CHAPTER 18

Building Organizational Supports for Research-Minded Practitioners*

MICHAEL J. AUSTIN, TERESA S. DAL SANTO, AND CHRIS LEE

ABSTRACT

One of the biggest challenges facing human service organizations is the proliferation of information from inside and outside the agency that needs to be managed if it is to be of use. The concepts of tacit and explicit knowledge can inform an approach to this challenge. Tacit knowledge is stored in the minds of practitioners (often called practice wisdom) and the explicit knowledge is often found in organizational procedure manuals and educational and training materials. Building on this perspective, this analysis provides a preliminary definition of research-minded practitioners by explicating the elements of curiosity, critical reflection, and critical thinking. The organizational implications of developing a cadre of research-minded practitioners include the commitment of top management to support "link officers", evidence request services, research and development units, and service standards. The challenges include the capacity to identify/support research-minded practitioners, promote an organizational culture of evidence-informed practice, redefine staff development and training, redefine job descriptions, and specify the nature of managerial leadership.

KEYWORDS: Research-minded practitioner, organizational support

Introduction

In the process of building knowledge sharing systems in local, public sector social service organizations, it has become increasing clear that more attention needs to be given to an array of organizational supports for practitioners as well as to the identification and nurturing of research-minded practitioners (Austin, Claassen, Vu, & Mizrahi, 2008). This analysis addresses this new challenge

for senior management by describing the emerging organizational context for evidence-informed practice, an evolving definition of the critical elements of a research-minded practitioner, a beginning framework for conceptualizing relevant organizational supports, and case examples of organizational supports provided by national organizations in the United Kingdom. It concludes with an emerging set of lessons learned and questions to guide practice and future research.

ORGANIZATIONAL CONTEXT

In this age of service accountability in the United States and United Kingdom, increased attention is being given to measuring and assessing outcomes. This development has placed new pressures on managers and practitioners to specify service objectives and invest time and resources in measuring the outcomes of these objectives. The efforts to establish, expand, update, and refine information systems have been at the heart of this recent development. While there has been considerable investment in this type of managerial infrastructure, there has been much less attention

Michael J. Austin: Mack Center on Nonprofit Management, University of California, Berkeley, California, USA

Teresa S. Dal Santo and **Chris Lee:** Bay Area Social Services Consortium and School of Social Welfare, University of California, Berkeley, California, USA and Bay Area Social Services Consortium

Address correspondence to Michael Austin, Mack Center on Nonprofit Management in the Human Services, School of Social Welfare, University of California, Berkeley, 120 Haviland Hall #7400, Berkeley, CA 94720. E-mail: mjaustin@ berkeley.edu

given to the presentation, dissemination, and utilization of the results coming out of these information systems. Monthly or quarterly reports on services have focused over time on outputs (e.g., how many clients served, etc.) and less on outcomes (e.g., level of change or improvement in client conditions). Even when outcome data is available, it is rarely presented in a form that practitioners can either understand or utilize to improve their practice.

At the same time that outcome measurement is being stressed, practitioners are being called upon to identify how evidence, either administrative data emerging from their agency information systems or evidence emerging from research centers, is being used to inform their practice. For some staff, the language of evidence-informed practice is viewed as another mandate from top management that needs to be accommodated. For others, the elements of evidence-informed practice have challenged them to look for new ways and promising practices that they might assess and incorporate into their own practice. In addition to these internal organizational dynamics, there is a growing interest (especially in the United Kingdom) to incorporate the voices of service users and carers into the process of promoting evidence-informed practice. All of these new developments are creating a new climate in which to reassess organizational-staff relations as well as organizational-client relations.

One of the biggest challenges facing human service organizations is the proliferation of information from inside and outside the agency that needs to be managed if it is to be of use. The for-profit sector has the most experience in the area of knowledge management, and the applications of this experience to the public sector is captured in the concept of knowledge sharing and knowledge transfer (Austin et al., 2008). The essential elements of knowledge sharing are the use of tacit and explicit knowledge; namely, the tacit knowledge stored in the minds of practitioners (often called practice wisdom) and the explicit knowledge reflected in organizational procedure manuals and the textbooks developed to prepare practitioners.

The concept of knowledge transfer relates to the substantial investment made by organizations in the on-the-job training of staff and the capacity to transfer new learning back to the workplace. Both of the processes of knowledge sharing and knowledge transfer rely upon the capacities of intermediary organizations (e.g., universities, institutes, consortia, etc.) or intermediary units within organizations (e.g., research, policy, evaluation staff, or link officers) to effectively disseminate knowledge and promote utilization (Anthony & Austin, 2008). In light of the challenges

