They suggested that initial resource investments in effective collaboration can result in profitable returns. CISCO (2010) found similar positive returns on investments in collaborative technologies, tools, and culture, including savings in operations, improved employee productivity, efficiency and

innovation, and positive shifts in corporate strategies, including entering new markets; building new business models; accelerating innovation cycles; and making faster and better decisions (Wiese, 2010).

Bryan and Carter (2016) suggest several lessons from contract theory for practitioners of adaptive programming; they emphasize that to introduce flexibility into program implementation and resource management, objectives and methods cannot be fully pinned down in advance. They define an "adaptive contract" as one that encourages experimentation, learning, and adaptation, which has taken hold in several sectors, though does not come without its own unique challenges.

Beyond the organizational literature, international development studies discuss broader concerns about how power dynamics in funding relationships affect CLA implementation and impact. The literature discusses structural inequalities in aid and development systems based on the north-south flow of resources that strongly impact the shape of partnerships and learning dynamics (Takahashi, 2003). For example, unequal resources and power relations between northern and southern institutions often result in knowledge transfer from northern organizations to the southern ones, rather than projects rooted in local knowledge and adapted to local contexts. The literature highlights the benefits and importance of mutual learning partnerships (Drew, 2002; Vincent & Byrne, 2009; Booth & Unsworth, 2014). In addition, southern organizations' competition for and dependence on limited funding from northern donors often hamper collaboration and partnerships among local organizations. Recognizing these concerns, international development organizations have increasingly taken steps to invest resources and shape policies to promote local partnerships and locally led development.

Unequal power relations based on funding can hamper collaborating, learning, and adapting.

CONCLUSIONS

WHERE, WITHIN THE CLA FRAMEWORK, IS THERE NOT MUCH EVIDENCE?

- **CLA Resources:** There is some literature on staffing for learning, particularly on how rotating staff can benefit from learning (Bourgeon, 2003). This literature, however, is also related to internal collaboration. While there may not be a heavy focus on resources, given that the literature does emphasize the importance of CLA, in general, and specific aspects of CLA in particular, one can infer that the resources required to make CLA happen are also important.
- **Scenario Planning:** Most of the evidence is in the private sector, and many of the articles are by consulting firms or businesses. The most-cited example is of when Royal Dutch/Shell used scenario planning to anticipate the drop in oil prices in 1986. Scenario

planning is also used for urban and public policy, but there is little evidence/research on scenario planning in development. Further research in the private sector, however, may demonstrate the value add of this approach to organizational effectiveness outside of the development sector (Schwartz, 2012; Diffenbach, 1983; Wilkinson, 2013).

WHAT METHODOLOGIES HAVE BEEN USED TO STUDY WHETHER COLLABORATING, LEARNING, AND ADAPTING MAKES A DIFFERENCE?

- Primary methodology: Case studies have used qualitative and inductive research techniques to review specific activities within organizations, or specific projects and collaborations across organizations.
- Organizational surveys: Quantitatively, some researchers have used propensity score matching and employed organizational surveys to conduct multivariate analysis and develop statistical modeling systems (for example, using structural equation modeling). These measures have been used to determine if continuous improvement systems affect organizational learning and whether these two factors (independently and jointly) affect organizational performance.
- Statistical research: Quantitatively, some researchers have employed both descriptive and inferential statistics to explore relationships between data collected in support of their hypotheses (such as partial least squares regression).
- Ethnographic research: Some has been done, specifically regarding CoPs, and social and knowledge networks.
- Action research: This type of research, in which the researcher takes an active part in the process that s/he studying, has been used to reflect on the experiences of development agencies (White, Cardone & Moor, 2004).

WHERE ARE PEOPLE CALLING FOR MORE RESEARCH?

- First and foremost, there is a need to expand the evidence base on the effect, impact, and/or contribution of CLA practices to organizational effectiveness and development outcomes. Specifically identified areas of research include the following:
    - Evaluation and impact assessment on KM
    - Empirical examinations of the impact of organizational learning and feedback loops
    - How a learning culture affects job satisfaction and performance-related outcomes
    - How contracting mechanisms impact project performance and outcomes
    - How “evaluative thinking” improves team performance and outcomes
    - How to measure the impact of adaptive management practices on programs and development outcomes
- Within CLA as a technical area, the additional areas for research include the following:
    - Who controls and drives learning? Why? And for whom?
    - There is a northern bias in the dominant KM for development discourse; more research from other regions is needed.

