EMBEDDING SUSTAINABLE CHANGE IN PRACTICE
AND
OUTCOMES
ADAPTED FROM THE WORK:

Facilitating the Research to Practice Process:
A Review of the Literature

Developed by
Carol E. Hays, Ph.D.
Deirdre Danahar, M.S.W., M.P.H.
D.G. Mawn, M.A., J.D.
Lourdes Vazquez, M.S.W.
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Introduction
The wide ranging recognition across public health and human service fields of the need to implement evidence based practices has grown increasingly strong within the field of substance abuse prevention in recent years. National outcome measures for the field now place particular emphasis on the extent to which evidence based programs, policies and practices are implemented with federal resources, the primary funding stream for most prevention efforts. Prevention research has grown to identify a wide range of social and environmental influences that shape the attitudes and behaviors of populations and provide opportunities for intervention at the population level along with more traditional individually focused strategies. Despite advances in prevention knowledge as well as other public health fields that have documented positive outcomes in published research, research about the utilization of evidence based practices in the public health, social services, and medical fields suggests that as few as 25 percent of practitioners utilize evidence based approaches or rely on research evidence more generally to guide their decision making and practice (Nutley et al., 2008). This is a frustrating trend given the effort at federal and state levels to encourage practitioners to utilize evidence to guide practice.

There is a growing body of research literature spanning a variety of public health, social service and medical fields that is stimulating a dialogue among researchers, funders and service professionals to identify methods for expediting the uptake of research and evidence based approaches into field practice. This research is establishing theories of how the science to practice bridge can best be built and operationalized to better encourage and strengthen the use of research and evidence based practices. The following literature review considers the elements in the research to practice process and the characteristics and dynamics that work to support and inhibit the process. Prevention policy makers as well as those who work as change agents and providers of technical support to promote utilization of research to inform and strengthen practice may find this review useful as they consider how further encourage evidence based practice within their systems.

Research to Practice is Complex

A growing body of research suggests that in addition to effective implementation, moving innovative strategies from research to practice is in itself a complex process. First, policy makers and practitioners must be aware of a problem and generate enough interest within their respective systems to address it. Second, there must be available solutions that fit the problem and the context in which it occurs that can be implemented with adequate ease to actually reduce the problem (Kingdon, 1984). Given constraints on implementation resources and the need to justify results, funders are increasingly emphasizing rational decision making approaches that lead to the selection of evidence based strategies in order to encourage the use of what works rather than expending limited resources on practices with no proven record of intended effect. While it might appear then that with incentives such as funding to select evidence based strategies, all that must be done is to make the information

about effective practices available to policy makers and practitioners in order to increase their use. As it turns out, changing practice behaviors is not as easy as simply getting the information into the hands of practitioners.

The spread of new knowledge--both research and practical knowledge--into practice is a process. Various models of how new knowledge is spread span a continuum from the more passive diffusion--"Let it happen"--to very intentional--"Make it Happen"--dissemination approaches (Rogers, 2003; Greenhalgh et al., 2004). Documentation of these models reveals that the spread of knowledge is a complex and highly contextual process. Spread of knowledge happens under both conditions depending on the nature of the knowledge and those who would utilize it to inform decision making and practice (Rogers, 2003). However, funders seeking to encourage more rapid spread of approaches with evidence of improving public health, may prefer models with promise of 'making it happen' more quickly.

Following the dissemination approach to encourage adoption and successful implementation of evidence based practices. Kitson et al (1998) propose a model of dissemination in which active facilitators serve as a bridge between research knowledge and particular contexts in which it is to be applied in order to translate knowledge and support successful implementation and outcomes. This model of knowledge translation incorporates a process through which expert facilitators, knowledgeable about evidence based practice, work with those who might adopt new knowledge (individuals and teams), gain and utilize new knowledge while addressing conditions within the organizational or broader system context that can be detrimental to adoption, successful implementation and ongoing utilization of effective practices (Kitson, 2008).

Knowledge Translation

The area of research concerned with how innovative knowledge is transmitted to policy makers and practitioners is referred to as Knowledge Translation (Kitson et al., 1998). There is now ample evidence to indicate that providing information alone is a relatively ineffective strategy for closing the gap between research and its utilization in the field (Bero et al., 1998; Davis et al., 1995; Kelly et al., 2000; Lomas et al., 1989; Soumera et al., 1989). Instead the process of bringing about successful implementation involves translating knowledge into a context where it can be effectively practiced. Through publications over the past ten years, a British research team lead by Allison Kitson has sought to develop and clarify a theoretical model of the Knowledge Translation process, systematically defining and conceptualizing each element in their model in various peer reviewed journals. In 2008, Kitson's team hypothesized and empirically demonstrated their theory that successful implementation (SI) is a function of research based knowledge or evidence (E), context (C) and facilitation (F) such that:

$$SI=f(E, C, F).$$

The successful implementation of evidence based strategies is believed to be a function of the available evidence, the context in which the evidence is to be applied, and the facilitation of the linkage between the research and the user (Kitson et al). The process of bringing about successful implementation involves translating knowledge into a context where it can be effectively practiced. In order to be applied, research findings (evidence) must have utility to fit as a solution to a given problem. Such innovative solutions must be feasible in a given context, especially so when the innovation has multiple components and thus may be complex to implement. The process of Knowledge Translation helps to increase the perceived utility and feasibility of the research based practice among practitioners and policy makers. There is ample evidence across diverse bodies of research, including prevention science, medicine, nursing, and policy change that the utilization or uptake of knowledge (research or evidence based information) is not a simply a linear process where research is published and practitioners quickly read, integrate and apply it (Nutley et al., 2007; Rogers, 2005; Wandersman et al., 2008). Bridging the gap between research and practice is best accomplished with ongoing facilitation to connect the practitioner or policy maker to the appropriate research and in a manner that best fits the context rather than simply publishing best practices and hoping it makes its way into the hands of those who need it when it is needed. Therefore knowledge translation (Kitson et al., 1998) is concerned with how innovative knowledge is transmitted to policy makers and practitioners.