presented by knowledge management, it is clear that very few of them can take place until human service organizations adopt the principles of a learning organization and reflect them in their mission, future directions, and practices modeled by senior management (Austin & Hopkins, 2004).
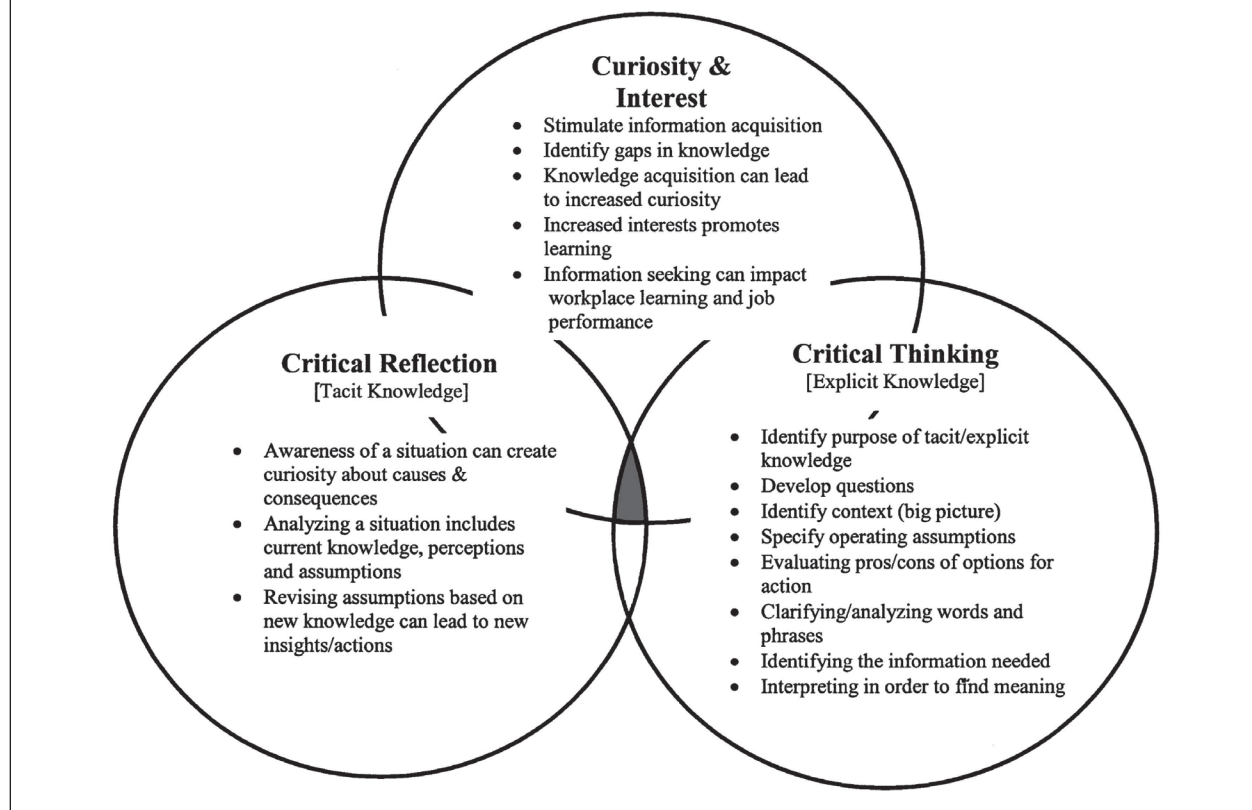
DEFINING THE RESEARCH-MINDED PRACTITIONER

The definition of the research-minded practitioner depends on who does the defining. If educators do the defining, it usually focuses on becoming knowledgeable research consumers (sometimes referred to as appraisal training in the contest of agency training programs) and/or becoming a beginning social science researcher. If practitioners do the defining, it often includes aspects of the following: (a) an essential practitioner attribute, (b) a capacity to critically reflect on practice to develop researchable questions, (c) a capacity to be informed by knowledge and research related to social work values, and (d) capacity to understand research designs and related methodologies in order to theorize about practice (Harrison & Humphreys, 1998).

The growth and support of a research-minded practitioner is often assumed to emerge as a result of attending research courses while pursuing professional education at the undergraduate and/or graduate level of a college or university where practitioners gain an overview of research methods and are encouraged to conduct research projects. However, given the fact that most research courses are taught without much attention to practice, many practitioners acquire either a limited appreciation of research or a negative perception of its relevance to practice. As a result, it often falls to the workplace and on-the-job learning experiences for practitioners to begin to value the use of data and see the value of research within an organizational practice context.

An example of a career trajectory of a research-minded practitioner is presented in *Appendix A*. There are several important processes buried within such a trajectory, one of which is *curiosity or interest* in finding explanations to practice dilemmas:

> I increasingly found myself in a process of exploring research and thinking about methodological issues that were interesting, stimulating, and empowering . . . the movement from being concrete to identifying patterns that are informed by previous knowledge and theories were very enlightening . . . my mind had been opened up and I was seeing practice and service delivery in a new light . . .