- What does KM in different constellations of development organizations look like?
- How are knowledge and learning being conceptualized in a given situation? This scenario pertains to the knowledge as a behavioral or cognitive activity.
- Given the more limited research in resources for CLA and scenario planning, what resources are needed to implement CLA and planning for scenarios?

REFERENCES

Akhtar, P., Tse, M., Khan, Z., & Rao-Nicholson, R. (2016). Data-driven and adaptive leadership contributing to sustainability of global agri-food supply chains connected with emerging markets. *International Journal of Production Economics, 181*, 392-401. ISSN 0925-5273. Retrieved from: http://eprints.uwe.ac.uk/27723

Allan, C., & Curtis, A. (2005). Nipped in the bud: Why regional scale adaptive management is not blooming. *Environmental Management, 36*(3), 414-425.

Andersson, K. (2009). Motivational dilemmas in collaborative learning activities: The case of the Swedish International Development Cooperation Agency (SIDA). *Public Administration and Development, 29*(5), 341-351. doi:10.1002/pad.552

Andrews, M., Pritchard, L., and Woodcock, M. (2012, June). *Escaping capability traps through problem-driven iterative adaptation (PDIA).* (Faculty Research Working Paper No. RWP12-036.) Boston: Harvard Kennedy School.

Ansari, W. E., Phillips, C. J., & Hammick, M. (2001). Collaboration and partnerships: developing the evidence base. *Health and Social Care in the Community, 9*(4), 215-227. doi:10.1046/j.0966-0410.2001.00299

Argyris, C., & Schön, D. (1978). *Organizational learning: A theory of action perspective*. Reading, MA: Addison Wesley.

Arthur, J. B., & Huntley, C. L. (2005). Ramping up the organizational learning curve: Assessing the impact of deliberate learning on organizational performance under gainsharing. *Academy of Management Journal*, 48(6), 1159−1170.

Austin, J. R. (2003). Transactive memory in organizational groups: The effects of content, consensus, specialization, and accuracy on group performance. *Journal of Applied Psychology*, *88(5):* 866-878.

Ayas, K., & Zeniuk, N. (2001). Project-based learning: Building communities of reflective practitioners. *Management Learning, 32(1)*, 61–76.

Babcock, P. (2004). Shedding light on knowledge management. *HR Magazine, 49*(5), 46−50.

Bain, K., Booth, D., & Wild, L. (2016). *Doing development differently at the World Bank: Updating the plumbing to fit the architecture*. (Report). London: Overseas Development Institute.

Barnard, G. (2003). Knowledge sharing in development agencies: Knowledge fortress or knowledge pool? *Information Development, 19(4)*, 280-288.

Benyamini, Y. (2011). Why does self-rated health predict mortality? An update on current knowledge and a research agenda for psychologists. *Psychology & Health 26*(11), 1407-1413. Retrieved from http://www.tandfonline.com/doi/pdf/10.1080/08870446.2011.621703

Björkman, M., & Svensson, J. (2007). Power to the people: Evidence from a randomized field experiment on community-based monitoring in Uganda. *The Quarterly Journal of Economics* 124 (2): 735-769. Retrieved from https://www.povertyactionlab.org/sites/default/files/publications/96%20Community-

based%20monitoring%20of%20primary%20healthcare%20providers%20in%20Uganda%20Project.pdf

Blanchard, K., & Waghorn, T. (2009). Make Sure your employees trust you—or else. *Forbes*. Retrieved from http://www.forbes.com/2009/03/23/trust-respect-employees-leadership-managing-blanchard.html

Bonino F., & Warner, A. (2014). *What makes humanitarian feedback mechanisms work? Literature review to support an ALNAP–CDA action research into humanitarian feedback mechanisms*. (ALNAP literature review). London: Active Learning Network for Accountability and performance/Overseas Development Institute.

Booth, D. (2015). *Thinking and working politically*. (GSDRC Professional Development Reading Pack No. 13). Birmingham, UK: University of Birmingham.