This translation of knowledge is a complex, messy, personalized process whereby the end users of knowledge make meaning out of knowledge and elect whether, how, and when to use the knowledge. Moreover, the end user is not typically an individual practitioner who makes unilateral decisions about their work and actions in isolation, but rather acts in concert with and through an organization which is very often part and parcel of a larger system. Therefore, it is important to consider the organizational context in which research must take root. And in the case of community based prevention, lessons learned from evaluations of these approaches indicate that the community presents an even larger and potentially more important context that must be considered if implementation of complex, multifaceted prevention strategies is to be successful.

Thus understanding what counts as evidence, how context affects the extent to which evidence can inform practice and the role and function of facilitation in serving as the linking mechanism between evidence and context can provide important insights for increasing the use of evidence based practices, their successful implementation and for improving outcomes overall.

Considering Evidence, Context and Facilitation

The following sections will consider each of the elements of the model put forward by Kitson's team, providing a definition and what research has to say about how each element, independently and in concert with the others, may affect successful

implementation of strategies. Those who provide knowledge translation to advance the practice of evidence based approaches through technical assistance and other means may also find these concepts helpful in clarifying their role and functions and in identifying organizations that can most readily adopt and integrate research based knowledge as it emerges--particularly in the complex arena of community based health promotion and prevention.

We begin with a consideration of evidence, what should be considered evidence that informs practice, the phases of evidence development, and the attributes of innovations that facilitate their utilization and how the spread of knowledge is linked to its development.

What Counts as Evidence?

The development of knowledge is an ongoing process. Like an unending stream, construction of knowledge builds upon past understanding, both theorized relationships between social phenomenon as well as empirical or measured evidence of the actual nature of these relationships. Evidence needs to be independently observed, scrutinized and verified if we are to rely on it (Davies, Nutley and Smith, 2002). This process takes time. As such, knowledge—especially in the social sciences—is said to be contingent, continually developing and evolving with each new published finding. And while the dynamic nature of research creates opportunities for continuous learning, it can also create a sense of being "not quite there yet" and a hesitancy on the part of the practitioner community to invest heavily in gearing up for a seemingly endless stream of new theoretical models and program approaches.

Knowledge is derived from a variety of credible sources that include both formal and informal sources of information have been subjected to testing and found to be credible (Rycroft-Malone et al., 2004, Higgs and Jones, 2002). Formal knowledge is derived from research, with the primary concern is about being able to generalize this knowledge across settings. Professional knowledge comes from practice experience and is less concerned about transfer across settings (Rycroft- Malone et al., 2002). The melding of these sources of knowledge occurs within a complex contextual practice environment and is shaped by that environment. Research Knowledge is continually evolving. It may have different interpretations by various stakeholders and is a product of its historical time. Research is rarely value free and may compete with experiential knowledge. Therefore, research knowledge cannot simply be put out in journals and practice guides with the expectation of automatic, immediate uptake and application of this knowledge by practitioners. There is a need for knowledge translation to make sense of this information in the context of practitioner's practice (Rycroft-Malone et al., 2004, Wood, et al, 1998, Higgs and Titchen, 1995, Nutley, et al, 2007).

Personal characteristics of the researcher can affect both the diffusion and adoption of research and translation into evidence based action (Nutley et al, 2007). For a variety of reasons not all researchers are vested in helping to foster use of research in the practice community. Academic environments may serve to inhibit the flow of research from universities to practice and policy communities. And there are typically minimal resources allocated for dissemination activities, as well as little professional support and incentives to support dissemination of published research.

Without application guidance, the result can be that research findings are used inconsistently by practitioners and policy makers in an instrumental manner, that is to justify a given policy or practice but not to guide overall decision making. In addition, the nature of the knowledge development and evidence building process itself may generate distrust among some and discourage its use.

There is increasing recognition among researchers of the need to meld and integrate practice based knowledge with research knowledge (Rycroft- Malone, et al, 2004). Practical knowledge or professional craft knowledge and the expertise of peers are a critical piece of knowledge that professionals must be able to rely on, regardless of the perception that it is biased. This suggests that a workforce must be well versed and knowledgeable about their profession. Simply reading research will not provide a rich enough knowledge base to support a practitioner's ability to provide quality services which meet the needs of the population or community served.

The nature of research itself, its credibility and how it is communicated are important to consider and impact the likelihood that it will be used by practitioners (Crewe and Young, 2002; Nutley et al, 2007). Research must be seen as high quality as defined by the potential end user as well as relevant and timely. The research methodology used may lend legitimacy to the findings. For example, the presumed gold standard for valid and reliable evidence is the randomized controlled trial (RCT). Yet such trials are expensive and can take many years to yield research with utility. However, even such trials in which subjects are randomly assigned to experimental and control conditions often exclude the very things that influence real world implementation of research results. Thus the reality of these results actually being immediately generalizable is unrealistic as it takes time to fit things into the many real life contexts in which they will be applied. Additionally the source from which the user accesses the information, be that a technical assistance provider, governmental agency, journal article, website or other source, must hold credibility with the user. "Sources and conveyers of information may be as influential as the content" (Crewe and Young, 2002). Given the continually evolving nature of research, practitioners are advised to use the current best evidence judiciously and have an understanding of the nature of the evidence they are relying on.

Characteristics of research itself can impact its use in practice. New knowledge or approach that are perceived as having relative advantage in comparison to current approaches, that are not too complex to implement, are perceived as compatible

with local needs and context, that can be tried locally for fit or can be observed in other settings are more likely to be adopted (Rogers, 2003).

What is Context?