FIGURE 1
Key Elements of the Research Minded

Curiosity &
Interest
- Stimulate information acquisition
- Identify gaps in knowledge
- Knowledge acquisition can lead to increased curiosity
- Increased interests promotes learning
- Information seeking can impact workplace learning and job performance

Critical Reflection
[Tacit Knowledge]

- Awareness of a situation can create curiosity about causes & consequences
- Analyzing a situation includes current knowledge, perceptions and assumptions
- Revising assumptions based on new knowledge can lead to new insights/actions

Critical Thinking
[Explicit Knowledge]

- Identify purpose of tacit/explicit knowledge
- Develop questions
- Identify context (big picture)
- Specify operating assumptions
- Evaluating pros/cons of options for action
- Clarifying/analyzing words and phrases
- Identifying the information needed
- Interpreting in order to ffnd meaning

Have a capacity to engage in *critical reflection* of one's practice also emerged as an important process:

> My feeling is that this intellectual work, required for evidence-informed practice can be very challenging for practitioners as it requires time and support to reflect and make judgments. Perhaps most challenging, the process raises questions about what you are doing and why (this uncertainty, in the first instance, can be quite overwhelming but it is part of the learning process that many practitioners are not exposed to) . . .

In line with critically reflecting on one's practice, having a capacity to engage in *critical thinking* about available knowledge usually reflected explicitly in the research literature is another important process for research-minded practice:

> Making the transition from viewing individual clients as unique to seeing common patterns in their behaviors and searching for similarities and differences and speculating on the reasons why these patterns occurred . . . I was questioning

pretty much everything and my efforts to challenge common practices probably threatened some of my colleagues . . . of course the relationship between evidence and practice is not straight forward and implementing research findings is most challenging.

These three elements are the focus of the next section, and examined further especially in relationship to facilitating research-informed practice (see *Figure 1*).

Exploring Curiosity and Interest

Curiosity is an approach-oriented motivational state associated with asking questions, examining/manipulating interesting images/objects, reading exhaustively, and/or persisting on challenging tasks. The function of curiosity is to learn, explore, and immerse oneself in an interesting topic/event. Curiosity also serves a broader function of building knowledge and competence.

In the process of defining curiosity, Kashdan and Silvia (2009) note that curiosity can include the recognition, pursuit, and intense desire to explore novel, challenging, and uncertain events. It is an innate characteristic of humans

that varies in its level of intensity but is always present to some degree (Harvey, Novicevic, Leonard, & Payne, 2007). To truly appreciate the importance of curiosity in nearly every area of human activity, it is important to examine its fundamental attributes. According to Loewenstein (1994), curiosity is voluntary, intense, transient, immediate, stimulus-bound, and varying in satisfaction. It is caused when focusing on a gap in one's knowledge. Curiosity also can result from a motivation to increase one's competence related to mastering one's environment (Deci, 1975).

Over a century of psychological study has resulted in several different models of curiosity. Berlyne (1971 cited in Silvia, 2006, p. 33) proposed that new, complex, and surprising things activate a reward system related to exploring novel things (externally stimulated) and identified four approaches to understanding curiosity: (a) *epistemic curiosity* (desire for knowledge), (b) *perceptual curiosity* (aroused by novel stimuli), (c) *specific curiosity* (desire for a particular piece of information), and (d) *diverse curiosity* (general seeking of stimulation). In Berlyne's research he identified situations that aroused curiosity as complex, novel, uncertain, and conflict-laden (Berlyne, 1954a cited in Silvia, 2006, p. 180).

Curiosity and interest have also been placed within the category of knowledge emotions (Keltner & Shiota, 2003) that are associated with learning and thinking as well as the building of knowledge, skills, relationships, and wellbeing (Kashdan & Steger, 2007). By connecting curiosity to interests, an appraisal model of curiosity can help to explain why people don't find the same things interesting, why interest changes dynamically over time, and why feelings of curiosity vary in response to similar events.

Kashdan, Rose, and Fincham (2004) further elaborated on curiosity as a knowledge emotion, proposing that curiosity is a "positive emotional-motivational system associated with the recognitions, pursuit, self-regulation of novel and challenging opportunities" (p. 291). This personal growth model of curiosity differs from motivation or cognitive models in that it assumes that curiosity stems from a person's interest in self-development. In this more recent area of research, Litman and Jimerson (2004) have proposed that individual differences in curiosity can reflect either curiosity as a feeling of interest or as a frustration about not knowing something. As an emotional-motivational state, curiosity is complex in that its arousal can involve positive feelings of interest associated with the anticipation of learning something new, as well as relatively unpleasant feelings of uncertainty due to a lack of knowledge (Litman &

Jimerson, 2004). Curiosity is aroused by novel questions, complex ideas, ambiguous statements, and unsolved problems, all of which may point to a "gap" in one's knowledge and reveal a discrepancy between that which one knows and desires to know (Litman & Spielberger, 2003; Loewenstein, 1994). It has become increasingly clear that curiosity is influenced by both situation and disposition where situational interventions can stimulate a disposition to satisfy one's curiosity.

The model of situational and individual curiosity includes three types of curiosity: (a) individual interest is a *dispositional tendency* to be curious about a certain domain (individual differences in what people find interesting), (b) when someone with an individual interest encounters an activity relevant to the interest, *actualized interest* arises, and (c) curiosity is caused by external aspects of activities and objects that may involve complexity, novelty, uncertainty, conflict and/or inherently emotional content (Hidi, 1990; Hidi & Anderson, 1992, cited in Silvia, 2006, p. 184).