Booth, D. (2016). *Politically smart support to economic development: DFID Experiences.* London: Overseas Development Institute

Booth, D., & Unsworth, S. (2014). *Politically smart, locally led development.* (Discussion Paper). London: Overseas Development Institute.

Bouckaet, C. (2012). Trust and public administration. *Administration,* 60(1), 91-115.

Bourdieu, P. (1977). *Outline of a theory of practice.* Cambridge, UK: Cambridge University Press.

Bourgeon, L. (2003). *Team Building and Organizational Learning in New Product Development Projects*. Presentation at the Organizational Learning and Knowledge 5th International Conference, Lancaster University, May 30-June 2.

Bryan, K., & Carter, P. (2014). *Contracts for adaptive programming*. London: Overseas Development Institute.

Bubwolder, P., & Basse, F. (2016). *An empirical study of the effect of knowledge management on ramp-up performance in the SME sector*. Germany: RWTH Aachen University.

Byrne, K., Sparkman, T., & Fowler, B. (2016). *Getting there from here: Knowledge, leadership, culture and rules toward adaptive management in market systems programmes*. London: Beam Exchange.

Carter, C., & Scarbrough, H. (2001). Towards a second generation of KM? The people management challenge. *Education & Training, 43*(4), 215−222.

Cassiman, B., & Veugelers, R. (2002). R&D cooperation and spillovers: some empirical evidence from Belgium. *American Economic Review, 92*(4): 1169-1184.

Cassiman, B., & Veugelers, R. (2006). In search of complementarity in innovation strategy: internal R&D and external knowledge. *Journal of Management Science,* 52(1), 68-82.

Chen, A., & Edgington, T. (2005). Assessing value in organizational knowledge creation: considerations for knowledge workers. *MIS Quarterly 29*(2), 279-309.

Cochrane, A. (1972). *Effectiveness and efficiency: Random reflections on health services*. London: Royal Society of Medicine Press.

Collins, C. J., & Smith, K. G. (2006). Knowledge exchange and combination: The role of human resource practices in the performance of high-technology firms*. Academy of Management Journal, 49*(3), 544−560.

Costa, A. C. (2003). Work team trust and effectiveness. *ResearchGate, 32*(5), 605–622. doi:10.1108/00483480310488360

Cross, R., Rbele, R., Grant, A. (2016, January/February). Collaborative overload. *Harvard Business Review*.

Cummings, J. (2003). *Knowledge sharing: A review of the literature*. (OED Working Paper). Washington, DC: World Bank.

Cummings, J. N. (2004). Work groups, structural diversity, and knowledge sharing in a global organization. *Management Science*, 50(3), 352−364.

Custer, S., Rice, Z., Masaki, T., Latourell, R., & Parks, B. (2015). *Listening to leaders: which development partners do they prefer and why? (*Executive summary.) Williamsburg, VA: AidData.

De Meuse, K. P., Tang, K. Y., & Dai, G. (2009). *Construct validation of Lominger T7 model of team effectiveness.* Minneapolis, MN: Lominger International: A Korn/Ferry Company.

Derbyshire, H., & Donovan, E. (August 2016). *Adaptive programming in practice: shared lessons from the DFID-funded LASER and SAVI programmes*. London: Department for International Development.

Dewar, C., Keller, S., Lavoie, J., & Weiss, L. (2009). *How do I drive effective collaboration to deliver real business impact?* McKinsey & Company.

De Wet, J. P., & Schoots, J. (2016). The learning organisation: conditions of possibility in a feminist NGO. *Development in Practice, 26*(1), 64-76.

DFID. (2000). *Doing the knowledge: How DFID compares with best practice in knowledge management.* London: Department for International Development. Retrieved from http://www.dfid.gov.uk

Diffenbach, J. (1983). Corporate environmental analysis in large us corporations. *Long Range Planning* 16 (3), 107-116.

Di Stefano, G., Gino, F., Pisano, G., & Staats, B. (2015). *Learning by thinking: Overcoming the bias for action through reflection*. (Working Paper No. 14-093). Boston, MA: Harvard Business School.

Drew, R. (2002). *Learning in partnership: What constitutes learning in the context of South-North partnerships?* (BOND Discussion Paper.) London: British Overseas NGOs for Development.