Context is the specific environment in which adopters utilize evidence that impacts their work as well as the environment in which the creation of new evidence takes place (Kitson et al., 1998; McCormack et al., 2002). Within a given context, there may be various levels of systems that shape the utilization of evidence: from the individual practitioner who works within an organization, departments which create specialization within an organization, the organization itself which often works within a larger system comprised of a collective of organizations which receive funds from governmental and nongovernmental agencies to improve health or other social outcomes. The autonomy and authority of each system level to make or shape decisions for their level or for others within the system can impact the culture of decision making across the system, including how and to what extent evidence is used to inform practice. To the extent that the use of research is actively encouraged or expected by senior decision makers and structures, policies, and procedures are in place which make using research practical and feasible, practitioners are more likely to attempt to apply research to their practice.

How does the context impact the use of research?

Since the characteristics of each implementation context are complex and in many ways unique, developing a thorough understanding of a given context is important prior to undertaking any knowledge translation effort to support the use of research. No one particular approach or theory of knowledge translation will fit all contexts (Estabrooks et al., 2006). Knowledge about the local context such as performance and evaluation data, the organizational and broad community cultures, feedback from stakeholders, local conditions and policies increasingly are recognized as important sources of information to inform decision making and shape evidence based action (Langly et al., 1997; Rycroft-Malone et al., 2004b; Stetler, 2003).

Nutley et al. (2007) suggests that utilization of research occurs along a continuum that spans from implementing particular strategies with evidence of effectiveness (instrumental uses) to more conceptual uses of research that guide general knowledge and understanding across a field of practice. To the extent that practitioners, organizations and systems have the capacity to utilize both types of research or knowledge, systems are more likely to be open to new information and integrate it more quickly. The continuum proposed by Nutley's team is presented below.

More Conceptual Uses   **More Instrumental Uses**

Awareness	Knowledge and understanding	Attitudes, perceptions, ideas	Practice and policy change

Understanding the nature of context and its effect on adoption and application, also referred to as uptake, of new research knowledge is crucial for policy makers as well as those directly facilitating adoption by practitioners (Greenhalgh et al., 2004 a&b). A policy push can help provide an incentive to apply new knowledge or use an innovative research based practice; however it does not ensure successful uptake and implementation. Systems and organizations that have a predisposition toward gaining and using knowledge to guide broader decision making are more likely to translate knowledge into effective action (Nutley et al. 2008).

Given this, workforce development should include a focus not only on individual professional development to support implementation of evidence based practices but also on organizational structures and capacity to support knowledge uptake and utilization more generally. Workforce development alone without addressing these other levels of context will limit the impact of individual practitioners to embed and sustain new research. There is evidence to suggest that some organizations actually weigh the risks associated with adopting new evidence based strategies. These perceived risks can include costs associated with training, shifting organizational resources, as well as the possibility that funders will shift emphasis in the short term, leaving the organization with sunk costs (Panzano and Roth, 2006).

What makes a context open to new knowledge?

A key to getting research used, especially by practitioners, is to identify and address barriers to research utilization within the local context while encouraging factors that support utilization (Nutley et al., 2007; Panzano and Roth, 2006). These barriers are present within organizations (internal context) as well as in the broader system (external context). Identifying and addressing barriers can help to increase the likelihood not only that new knowledge will be acquired but that it will be used to promote successful implementation, strengthening outcomes. Thus a variety of problems could be avoided or more effectively addressed such as the misalignment of evidence based approaches with the actual needs and resources present in a given context or the a lack of critical buy in for new, more effective approaches on the part of key stakeholders.

Internal Context

Research points to a variety of internal characteristics and conditions of organizations influence readiness and ability to successfully use research (Kingdon, 1984; Rogers, 2003; Greenhalgh et al., 2004 a&b; Panzano and Roth, 2006). These include:

- A learning organization culture which values innovation and change;
- The impetus and perceived need for change;
- Availability of a perceived solution that fits needs and goals;
- Organizational propensity to take risks;
- Balance between support and opponents of the innovation;
- Implications of change for staffing and other organizational impacts;
- Availability of dedicated time and resources to implement innovation;
- Structure and use of internal evaluation and monitoring systems.

Outer Context

Research also points to conditions in the outer context that influence uptake and utilization of evidence. The four key aspects of the outer context are the economic, political, communication avenues, and social conditions that influence and impact any attempted change in process, strategy, policy or other actions taken to embed new research. The impact of any of these four outer context areas are affected by the interests, ideology, information and institutions embedded in the outer context in which the adopter (individual or organization) operates (Weiss, 1999).

These external dynamics can serve as potential tensions affecting perceptions of needs, priorities as well as individual, organizational, community and system agendas. Panzano and Roth (2006) found that the decision to adopt evidence based interventions is a strategic decision made in part by the perceived risks associated with the adoption and the perceived capacity to manage these risks. The risks and benefits associated with the uptake of research must be evaluated in light of the particular context in which it will be used. "…it is not the interventions themselves that lead to change, but the underlying reasons or resources that they offer (Pawson, 2002)" to address the needs and priorities of adopters.

How do organizations learn about research?

Five important mechanisms have been identified as improving the awareness and use of research (Walter et al., 2003b; Nutley et al., 2007). These are:

1. Dissemination of research findings to potential users in a manner tailored to the specific user audience;
2. Stronger interaction between researcher and practitioner;

3. Social influences of others (experts and peers) to inform potential adopters of and persuade them about the value of research findings;
4. Facilitation of the use of research findings through technical, organizational, social and emotional support; and
5. Use of incentives and reinforcements to encourage and support research use.

Organizations may learn about research through various channels of communication, both formal and informal. Diffusion is the less formal spread of information while dissemination is the formal intentional spread (Greenhalgh et al., 2004 a & b). Diffusion is the process by which an innovation is communicated through certain channels over time among the members of a social system (Rogers, 2003). Dissemination is focused on the task of actively spreading a message to target groups (Greenhalgh et al., 2004b; Mowatt et al., 1998).
Effective dissemination attends to the sources of the information used by potential users, key messages about the content, the medium used to communicate about the message, and the interests and needs of the potential user.