Lowenstein (1994) offers an intriguing theory of curiosity based on information theory. He proposes an information gap theory, which "views curiosity as arising when attention becomes focused on a gap in one's knowledge" (p. 86). Such information gaps produce the feeling of deprivation labeled curiosity. He notes, "The curious individual is motivated to obtain the missing information needed to reduce or eliminate the feelings of deprivation" (p. 87). Thereby, nurturing practitioners' curiosity may also facilitate the development of research-minded practice, with the following implications for the development of staff:

1. Curiosity requires a pre-existing knowledge base and the need to "prime the pump" to stimulate information acquisition in the initial absence of curiosity.

2. To stimulate curiosity, it is important to recognize/increase staff awareness of manageable gaps in their knowledge, helping staff "know what they don't know."

3. As staff gain knowledge in a particular area, they are not only likely to perceive gaps in their knowledge but those gaps will become smaller relative to what they already know. Staff members are likely to become progressively more curious about the topics that they know the most about.

4. The intriguing intersections of cognition and emotion suggest that interests promote learning (Schiefele, 1999; Son & Metcalf, 2000, cited in Silvia, 2006, p. 204).

5. Curiosity-induced behaviors such as information seeking can play a meaningful role in workplace learning as well as in job performance (Reio & Wiswell, 2000).

Ultimately, staff members who are curious are able to challenge their views of self, others, and the world around them as they seek out information, knowledge, and skills. This process can provide a pathway to the building of a meaningful work life that is supported by a focus on the present (mindful engagement, sense of meaningfulness) and the future (continuous search for meaning with minimal concern about obstacles).

Critical Reflection

One of the specific contributions of workplace learning is the emphasis on informal and socially situated learning that focuses on the everyday ways that people learn within specific work situations (Argote, 2005 cited in Fook, 2008, p. 7). Hager (2004 cited in Fook, 2008, p. 8) argues that we need to view learning as a reflection process in which learners construct their learning in interaction with their environments. In this sense, reflection is more about the processes by which individuals think about their experience and learn about this in organizational context (Fook, 2008, p. 10). The process includes the recapturing, noticing, and re-evaluating of their experience and "to work with their experiences to turn it into learning" (Boud et al., 1993, p. 9 cited in Fook, 2008, p. 24).

Reflection refers broadly to the intellectual and emotional processes by which individuals change their thinking in order to make meaning of and thus learn from experience (Fook, 2008, p. 33). This may involve many different activities and processes and many different changes in different types of knowledge. Reflection, therefore, can take many different forms, and be enacted in many different ways. According to Fook (2008), learning from experience is not prompted by the existence of experience per se, but by the disquiet or discomfort that some experiences entail and reflection is the key element in response to this disquiet. For example, reflection more specifically refers to the notion of discrepancies between professional practice as enacted and the need to expose the tacit assumptions inherent in enacted practice to resolve the discrepancies. Reflective practice therefore involves the unearthing of implicit assumptions by professionals in their own work.

While critical reflection refers to general thinking processes to make meaning from experience, there are several specific theories that differentiate those processes and changes. For example, "Transformative learning refers to the process by which we transform our taken-for-granted frames of reference . . .to make them more inclusive . . . and reflective as that they may generate beliefs and opinions that will prove more true or justified to take action" (Mezirow, 2000, pp. 7–8 cited in Fook, 2008, p. 35). Transformative learning is linked to critical reflection when it transforms "frames of reference within the scope of one's awareness through critical reflection on assumptions" (Mezirow, 1998, p. 190 cited in Fook, 2008, p. 35).

By recognizing and allowing the expression of the disquieted or emotional elements of professional practice, critical reflection may provide invaluable support in sustaining workers in difficult or anxiety-producing work situations. It also may assist in managing some of the organizational dynamics which are driven by emotions. For example, by understanding how power works (implicitly and explicitly) in an organization, critical reflection may help workers gain a sense of their own power and see different ways in which to create organizational changes (Fook, 2008, p. 39). For instance, critical reflection may be used as a form of dialogue which "involves learning how to learn from one's own experiences and learning how to learn from the experiences of others" (Schein, 1993, p. 82, cited in Fook, 2008, p. 40).

Critical reflection is a process which may be used to mine tacit knowledge and make tacit knowledge more assessable so it can be more organizationally acknowledged and changed. To quote Senge (1990, p. 12 cited in Fook, p. 40), "A learning organization is a place where people are continually discovering how they create their reality and how they can change it." According to Fook (2008, p. 40) essential elements of the learning process involve critical reflection processes that involve cognitive, emotional, and action elements throughout, and some of the following: (a) initial discrepant experience; (b) examination of discrepancy with regard to both past experiences and cultural contexts; (c) re-examination of past experiences/interpretations; (d) reconstruction of past and present experiences in this light; and (e) testing the resulting interpretations (in action).