Duhigg, C. (2016, February 25). What Google learned from its quest to build the perfect team. The *New York Times Magazine.*

Dybå, T., & Dingsøyr, T. (2009). Empirical studies of agile software development: A systematic review. *Information Software Technology, 50*(9-10), 833–859.

Dweck, C., Walton, G., & Cohen, G. (2014). *Academic tenacity: Mindsets and skills that promote long-term learning*. (White Paper). Seattle, WA: Bill & Melinda Gates Foundation.

Edmondson, A. (1999). Psychological safety and learning behavior in work teams. *Administrative Science Quarterly 44*(2): 350-383.

Erdem, F., Ozen, J., & Atsan, N. (2003). The relationship between trust and team performance. *Work Study, 52*(7), 337–340. doi:10.1108/00438020310502633

Escribano, A., Fosfuri, A., & Tribó, J. A. (2009). Managing external knowledge flows: The moderating role of absorptive capacity. *Research Policy, 38*(1), 96–105. doi:10.1016/j.respol.2008.10.022

Faustino, J., & Booth, D. (2014). *Development entrepreneurship: How donors and leaders can foster institutional change*. London and San Francisco: Overseas Development Institute and the Asia Foundation.

Franklin, T., Helinski, R., & Manale, R. (2007, September). *Using adaptive management to meet conservation goals*. (Technical review 07-1). Bethesda, MD: The Wildlife Society.

Fullerton, R., Kennedy, F., & Widener, S. (2014, September). Lean manufacturing and firm performance: the incremental contribution of lean management accounting practice. *Journal of Operations Management*, 32(7-8). doi: 10.1016/j.jom.2014.09.002

Fullerton, R., & Wempe, W. (2008, December). Lean manufacturing, non-financial performance measures, and financial performance. *International Journal of Operations and Production Management,* Retrieved from SSRN: https://ssrn.com/abstract=1318393

Garvin, D. A. (1993, August). Building a learning organization. *Harvard Business Review*, 71(4), 78–91.

General Electric Company. (1997). *Annual Report.* Fairfield, Connecticut. Retrieved from http://www.annualreports.com/HostedData/AnnualReportArchive/g/NYSE_GE_1997.pdf

Grieco, J. (2015). *Moving toward improved strategic planning in U.S. foreign policy*. *The Interagency Journal 6*(3), 39-46.

Gulrajani, N., & Honig, D. (2016). *Reforming donors in fragile states: Using public management theory more strategically*. (Report). London: Overseas Development Institute.

Hackman, J. R. (2002). *Leading teams: Setting the stage for great performances*. Boston: Harvard Business School Press.

Hailey, J., & James, R. (2002). Learning leaders: the key to learning organisations. *Development in Practice, 12*(3), 398–408.

Hakanen, M., & Soudunsaari, A. (2012). Comments. *Technology Innovation Management Review, 2*(6). Retrieved from https://timreview.ca/article/567

Hansen, M. T. (2002). Knowledge network: Explaining effective knowledge sharing in multiunit companies. *Organization Science, 13*(3), 232−248.

Hilden, S., and Tikkamäki, K. (2013). Reflective practice as a fuel for organizational learning. *Administrative Sciences 3*(3), 76-95.

Hogan, R. L. (2007). The historical development of program evaluation: Exploring the past and present. *Online Journal for Workforce Education and Development 2*(4).

Holloran, B. (2014). Closing feedback Loops? (again). Politics, Governance, and Development. https://politicsgovernancedevelopment.wordpress.com/2014/07/03/closing-feedback-loops-again

Hovland, I. (2003, August). *Knowledge management and organisational learning: An international development perspective*. (Working Paper 24). London: Overseas Development Institute.

Huber, G. P. (1991). Organizational learning: The contributing processes and the literatures. *Organization Science 2*(1), 88-115.

ICAI (Independent Commission for Aid Impact). (2014, April). *How DFID learns.* (Report 34). London: Department for International Development. Retrieved from http://icai.independent.gov.uk /wp-content/uploads/How-DFID-Learns-FINAL.pdf

Jakimov, T. (2008). Answering the critics: the potential and limitations of the knowledge agenda as a practical response to post-development critiques. *Progress in Development Studies 8*:4, 311-323.