How do organizations turn awareness of the possible benefits of research into action and realized benefits in the field?

An organization's absorptive capacity determines its ability to create and utilize knowledge in ways that enhance its ability to gain and sustain an advantage in its field over time (Zahra and George, 2002). An organization or system that has sufficient absorptive capacity can move from conceptual uses of research to more instrumental uses of research fluidly and be positioned for successful update, retooling when necessary and implementation (Cohen and Levinthal, 1990; Zahra and George, 2002). These organizations are also better positioned to manage the risks associated with innovation and adoption (Panzano and Roth, 2006). Organizations with absorptive capacity utilize routines and processes to acquire, assimilate, transform and exploit knowledge from external sources and produce this dynamic organizational capacity. This provides strategic flexibility at the organizational level to adapt to a rapidly changing environment. Zahra and George propose 4 dimensions of organizational that build on each other:
- *Acquisition*: the ability to find and prioritize new knowledge quickly and efficiently;
- *Assimilation*: the ability to understand it and link it to existing knowledge;
- *Transformation*: the ability to combine, convert and re-codify knowledge to a usable form;
- *Exploitation*: the ability to put knowledge to good use.

An organization must be able to consistently and efficiently convert its potential absorptive capacity to realized absorptive capacity in order to maintain its ability to successfully address evolving needs and issues. Mintzberg et al. (1998) point to some of the characteristics of organizations that are better able to respond and adapt to change:

- Celebration of Success – a valuing of excellence;
- Absence of complacency – innovation and change are valued within the organization;
- Tolerance of mistakes - - learning from failures;
- Belief in human potential - - values people and fosters their personal and professional development;
- Recognition of tacit knowledge - - a belief in empowerment by enlarging discretion, responsibility and competence;
- Openness - - fostering a systems view through formal and informal cross disciplinary knowledge sharing to develop learning capacity;
- Trust - - individuals in the organization trust that management will appreciate and value risk taking, knowledge expansion, efforts towards excellence; and,
- Outward looking - - valuing of learning opportunities outside the organization including those from competitors, other stakeholders, and community or client needs.

According to Jones (2006), mature well established organizations must be deliberate in breaking from their routines and undertake a process of relearning in order to make use of their absorptive capacity for "strategic renewal" purposes in order to maintain their competitive advantage. He suggests that the roles played by middle management are well positioned to help facilitate strategic change, as they link the strategic (administrative) and operational elements of an organization, and can serve as gatekeepers, boundary spanners or internal change agents.

Hence the more porous an organization is, with many staff having exposure to outside information networks and channels, the greater the opportunity for exposure to new knowledge. Similarly the greater the number of reliable sources (e.g.: opinion leaders, change agents, bounder spanners) from which the decision maker hears a consistent and supportive message regarding new knowledge the more likely the knowledge will be utilized within the organization.

How can Facilitators enhance the contextual setting for adoptive learning?

Another important element that promotes organizational learning is personal contact, ideally face-to-face, with both peers and experts as sources of information about research to its flow and uptake (Nutley et al., 2007; Stetler et al., 2006). Facilitators are well positioned to maintain regular contact with potential adopters and can become a resource who serves to span boundaries of research and field generated knowledge to encourage and support ongoing information uptake and exchange (Ellis et al., 2005; Stetler et al., 2002).

Quality knowledge transfer occurs when the facilitator has a full and deep appreciation of the context in which the potential adopter is practicing and the facilitator and the potential adopter have built a trusting and collaborative

relationship with mutual goodwill. This starts with the assessment of the adopter's needs and the development and implementation of a plan to meet these needs so that the potential adopter believes that the facilitator will help them identify research knowledge that will help meet their needs in their context (Kegler et al., 2006; Mitchell et al., 2002; Rodgers, 2003). The facilitator must understand the adopter, be present and diligent about their understanding and on-going assessment of the adopter's needs, motivations, and capacities in order to facilitate the diffusion, and adoption of innovations as they become appropriate. The extent to which the facilitator consistently maintains and cultivates communication with the adopter as well as other factors, such as the timing of content relative to the adopters readiness and stage of change impacts the likelihood of the facilitators success in fulfilling their role (Davis and Taylor-Vaisey, 1997; Kelly et al., 2000; Mitchell et al., 2002; Rogers, 2003; Whitworth et al., 2007).

Questions to Consider Regarding Context

Research use is more about transformation of information in a given context than it is about direct uptake and application of knowledge to practice. The implication for the Facilitator is to be aware of how other adopters are transforming innovative knowledge, such that this becomes part of the "conversation" with a potential adopter. Additionally, the Facilitator may need to attend to areas that need discontinuance or "unlearning" in order for new research knowledge to be applied by potential users. The answer to what has to change in order to integrate new knowledge and practices may not always be what needs to begin but may also include what needs to stop or be done differently. Facilitators should consider the context by asking the following questions:

- What utility does the new knowledge have for potential adopters' success?
- What is the nature of the organizational (internal) and broader system (external) context and how conducive is it to the uptake and use of research generally and practice innovations in particular as well as their sustainability?
- What is the nature of communication and influence about research or innovation within the adopter's organization and broader system? What messages are being conveyed about research, innovation, and evidence based practice? Through what networks are these being conveyed? Are organizations effectively positioned to receive these messages?
- What is the nature and quality of relationships between the adopting organization and the agency that may be disseminating knowledge or encouraging chance? How might this relationship affect the propensity for potential adopters to be open to new knowledge?
- What is the absorptive capacity of each potential adopter organization? What strengths can facilitate and what barriers can prevent each organization's ability to convert its potential absorptive capacity to realized absorptive capacity?