Steps in the Critical Reflections Process

The reflective process includes several different stages or levels. Williams (2001) identified the following key stages: (a) awareness of an event or situation that creates puzzlement, surprise, or discomfort, (b) an analysis of the situation leads to an examination of current knowledge, perceptions, and

assumptions, and (c) revised assumptions that lead to a new sense of balance.

Step #1: Creating awareness. Identifying the discomfort that some experiences entail is a key element of critical reflection. Reflective practice involves staff in exploring the implicit assumptions in their own work based on perceived discrepancies between a practitioner's beliefs, values, or assumptions and new information, knowledge, understanding, or insight. According to Stein (2000), the learning strategies designed to create awareness in individuals and work groups include dialogue journals (Kottkamp, 1990 and Mezirow, 1990, both cited in Stein, 2000), diaries (Heath, 1998 and Orem, 1997, both cited in Stein, 2000), action learning groups (Williamson, 1997, cited in Stein, 2000), autobiographical stories (Brookfield, 1995, cited in Stein, 2000), and sketching (Willis, 1999, cited in Stein, 2000).

Three additional techniques often used in critical reflection include critical incidents, diaries, and small group processes. Critical incidents are used in teaching critical reflection (Hunt, 1996, cited in Stein, 2000) as a way to critically examine one's beliefs and (Newman, 2000) positive or negative experiences. Creating a safe and structured climate can increase the willingness to share difficult experiences (Haddock, 1997, cited in Stein, 2000). Diary keeping or journaling involves recording events and reactions to events for later reflection (Heath, 1998, Mackintosh, 1998, Orem, 1997, and Williamson, 1997, all cited in Stein, 2000). The limitations of this approach may include the lack of writing skills and expressive skills, or the inability to confront comfortable assumptions (Heath, 1998, Orem, 1997, and Wellington, 1996, all cited in Stein, 2000). Using a small group process to share experiences, personal insights, and ideas among practitioners is another reflective strategy to develop ways of improving professional practice (Graham, 1995, cited in Stein, 2000). Using the concept of "externalization," Nonaka and Takeuchi (1995, cited in van Woerkom, 2004) place reflection in a process of social interaction between individuals devoted to the development of new explicit knowledge out of tacit knowledge.

Step #2: Analyses. Questioning is an essential component of critical reflection that is needed to make explicit assumptions explicit and to validate underlying premises. Brookfield (1988, cited in Clark, 2008) identified four processes for analyzing critical reflections:

- Assumption analysis—activity engaged in to bring awareness of beliefs, values, cultural practices, and social structures that regulate behavior in order to assess their impact on daily activities (making explicit the "taken-for-granted" notions of reality).
- Contextual awareness—identify how assumptions are created within specific historical and cultural contexts.
- Imaginative speculation—opportunities to challenge prevailing ways of knowing and acting by imagining alternative ways of thinking.
- Reflective skepticism—represents the combination of assumption analysis, contextual awareness, and imaginative speculation needed to question claims of universal truths or unexamined patterns of interaction.

Step #3: Action. The primary outcome of critical reflection is an increased ability to reflect and act on newly formed knowledge understandings based on reconstructing experiences in the light of new interpretations or areas for further elaboration (Stein, 2000). At the individual level, critical reflection can increase a practitioner's understanding of the need for change, the complexity of personal or interpersonal dynamics, and the prospects for future action by:

- Identifying and constructing shared meanings from critical reflection experiences.
- Identifying and developing ways in which this shared meaning can be supported at the colleague, group, and organizational levels.
- Identifying new ways to make tacit knowledge more explicit in the form of new organizational processes that link organizational learning with the development of a culture of learning that is essential for the growth of learning organizations.

Critical reflection provides an opportunity for managers and practitioners to learn from their own experiences as well as the experiences of others. Critical reflection contributes to a learning organization where staff can continuously discover how they create reality and how they can change it. Engaging colleagues in critical reflection allow practitioners and managers to examine differing views from their own. Understanding the views of practitioners is essential for building the trust that is critical for developing the creative tension need to encourage learning.

- When it comes to organizational supports for critical reflection, it is clear that management needs to provide a safe space where practitioners/ managers have the freedom to build their understanding of how their own

experiences shape, and are shaped by, social conditions (Ecclestone, 1996, and Mackintosh, 1998, both cited in Stein, 2000). This process is based on the following assumptions:

- Power is both personal and organizational;
- Practitioners/managers participate in their own sense of being dominated;
- Organizational change is both personal and collective;
- Evidence is both empirical and constructed; and
- Dialogue and communication are essential in critical reflection.

In summary, with the appropriate organizational supports, the use of the steps in critical reflection (creating awareness, conducting analysis, and action) can lead to the following outcomes (Fook, 2008, p. 41):

- Increased understanding of the connections between individual and organizational identity (and ways of preserving individual integrity).
- Increased understanding of the need to acknowledge, express, and accept emotion in individual work and organizational dynamics, to both support workers and improve organizational processes and practices.
- Increased capacity to use an awareness of power (both personal and organizational) in helping staff to see different possibilities for change.
- Increased capacity to make sense of organizational issues.
- ncreased capacity to "mine" the tacit knowledge (about both being and doing) related to individual and group/organizational practices in order to make these explicit and allow reformulation.