Jones, l. (2011). *Towards a holistic conceptualization of adaptive capacity at the local level: insights from the local adaptive capacity framework***.** Background paper presented at the Building Livelihoods Resilience in a Changing Climate conference, Kuala Lumpur, March 3-5. London: Overseas Development Institute.

Kahneman, D. (2011). *Thinking, fast and slow*. New York: Farrar, Straus and Giroux.

Kanawattanachai, P., & Y. Yoo. (2007). The impact of knowledge coordination on virtual team performance over time. *MIS Quarterly 31*(), 783-808.

Kasemsap, K. (2014). The role of knowledge management on job satisfaction: A systematic framework, *Advances in Secure Computing, Internet Services, and Applications* (104-127). Suan Sunandha Rajabhat University, Thailand: IGI Global.

Katzenbach, J. R., & Smith, D. K. (1993). *The wisdom of teams: Creating the high-performance organization.* Boston: Harvard Business School Press.

Kelly, K., & Schaefer, A. (2014). *Creating a collaborative organizational culture.* (White Paper). Chapel Hill, NC: Keenan-Flagler Business School, University of North Carolina.

Kharabsheh, Bittel, N., Elnsour, W., Bettoni, M., & Bernhard, W. (2016). A comprehensive model of knowledge sharing. In Moffett, S., and Galbraith, B., editors, *Proceedings of the 17th European Conference on Knowledge Management,* 455-461, Ulster University, Northern Ireland.

Kianto, A., Vanhala, M. and Heilmann, P. (2016, July). The impact of knowledge management on job satisfaction. *Journal of Knowledge Management 20*(4), 621-636.

King, K., & McGrath, S. (2003). *Knowledge sharing in development agencies: Lessons from four cases.* (OED Working Paper). Washington, DC: World Bank.

Kotter, J. P. (1995). Leading change: Why transformation efforts fail. *Harvard Business Review*, 73(2).

LaFasto, F., & Larson, C. (2001). *When teams work best: 6,000 team members and leaders tell what it takes to succeed.* Thousand Oaks, CA: Sage.

Lee, K. C., Lee, S., & Kang, I. W. (2005). KMPI: Measuring knowledge management performance. *Information & Management, 42*(3), 469-482.

Lencioni, P. (2002). *The five dysfunctions of a team: A leadership fable.* San Francisco: Jossey-Bass.

Lewis, K. (2004). Knowledge and performance in knowledge-worker teams: a longitudinal study of transactive memory systems. *Management Science, 50*(11), 1519-1533.

Lin, H.-F. (2007). Knowledge sharing and firm innovation capability: An empirical study. *International Journal of Manpower, 28*(3/4), 315−332.

McGregor, L., & Doshi, N. (2015, November). How company culture shapes motivation. *Harvard Business Review.* Retrieved from https://hbr.org/2015/11/how-company-culture-shapes-employee-motivation

Mercy Corps and International Rescue Committee. (2016). *Adapting aid: lessons from six case studies.* Edinburgh: Mercy Corps.

Mesmer-Magnus, J. R., & DeChurch, L. A. (2009). Information sharing and team performance: A meta-analysis. *Journal of Applied Psychology, 94*(2) 535−546.

Miller, C. C., & Cardinal, L.B. (1994). Strategic planning and firm performance: a synthesis of more than two decades. *Academy of Management Journal, 37(*6), 1649-65.

Minami, T., & Brown, J. (N/A). Feedback informed treatment: an evidence based practice. (Blog post on A Collaborative Outcomes Resource Network (ACORN) website: https://psychoutcomes.org/COMMONS/OutcomesInformedCare Retrieved March 2017.

Mitchell, J., Shakleman, J., & Warner, M. (2001, October). Measuring the 'Added Value' of Tri-Sector Partnerships. (Working Paper No. 14). Business Partners for Development—Natural Resources Cluster. https://www.commdev.org/userfiles/files/902_file_wp1ba.pdf

Moreno, A. (2001, September). Enhancing knowledge exchange through communities of practice at the Inter-American Development Bank. *Aslib Proceedings 53*(8), 296-308.

Morgan, R. E. & Berthon, P. (2008). Market orientation, generative learning, innovation strategy and business performance inter-relationships in bioscience firms. *Journal of Management Studies, 45*(8), 1329-1353.