- What are adopters' perceived needs and how will they likely influence the decision to adopt new knowledge or innovative practice?
- What are the key concerns of potential adopters regarding uptake of new knowledge?
- How might the perceptions and attitudes of the potential adopter and critical key stakeholders regarding new knowledge or evidence be influenced toward uptake or adoption of new knowledge or practice?
- How might new knowledge need to be adapted to make it more appropriate for the adopter? Would this adaptation or reinvention improve implementation, making it more successful, or reduce the effectiveness of innovative knowledge or practice.
- What is the organizational level of readiness to adopt and apply particular research or innovation? What tensions for change? Have the implications at an organizational level of adopting the research or innovation been fully explored?
- Is the implementation and sustainability process at the organizational level adequately planned, resourced and managed?
- What procedures and measures are in place to support individuals and teams as they seek to understand the new research or innovation? What procedures and measures are in place to assess the effects of the new knowledge or innovation once adopted?

What is Facilitation?

Facilitation helps the adopter "wrestle with the very complex process of actually considering and implementing innovations" (Backer, 2000). Facilitation is the process by which one person makes something easier for another person, enabling the implementation of knowledge into practice (Harvey et al., 2002; Kitson et al., 1998). In other words, a facilitator serves as an avenue to help the adopter sort through more broad research and combine it with local knowledge to deploy effective interventions to meet local needs and solve problems (Crow et al., 2004; Stetler et al., 2006). Facilitation includes helping adopters understand what processes they will need to go through in order to change their ways of working, their attitudes and or skills in order to apply selected knowledge or adopt innovative practices (Rycroft- Malone, et al. 2002; Stetler, 2006).

A facilitator is a type of change agent, a specific person or team who carries out a special process to help adopters, be they individuals, teams, organizations or whole systems, apply knowledge in their given practice context (Harvey, et al., 2002; Stetler, 2006). Facilitators generally act on behalf of a change agency, serving as a catalyst for change, helping adopters understand what will have to change and how to make this change in order to achieve their desired outcomes (Fullard, 1994; Harvey, et al., 2002; Kitson, et al., 1998). They must work with adopters to plan for the impact of the adoption of research and its consequences and plan for the

future—this includes being aware of the larger system in which the adopter acts and how the change could be affected by the system. The facilitator works to cross organizational and professional boundaries in order to smooth the progress of change.

Facilitators must recognize that adopters operate in their own best interest (Rogers, 2003). Research utilization by individuals often is a very personal and idiosyncratic process in which the user actively selects information that aligns with their values and makes sense in their particular context (Rickinson, 2005). Evidence used in this way is perceived as rewarding because it provides a way to make sense of personal experiences, reinforces them and acts a stimulus for meaningful professional discourse with colleagues. Those charged with the role of facilitating knowledge translation must then help potential adopters appreciate why an innovation that is being disseminated would be in the adopter's best interest (Pawson, 2002). The facilitator will need to assess individuals' openness to innovative knowledge or practices that they did not "discover" themselves. This becomes an inherent tension between innovation by diffusion v. innovation by intentional dissemination.

What is the importance of Facilitation to achieving knowledge translation?
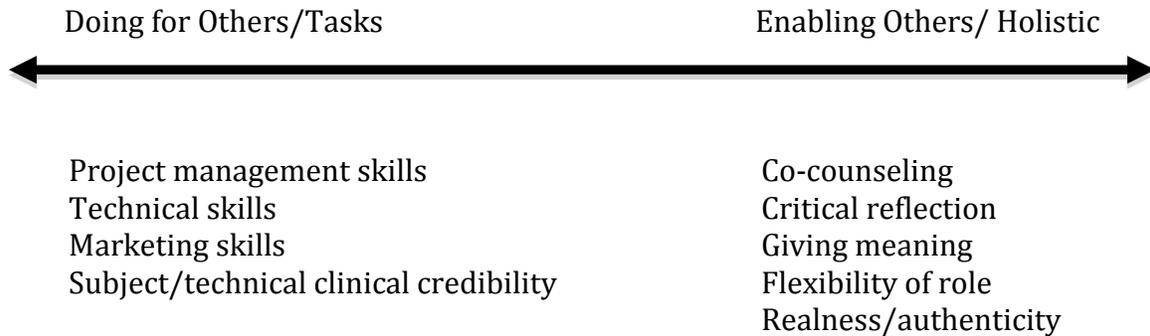
There is abundant evidence that information dissemination and/or diffusion strategies to spread innovations are ineffective in ensuring the implementation of evidence. Training to increase knowledge of research based practices, regardless of its quality, is also ineffective in ensuring the implementation of evidence without other supports (Fixsen et al.., 2005; Greenhagh et al.., 2004 a & b). Training, coaching and administrative support have been identified as key components or "drivers" to successful implementation of evidence based interventions in organizations (Fixsen, et al., 2005). Specifically coaching and training are the principle modalities "in which behavior change is brought about for carefully selected staff in the beginning stages if implementation and throughout the life of evidence based practices and programs" (Fixsen, et al., 2005).

Facilitators must attend to the particular context in which a practitioner is situated and tailor the process by which they guide a practitioner's own process of accessing and deciding whether to utilize new knowledge in their practice. More than one strategy must be drawn on to promote better use of research. Successful facilitation employs a variety of strategies, including technical, financial, organizational and even emotional support of practitioners and policy makers to encourage the uptake (acceptance) of research in policy and practice (Fixsen et al., 2005; Granados et al., 1997; Harvey et al., 2002; Nutley et al., 2007; Stetler et al., 2006). These strategies focus on creating an environment that can make possible the use of research, including providing resources to take action and/or remove barriers to research use.

The continuum of facilitation modalities—strategies and actions—ranges from task oriented to holistic (Ellis, et al., 2005; Harvey, et al., 2002; Mitchell, et al., 2002;

Stetler, et al., 2006; Wandersman, et al., 2008). The specific purpose of facilitation may vary from supporting the completion of a specific task, such as providing one time assistance to develop a job description to supporting "higher level" critical thinking such as enabling teams to reflect, analyze and change their ways of thinking and work in a more proactive manner. These strategies are not mutually exclusive, and an effective facilitator needs to be able to span the continuum as needed.