Critical Thinking and Decision Making

Decision making is at the heart of social service practice (e.g., making and using client assessments for service planning and evaluation) (Gambrill, 2005). The quality of well-reasoned practice decisions depends precisely on the quality of the thought involved. If we want to think effectively, we need to understand the rudiments of a thought process (Elder & Paul, 2007). Several structures can be used to describe the critical thinking process. The eight-part structure developed by Elder and Paul (2007) is illustrated in *Figure 1* and the process explained as follows:

> When we think, we think for a purpose within a point of view based on assumptions leading to implications and consequences. We use concepts, ideas, and theories to interpret data, facts and experiences in order to answer questions, solve problems, and resolve issues. These elements are interrelated. If you change your purpose or agenda, you change your questions and problems. If you change your questions and problems, you are forced to seek new information and data. (2007, p. 5)

This eight-part structure (Elder and Paul, 2007) is used to outline the next sections and the outline is supplemented with material from Gambrill (2005 and 2006).

IDENTIFY FUNDAMENTAL PURPOSE

Several questions can be used to help determine the fundamental purpose of the social services practice decision. What exactly is the issue or pattern of behaviors that you want to understand or what data or information have you received or want to receive? What context can be used to clarify the issue (program changes or big picture concerns related to connecting personal trouble to social issues)? What am I trying to accomplish?

DEVELOP QUESTIONS

A key step in critical thinking is translating practice and policy issues or concerns into specific, answerable questions and stating them as clearly and precisely as you can (Gambrill, 2006, p. 287). Different kinds of questions illicit different types of information and require different forms of analysis. Examples of different types of questions include the following (Gibb, 2003 and Sacket et al., 1997 both cited in Gambill, 2006, p. 291): (a) For people recently exposed to a catastrophic event, what evidence exists to support brief psychological debriefing or doing nothing in order to avoid or minimize the likelihood of post-traumatic stress disorder? And (b) For adolescents in foster care, what is the evidence that early home visitation programs reduce the frequency of delinquency?

Experience may be a valuable source of ideas about what may be true, (Gambrill, 2006, p. 80). However, experience must be critically appraised using additional sources of information related to practice such as "what works, for what client, in what circumstances, and to what effect?" Are there other studies that support the findings? Do the findings apply across populations or only for certain populations? Also, some suggest that answerable questions need to be posed as part of critical thinking: (a) how can the population be described; (b) what interventions are relevant to address the need of the population; (c) how can the interventions be compared; and (d) what are the outcomes? (Sackett et al., 1997; 2000 as cited in Gambrill, 2005, p. 289). Gibbs

(2003 cited in Gambrill 2005, p. 289) referred to these as COPES questions because they are client-oriented, have practical importance, can be used to search the literature, and can be used to identify outcomes.

Point of View

Critical thinking includes the search for the big picture to identify and make explicit underlying or opposing points of view (Gambrill, 2006, p. 30). In everyday practice, it is often easy to forget about economic, political, and social context in which personal and social problems are defined (Gambrill, 2006, p. 31). Therefore, when thinking critically, it is important to clarify the influence of values and standards used in decision making. Values can be defined as the social principles, goals, or standards held by an individual, group, or society. Values reflect preferences regarding certain goals and how to attain them. They are used to support decisions at many different levels (Gambrill, 2006).

Problems are often socially constructed and defined differently at different times and receive more or less attention (Gambrill, 2006). In addition, resources available to address personal and social problems are related to larger structural variables (Gambrill, 2006). There are many organizational factors that influence a practitioner's decisions (e.g., large caseloads, lack of clear policy concerning priorities, contradictory demands from diverse sources, availability of resources, social and time pressures, perceived value of task, goals pursued, access to information, and agency culture) (Gambrill, 2006).

Operating Assumptions

An assumption is an assertion that we either believe to be true in spite of a lack of evidence of its truth or are willing to accept as true for purposes of debate or discussion (Gambrill, 2006). A recommended question for checking for assumptions is—What am I taking for granted?

Identification of bias is central to critically appraising the quality of research and decision making. Bias is a systematic "leaning to one side" that distorts the accuracy of thinking. For example, we tend to seek and overweigh evidence that supports our beliefs and ignore and under weigh contrary evidence (Nickerson, 1998 cited in Gambrill, 2006, p. 227) (i.e., we try to justify or confirm assumptions rather than to question them).

Oversimplifications can be based on biases about certain groups, individuals, or behaviors that influence our judgments (Gambrill, 2006). Generalizations influence what we do and what we believe. They are quick and easy and we do not have to think about all the ways in which a client, for example, may not fit pre-conceptions. However, if the degree of variability is underestimated, a chance is lost to identify clues about what a person is like or may do in certain situations. If we search only for evidence that supports a stereotype, we may miss more accurate alternative accounts (Gambrill, 2006).