Mourshed, M., Chijioke, C., & Barber, M. (2010). *How the world's most improved school systems keep getting better*. (Report). McKinsey & Co. Retrieved from http://www.mckinsey.com/~/media/mckinsey/industries/social%20sector/our%20insights/how%20the%20worlds%20most%20improved%20school%20systems%20keep%20getting%20better/how_the_worlds_most_improved_school_systems_keep_getting_better.ashx

Nelson, C. (2012). *Building capacity to transform literacy learning.* (Literature review). Urbana, IL: National Center for Literary Education. Retrieved from http://www.ncte.org/library/NCTEFiles/About/NCLE/NCLEshortlitreview.pdf

Obermayer, N., & Kovari, E. (2016). *The impact of emotional intelligence on knowledge sharing behavio*r. Hungary: Department of Management, Faculty of Business and Economics, University of Pannonia.

Patton, M. Q. (2011). *Developmental evaluation: Applying complexity concepts to enhance innovation and use*. New York: Guildford Press.

Phelps, C., Heidl, R., & Wadhwa, A. (2012). Knowledge, networks and knowledge networks: A Review and Research Agenda. *Journal of Management* 38(4), 1115-1166.

Phelps, R., Chan, C., & Kapsalis, S. C. (2001). Does scenario planning affect performance? Two exploratory studies. *Journal of Business Research 51*(3): 223–232.

Polanyi, M. (1996). *The tacit dimension*. Chicago: University of Chicago Press.

Pritchett, L., Samji, S., & Hammer, J. (2013). *It's all about MeE: Using structured learning ("e") to crawl the design space*. (Working Paper 322). Washington, DC: Center for Global Development.

Raelin, J. A. (2001). Public reflection as the basis of learning. *Management Learning 32* (1), 11-30.

Raimondo, E. (2016, June). *What difference does good monitoring & evaluation make to World Bank project performance?* (Policy Research Working Paper). Washington, DC: World Bank.

Ramalingam, B. (2005*). Implementing knowledge strategies: lessons from international development agencies.* (Working Paper 244: 31.) London: Overseas Development Institute.

Reynolds, M., & Vince, R. (2004). Critical management education and action-based learning: synergies and contradictions. *Academy of Management Learning and Education 3*(4), 442–456.

Roghe, F., Toma, A., Kilmann, J., Dicke, R., & Strack, R. (2012). *Organizational capabilities matter, organization of the future: Designed to win.* Boston Consulting Group. Retrieved from https://www.jma.or.jp/keikakusin/pdf/english_report.pdf

Romer, P. (1990, October). Endogenous technological change. *Journal of Political Economy*, *98*(5), 71-102.

Ronfeldt, M., Farmer, S., McQueen, K., & Grissom, J. (2015). Teacher collaboration in instructional teams and student achievement*. American Educational Research Journal, 52*(3), 475-514. Retrieved from http://journals.sagepub.com/doi/abs/10.3102/0002831215585562.

Rubin, I. M., Plovnick, M. S., & Fry, R. E. (1977). *Task oriented team development*. New York, NY: McGraw-Hill.

Sarkisova, Elina. (2016). *Is feedback smart?* Feedback Labs: Fund for Shared Insight.

Savedoff, W., Levine, R., & Birdsall, N. (2006, May). *When will we ever learn? Improving lives through impact evaluatio*n. (Report). CGD Evaluation Gap Working Group. Washington, DC. https://www.cgdev.org/files/7973_file_WillWeEverLearn.pdf

Schein, E. (1992). *The learning leader as culture manager: Organizational culture and leadership*. San Francisco: Jossey-Bass Publishers.

Schön, D. (1973). *Beyond the stable state*. New York, NY: Norton.

Schwartz, P. (2012). *The art of the Long View*. New York, NY: Crown Business.

Scott-Villiers, P. (2002). The struggle for organizational change: How the ActionAid accountability, learning and planning system emerged. *Development in Practice, 12*, 424–345.

Seely, J., & Duguid, P. (2000). *The social life of information*. Boston: Harvard Business School Press.

Senge, P. M. (1990). *The fifth discipline: The art & practice of the learning organization*. New York, NY: Doubleday Business.

Solomon, M., & Chowdhury, A. M. (2002). Knowledge to action: evaluation for learning in a multi organisational global partnership. *Development in Practice 12*(3): 346-354.