Continuum of Facilitator Modalities

Doing for Others/Tasks   Enabling Others/ Holistic

Project management skills	Co-counseling
Technical skills	Critical reflection
Marketing skills	Giving meaning
Subject/technical clinical credibility	Flexibility of role
	Realness/authenticity

(Harvey, et al., 2002)

The facilitator role has 4 potential distinguishing characteristics (Harvey, et al., 2002; Stetler, et al., 2006)
1. The role is appointed, not one where a change agent emerges organically from within the adopting context such as with opinion leaders.
2. The facilitator role may be internal to or external from the organization where change is occurring.
3. The focus of the facilitator role is enabling and helping rather than telling or persuading others.
4. A wide range of facilitator roles can be employed from task completion to more holistic approaches such as mentoring/coaching.

Facilitators act as the voice expressing the "perspective less likely to be explored at a particular decision making juncture so that potentially conflicting views are addressed early in project life rather than later (Mitchell, et al., 2002)." They often uncover unacceptable or poor practices not recognized by internal staff. Addressing these require tact, sensitivity, and the authority to address such situations (Kitson, et al., 1998). Identifying and addressing these practices, which in fact may be intentional or unintentional, becomes part of the change to be addressed during the innovation adoption decision process, which include trail and the decision to continue utilizing an innovation.

The reinvention of an innovation increases the likelihood of adoption (Greenhalgh, et al. 2004 a & b) and reduces likelihood of discontinuance (Berman & Pauley, 1975). However, the facilitator must help the adopter assure that not too much reinvention takes place, as this may in fact be an indicator that the innovation has

been swallowed by the status quo and may not have the desired impact (Berman & Pauley, 1975; Berman & McLaughlin, 1978; Nutley, et al., 2003).

The Continuum of Facilitator Roles

Doing for Others/Tasks   Enabling Others/ Holistic

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Episodic contact   Sustained partnership
Practical technical help   Developmental
Didactic, traditional approach to teaching   Adult learning approach to teaching
External agents   Internal/external agents
Low intensity – extensive coverage   High intensity – limited coverage
(Harvey et al., 2002)
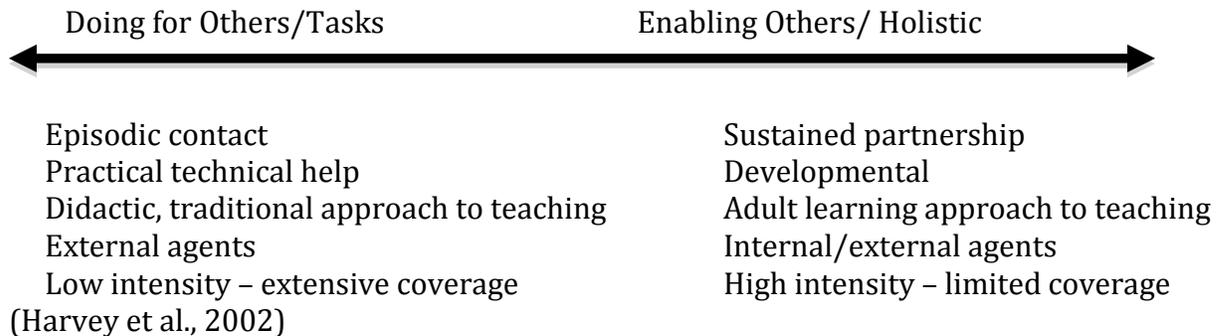
These roles may be expressed through a variety of methods, forms and functions. However, the literature points to 10 common tasks that the facilitator must perform. These tasks are essential to embed the innovation within the practice of a group or an individual.

10 Essential Tasks of Successful Facilitators*

> 1. Assure that not too much reinvention transformation takes place
> 2. Attend to the potential for information overload among adopters
> 3. Cultivate the intent to change among potential adopters by shifting attitudes
> 4. Customize the type, content, design and delivery of support based on characteristics of the intended audience
> 5. Develop a clear understanding of the adopter's needs, context, and organizational characteristics
> 6. Facilitate adopters' strategic thinking, planning and action
> 7. Respond to adopters' needs both expressed and unexpressed
> 8. Supply technical advice
> 9. Synthesize, translate and present evidence to adopters
> 10. Work via stakeholders, opinion leaders, boundary spanners & champions

* Allsop, 1990; Backer, 2000; Davis, and Taylor-Vaisey, 1997; Harvey et al., 2002; Johnson, Hays, Center & Daley, 2004; Mitchell et al., 2002; Nutley et al., 2007; Titchen, 2000; Rogers, 2003; Stetler et al., 2002; Stober & Grant, 2006; Wandersman, et. al, 2008; Whitworth et al., 2007

What Are the Characteristics and Skills of Effective Facilitators?

Facilitators generally are external experts in change management who possess a high degree of current expertise about the knowledge of innovative practice being diffused (Harvey, 1993; Harvey et al., 2002; Kitson et al., 1998; Mitchell et al., 2002; Rogers, 2003; Stetler et al., 2006; Whitworth et al., 2007). They are skilled at traveling the continuums of facilitator roles and modalities in order to support an adopter's change process and uptake and use of research. However, the facilitator

must not be overextended while attempting to fulfill the role (Mitchell et al., 2002) and must have the necessary resources to support the work (Backer, 2000).

The ability of a facilitator to tailor the nature and intensity of services to individual adopters is crucial to their ability to have a lasting impact on the adopter's intent to take action and the eventual action itself (Davis & Taylor-Vaisey, 1997; Kelly et al., 2000; Mitchell et al., 2002; Stetler et al., 2002). Facilitators should strike a balance between process facilitation and information delivery for the adopter and note this balance will shift over the course of the relationship and with each different adopter (Stober & Grant, 2006). Facilitators must be flexible in the ways in which they carry out their role in order to be responsive to the adopter needs. This may involve using multiple technical assistance methods over time, and with a variety of individuals in order to cultivate the critical mass needed to support change (Davis & Taylor-Vaisey, 1997, Kelly et al., 2000; Rogers, 2003; McInerney & Hamilton, 2007).