Implications and Consequences

Different ways of defining problems have different consequences. Critical thinking requires an *evaluation of options*, taking into account the advantages and disadvantages of possible decisions before acting. What consequences are likely to follow from this or that decision?
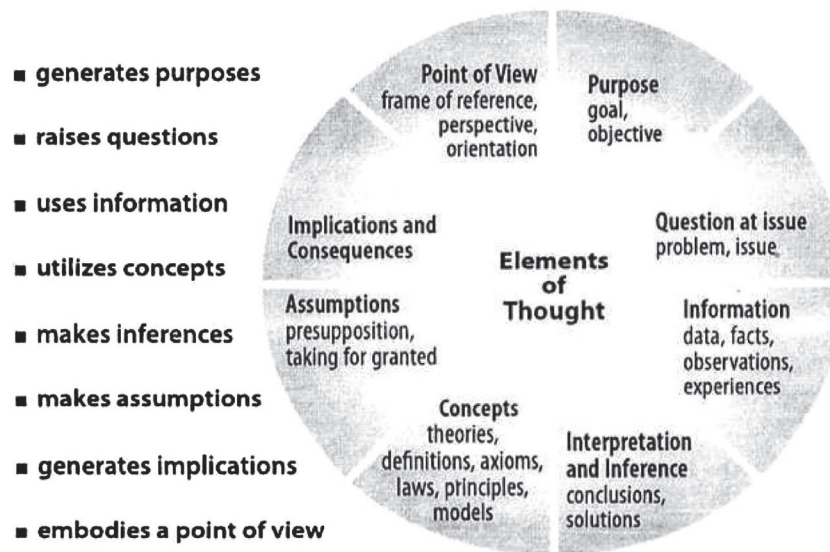
Essential Concepts

Gambrill (2006) points out the importance of clarifying and analyzing the meanings of words and phrases. Practitioners use words to describe people and events, to describe relationships between behavior and events and to express evaluations, and language is used in posing and "thinking" about practice questions (p. 123). Language may compromise the quality of decisions through (a) carelessness, (b) lack of skill in writing and thinking, and (c) deliberate intent. Some common errors in clarifying and analyzing the meaning of words and phrases, include: (a) incorrectly applying labels, (b) assuming that a word has one meaning when words have different meanings in different contexts, and (c) using vague terms (p. 131). If terms are not clarified, different meanings may be derived.

What Information is Needed?

Observation is always selective and is influenced by our theories and related concepts. We are influenced by our own evolutionary history in how we see and react to the world as well as by the culture in which we have grown up. According to Gambrill (2006), we see what we expect to see. Therefore, we need to collect information carefully by asking such questions as:

- What data is most helpful in making evidence-informed decisions?
- How can such data be obtained?
- When has enough information been collected?
- How should contradictory data be handled?
- What criteria should be used to check the accuracy of data?
- How can inaccurate and incomplete accounts be avoided?
- Does the measure reflect the characteristic it is supposed to measure? (Gambrill 2006, p. 466)

FIGURE 2
Eight Basic Structures of Critical Thinking (Elder & Paul, 2007)

- generates purposes
- raises questions
- uses information
- utilizes concepts
- makes inferences
- makes assumptions
- generates implications
- embodies a point of view

Point of View
frame of reference,
perspective,
orientation

Purpose
goal,
objective

Implications and
Consequences

Elements
of
Thought

Question at issue
problem, issue

Assumptions
presupposition,
taking for granted

Information
data, facts,
observations,
experiences

Concepts
theories,
definitions, axioms,
laws, principles,
models

Interpretation
and Inference
conclusions,
solutions

WHAT DOES IT MEAN? INTERPRETATION AND INFERENCE

Basic to deriving meaning is the critical discussion and testing of theories (eliminating errors through criticism). What is called scientific objectivity is simply the fact that no scientific theory is accepted as dogma, and that all theories are tentative and are continuously open to rational, critical discussion aimed at the elimination of errors (Popper, 1994, p. 160; cited in Gambrill, 2006, p. 103). Scientists are often wrong and find out that they are wrong by testing their predictions. In this way, better theories (those that can account for more findings) replace earlier ones. Unexamined speculation may result in acceptance of incomplete or incorrect accounts of problems. Untested speculation can get in the way of translating problems into outcomes that, if achieved, would resolve problems (Gambrill, 2006). The kinds of inferences questioned in an evidence-informed assessment include the following: (a) frequency of a problem, (b) contextual factors, (c) accuracy of assessment measures, and (d) accuracy of different practice frameworks.