Stein, D., & Valters, C. (2012). Understanding "theory of change" in international development: A review of existing knowledge. (Paper 1). Justice and Security Research Programme and The Asia Foundation. London, UK.

Stufflebeam, D., Madaus, G., & Kellaghan, T. (2000). *Evaluation models: Viewpoints on educational and human services evaluation*. Boston: Kluwer Academic Publishers.

Su-Chao, C. & Ming-Shing, L. (2007). A study on relationship among leadership, organizational culture, the operation of learning organization and employees' job satisfaction. *The Learning Organization 14*(2).

Takahashi, C. (2006). Partnerships, learning, and development: A case study from Ghana. *Development in Practice, 16*(1).

Todeva, E., & Knokes, D. (2005). Strategic Alliances and Models of Collaboration. *Management Decision, 43*(1). Retrieved from http://epubs.surrey.ac.uk/1967/1/fulltext.pdf

Valters, C. (2014). *Theories of change in international development: Communication, lLearning, or accountability?* (The Justice and Security Research Programme Paper 17). The Asia Foundation. London, UK.

Valters, C., Cummings, C., & Nixon, H. (2016). *Putting learning at the centre: Adaptive development programming in practice*. London: Overseas Development Institute.

Vest, J., & Gamm, L. (2009). A critical review of the research literature on Six Sigma, Lean and StuderGroup's Hardwiring Excellence in the United States: The need to demonstrate and communicate the effectiveness of transformation strategies in healthcare. *Implementation Science, 4*(35), 4-9.

Vincent, R., & Byrne, A. (2006, August). Enhancing learning in development partnerships. *Development in Practice,16*(5).

Voelpel, S. C., Dous, M., & Davenport, T. H. (2005). Five steps to creating a global knowledge-sharing system: Siemens' ShareNet. *Academy of Management Executive, 19*(2), 9−23.

Vogel, I. (2012). *Review of the use of "Theory of Change" in international development.* (Review report). London: Department for International Development.

Wack, P. (October 1985). Scenarios, uncharted waters ahead. *Harvard Business Review.*

Wallace, T. & Chapman, J. (2003, April). Some Realities Behind the Rhetoric of Downward Accountability. Paper presented at INTRAC' s 5th Evaluation Conference: Measurement, Management and Accountability, KDK Conference Centre, Soesterberg, Netherlands.

Weick, K. E. (1995). *Sensemaking in organizations*. Thousand Oaks: Sage Publications.

Wenger, E. (1998). *Communities of practice: learning, meaning and identity*. New York: Cambridge University Press.

Wesley, P. W., & Buysse, V. (2001). Communities of practice: Expanding professional roles to promote reflection and shared inquiry. Topics in Early Childhood Special Education. Chapel Hill: University of North Carolina.

White, N., Cardone, R., & de Moor, A. (2004). Learning 3.0: Collaborating for impact in large development organizations. *Knowledge Management for Development Journal 10*(3): 21-37.

Wiese, Carl. (2010). *Return on collaboration: Assessing the value of today's collaboration solutions*. White Paper. http://www.cisco.com/c/dam/en/us/solutions/collateral/enterprise/collaboration-strategies/c11-597613-00_return_collab_wp.pdf

Wilkinson, A., & Kupers, R. (2014). *The essence of scenarios: learning from the shell experience.* Amsterdam University Press. Amsterdam, Netherlands. Retrieved from http://www.jstor.org/stable/j.ctt6wp7mz.

Willemijn, V. (2010, April). Learning by southern peace NGOs. *The Journal of Development Studies, 46*(4).

Zak, P. J. (2017, January). The neuroscience of trust. *Harvard Business Review*. Retrieved from https://hbr.org/2017/01/the-neuroscience-of-trust

Zhang, Z.-X., Hempel, P. S., Han, Y.-L., & Tjosvold, D. (2007). Transactive memory system links work team characteristics and performance. *Journal of Applied Psychology, 92*(6), 1722-1730.

Zwarenstein, M., J. Goldman, & S. Reeves. (2009). "Interprofessional collaboration: Effects of practice-based interventions on professional practice and healthcare outcomes." *Cochrane Database of Systematic Reviews* 3, CD000072. doi:10.1002/14651858.CD000072.pub2

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