Again the facilitator acts as an conduit to help the adopter sort through research and combine it with local knowledge to deploy effective interventions to meet local needs, and solve one own problems (Crow et al., 2004; Stetler et al., 2002). Working in collaboration with a local champion, opinion leader or change agent who can continue the transformation after the departure of the facilitator helps to imbed the knowledge uptake and allows the facilitator to disengage at an appropriate time.

Many times a facilitator focused on enabling others in a more holistic approach is referred to as a coach. Coaching is a critical skill for facilitators. Coaching is defined as a goal oriented, solutions focused process in which an adopter is guided to help identify and construct possible solutions, address possible road blocks, delineate a range of goals and options, then facilitate the development and implementation of action plans to achieve those goals (Stober & Grant, 2006). Coaching actively supports the behavior changes needed among individuals within a given context in order to apply new research or implement evidence based interventions (Fixsen et al., 2005; Stetler et al., 2002).

Coaching supports developing and sustaining behavior changes related to uptake and the successful application of new information by addressing several simultaneous problems (Fixsen, et al., 2005; Stober & Grant 2006; Whitworth et al., 2007).

- *Newly learned behavior is crude compared to that of a well experienced practitioner.* Through coaching and the experience gained, an individual develops their own mastery and style that is true to the core components of the evidence based intervention or research.
- *Newly learned behavior is fragile and must be reinforced, especially in the face of reactions from others in the individual's practice context.* Coaches provide a counter-control function in the face of "push back" in response to the changes.

- *Newly learned behavior is incomplete and requires on going practice and shaping to become optimally functional in a given context.* Coaching support integrates segmented knowledge gained through dissemination, diffusion and training into actual practice. Coaches also aid individuals in integrating their craft knowledge, beliefs and values into the delivery of the evidence based intervention or research.
- *Individual practitioners are the intervention in Human Services.* Coaches provide the personal and emotional support, especially in times of stress. However, this must not be the primary focus of the Coach's role. Emotional support that is not coupled with support for critical thinking and strategic action will not result in behavior change.

The literature points to a number of characteristics and skills of successful facilitators. The characteristics are those traits an individual who is asked to be the facilitator needs to bring naturally into the process. The skills are those attributes learned or enhanced by the facilitator in order to bring about a successful uptake and adoption of new knowledge or practice.

10 Essential Characteristics of Successful Facilitators*

1. Authentic and credible
2. Energetic and motivated
3. Highly developed communication skills
4. Patient and open
5. Range and flexibility of style, including pragmatism and vision
6. Recognizes other's skills and abilities
7. Reliable and consistency of presence and support
8. Respects and believes in worth and value of people
9. Self-confidence
10. Sensitive and empathetic: Non-judgmental

*Allsop, 1990; Baker, 2000; Davis et al., 1997; Harvey, 1993; Harvey et al., 2002; Kelly et al., 2000; Kitson et al., 1998; McCormack & Garbett, 2001; Morrell et al. 1995; Roger, 2003; Stetler et al., 2002; Stober & Grant, 2006; Whitworth et al., 2007

10 Essential Skills of Successful Facilitators*

1. Building trusting collaborative relationships
2. Identifying problems and formulates solutions
3. Allowing people to learn by their own processes
4. Assessing the context of the potential adopter by using formative data
5. Aware of how the adopter is transforming the innovation/evidence
6. Coaching
7. Cultural Competency
8. Networking and Political skills
9. Acts as a resource agent
10. Strategic planning and thinking

* Allsop, 1990; CLAS, 2001; Fullard, 1994; Harvey, 1993; Harvey et al., 2002; Kegler et al., 2006; Kitson et al., 1998; Mitchell et al., 2002; Nutley et al., 2007; Rogers, 2003; Stetler et, al, 2002; Stober & Grant 2006; Titchen, 2000; Wandersman et al., 2008; Whitworth et al., 2007

What is important about the relationship between the Facilitator and the Adopter?

The relationship between the facilitator and the adopter must be dynamic, where the adopter is not solely a passive recipient of knowledge. Together they actively translate new research findings and existing knowledge to first make meaning from and of the research. If an adopter does not establish a link between the research and their own practice context, as well as their existing knowledge, the research findings can be discarded as irrelevant to them and their practice.

An effective facilitator creates an environment to introduce new information to adopters and that is conducive to supporting the adopters' active translation, recreation and adoption of this information (Nutley et al., 2007; Rogers, 2005). In order to do this the facilitator needs to appreciate how practitioners conceptualize a practice problem, as well as, their ability to absorb new information. The capacity to absorb new information must be present in individual adopters, as well as the organizations and systems in which they practice in order for the information to be applied.

What Factors Support or Hinder the Success of the facilitator?

There are several factors that facilitate and inhibit the success of the facilitator. The Facilitator must not be overextended while attempting to fulfill their role (Mitchell, et al., 2002) and must have the necessary resources to support the work including leadership support for and recognition of the importance of facilitator's role (Backer, 2000; Stetler et al., 2002).

What Are the Primary Functions of a Facilitator?

The facilitator has four primary functions, which form the arc of the facilitator's responsibilities throughout the dissemination/change process:
- Assessment of adoptee readiness relative to the innovation
- Translating intent on the part of potential adopters into action
- Facilitating the utilization of the innovation by the adoptee
- Stabilize the adoption and prevent discontinuance of innovations and achieve a terminal relationship with the adopter

Assessment of adoptee readiness relative to the innovation
Facilitators must cultivate an information exchange relationship with the adopter. This is a designed alliance to a) facilitate the assessment of readiness and needs and b) to lay the foundation for an ongoing relationship between facilitator and potential

adopter. Through these two primary tasks the facilitator supports the potential adopter in wrestling with the following questions:

- Is change needed?
- What is an appropriate innovation to adopt?
- Why this innovation?
- What must be in place to successfully adopt this innovation?
- What is currently missing to support successful adoption of this innovation?
- What challenges might lie ahead?
- What is in place to support a successful adoption of this innovation?'

Translate intent into action
Facilitators move the potential adopter along the "implementation bridge" (Hall and Hord, 2006). To do so, facilitators must be able to operate with latitude to meet potential adopters along the continuum of change and within the adopters' particular context. This allows the adopter to translate the research knowledge into meaning that fits but does not distort the core truth of the knowledge. Through various means of support, facilitators must also support adopter's exploration of questions such as:

- What is the correct environment in which adoption of this innovation should take place?
- How will we accomplish the actions needed to create this environment?
- Are we ready to act?
- How will we stage these actions?

Facilitate the utilization of the innovation
Key to helping the adopter actually utilize the innovation is their ability to evaluate the innovation in action and engage other stakeholders who will be impacted by the adoption of the innovation (Johnson, et al., 2004; Rogers, 2003; Wandersman, 2003). The facilitator must facilitate these two processes and support the exploration of questions such as:

- Are we doing what we said we would do?
- Is the innovation adoption process occurring as we thought it would?
- Are we seeing the expected changes?
- Who do we need to make sure is on board as we implement the innovation?
- Do we want to maintain the innovation?

Stabilize and terminate the adoption and prevent discontinuance
The facilitator keeps learning alive and timely for the adopter in order to support and overcome perceived risks of changes (Panzano and Roth, 2006). By continuing to open up new insights or learning, the facilitator addresses resistance and inertia so that the adopter embeds the necessary changes and supports the organization as it applies the solution and makes the transition (Stober and Grant, 2006; Whitworth,

et al., 2007). The facilitator may also have to address grief for the loss of traditional practices (Hall and Hord, 2006). At this point the facilitator and adopter explore questions such as:

- In what ways does the context of the diffusion or dissemination process matter?
- Is there a local change agent supporting the adopter's ability to maintain the innovation?
- How much change is expected as a result of adopting the new knowledge or innovative practice; what are expected outcomes of the change?
- How much time is allocated for change?
- Are adequate resources allocated to support needed changes?
- What are the incentives/disincentives to change and maintaining trial changes?

Glossary of Terms

Absorptive Capacity: a dynamic capacity regarding knowledge creation and utilization that enhances an organization's ability to gain and sustain a competitive advantage over time (Zahra and George, 2002).

Adopter: An individual or other unit that decides to use a new piece of information or innovation (adopted from Rogers, 2003).

Change Agent: an individual who influences adopters' innovation decisions in a direction deemed favorable by a change agency (Rogers, 2003)

Change Agency: an organization or other unit that promotes and supports adoption and implementation of innovations (Greenhalgh et al., 2004b).

Coaching: is a goal oriented, solutions focused process in which the coach works with the client to help identify and construct possible solutions, address possible road blocks, delineate a range of goals and options, then facilitate the development and enactment of actions plans to achieve those goals (Stober & Grant, 2006). Coaching actively supports the behavior changes needed in individual within a given context in order implement evidence based interventions or apply new research (Fixsen et al., 2005; Stetler et al., 2002).

Context: the specific environment in which adopters work to deliver services, where in the implementation, utilization and creation of evidence takes place. It includes the culture, leadership and evaluation present in the environment (Kitson et al., 1998; McCormack et al., 2002).

Evidence: Knowledge derived from a variety of sources, including research or empirical sources, as well as from practitioner experience, local context and from patients, clients and those served by a practitioner, that has been subjected to testing and has been found to be credible (Higgs & Jones, 2000; Rycroft-Malone et al., 2004)

Evidence Based Interventions: These include Evidence based practices(Skills, techniques and strategies that can be used when a practitioner is interacting directly with a consumer and are sometimes called intervention components when used in a broad programmatic context) and Evidence based programs (Organized, multi-faceted interventions that are designed to serve consumers with complex problems. Such programs may seek to integrate social skills training, educational assistance, counseling in a comprehensive, individualized manner based on a well articulated theory of change, identification of core components of change and specification of necessary organizational supports). Definitions from National Implementation Research Network, 2009.

Facilitation: the process by which one person makes something easier for another person enabling the implementation of knowledge into practice in (Harvey et al., 2002; Kitson et al., 1998).

Facilitator: is a type of change agent, a specific person, carrying out a special process to help adopters, individuals, teams, organizations and systems, apply knowledge in their given practice context (Harvey et al., 2002; Stetler, 2003).

Implementation: the act of accomplishing an aim or order; to put into practical effect; carry out; pursue to a conclusion; a set of specific activities designed to put into practice an activity or program or know dimensions. It is purposeful and the activity, program being implemented is described in such a way that independent observers can detect its presence and strength (National Implementation Research Network, 2009).

Innovation: A idea, practice or object that is perceived as new by an individual or other unit of adoption (Rogers, 2003).

Knowledge: That which occurs when an individual learns of the innovation's existence and gains some understanding of how it functions (Rogers, 2003).

Knowledge Translation: a process enabled by expert facilitation where trained individuals work simultaneously with adopters (individuals, teams) and the wider organizations and systems of which they are a part to manipulate contextual factors and support the experiential learning of adopters to manage and use new information (Kitson, 2008).

Practitioner: A professional or practical worked in human services, public health or medicine (Adapted from Oxford American Dictionary, 1980).

Research: A careful study or investigation undertaken to discover facts or information (Adapted from Oxford American Dictionary, 1980).

Users: see Adopter

Bibliography

The bibliography contains the citations for the various articles, books, monographs and other sources referenced in this literature review document. It includes other references for additional articles, books, monographs and other sources that have been consulted in the development of the document. These additional citations have been retained as they may be of value for further literature review or other efforts undertaken by the reader.

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