Additional analytic techniques that are used in critical thinking include: (a) identifying significant similarities and differences, (b) recognizing contradictions and inconsistencies, and (c) analyzing and evaluating arguments, interpretations, beliefs, or theories. Evaluating an argument is a classic critical thinking technique to understand a problem. An argument is a group of statements one or more of which (the premises) support or provide evidence for

another (conclusion). An argument is aimed at suggesting the truth (or demonstrating the falsity) of a claim. A good argument offers reasons and evidence so that other people can make up their own minds. Argument is an essential form of inquiry. It provides a way to evaluate the accuracy of different views. Steps to analyze an incomplete argument include the following from (Nicerkson, 1986a, p. 87 cited in Gambrill, p. 74).

1. Identify the conclusion or key assertion,
2. List all the other explicit assertions that make up the argument as given,
3. Add any unstated assertions that are necessary to make the argument complete (Put them in parentheses to distinguish them from assertions that are explicit in the argument as given),
4. Order the premises (or supporting assertions) and conclusion (or key assertion) so as to show the structure of the argument.

In summary, critical thinking involves the careful examination and evaluation of beliefs, arguments, and actions by considering alternative views to arrive at well-reasoned decisions, for example, "paying attention to the process of how we think, not just the outcome" (Gambrill, 2005, p. 253).

In an effort to integrate all three elements of a research-minded practitioner, *Figure 2* summarizes the elements and provides the conceptual foundation for the construction of training and course curricula.

Defining Organizational Support

The traditional forms of organizational supports are usually located in a range of professional development activities for practitioners. They include taking an educational leave to complete a degree program or a more timelimited certificate to workplace related activities that include learning from a performance evaluation, participating in induction or specialized training, effective supervision, and/or given a special assignment that involves new learning.

The newer forms of organizational support can be found in an array of examples from the United Kingdom where the implementation of evidence-informed practice has had a longer lifespan. The examples noted in this section include the role of top management, the use of link officers, the use of an evidence request service, the use of agency-based research and development units, the role of service standards (and accreditation), and the sharing/learning from other organizations.

Commitment of Top Management

Since the design and management of organizational support systems are often the responsibility of senior management, it is logical to start with the role of top management in supporting evidence-informed practice. According to Research in Practice (2006) in their publication entitled *Firm Foundations: A Practical Guide to Organizational Support for the Use of Evidence-informed Practice* (see *Attachment 1* for abridged version), organizational support includes: (a) giving strategic leadership, (b) setting expectations, (c) supporting local research, (d) improving access to research, and (e) encourage learning from research. Setting directions and expectations involves bringing together and consulting with any staff interested in evidence-informed practice, often led by one or more senior staff members who can demonstrate how evidence-informed practice can be linked to both planning and review processes.

A second dimension of organizational support involves increasing staff competence related to evidence-informed practice through training and ongoing support. The support could include outcome measurement, opportunities to use data-based websites, leading focus groups with service users, and involving student interns. The roles of senior management related to research (modeling critical thinking, incorporating evidence into agency documents, and maintaining research partnerships with universities, institutes, and consultants) are identified in *Appendix B*.

Another approach for senior management is to identify the role of evidence-informed practice in the organization's mission statement. For example, Barnardo's in the United

Kingdom has developed the following component for their agency's mission statement related to:

- Improving outcomes for children based evidence-informed decision-making: Service development and design are driven by evidence drawn from performance evaluation data derived from existing services and/or external research evidence.
- Practice decisions are based on the best available evidence (external research, views of service users, government service audits, program evaluations, and expertise of managers and practitioners).
- Practice is monitored, evaluated, and performance data generated to ensure that intended outcomes are being achieved and not causing harm.
- If staff is unsure about the effectiveness of an approach or intervention, pilot efforts are evaluated before full scale implementation.

While there are multiple staff barriers to achieving this mission (e.g., work pressures and lack of time, lack of research knowledge, lack of practical supports and resources, relevance of current research to practice, etc.), it is also recognized that senior management can help to address these barriers by:

- Demonstrating a clear commitment to the mission,
- Investing organizational resources in staff training and senior staff facilitation as well as Internet access,
- Build evidence-informed practice into ongoing organizational processes (e.g., supervision, team meetings, reading opportunities, Internet searching, etc.),
- Increasing communications devoted to sharing practice knowledge up and down as well as across the organization,
- Managing and sharing in-house (administrative) data and ensuring that information reaches the people who need it,
- Using evidence to inform (influence) public policy,
- Modeling reflective practice as an organizational norm by creating a learning organization that values curiosity, inquiry, and life-long learning, and
- Supporting communities of practice that bring practitioners in similar areas together on a regular basis to work on similar issues and share resources.

Link Officers

Another approach to creating organizational support for evidence-informed practice features the role and functions of staff members who serve as Link Officers (Research in Practice, 2006). The role can be carried out by a staff

member or a group of staff working as part of a knowledge sharing team. While each organization can shape the role to meet its own needs, the link officer role often includes one or more of the following:

- Fostering relationships between agency and research organizations (e.g., universities),
- Helping staff use service evaluation research to improve services and outcomes,
- Identifying opportunities for special projects and partnerships,
- Contributing to the integration of evidence-informed practice in the agency,
- Participating in multi-county knowledge sharing projects when they benefit the agency,
- Coordinating learning events, disseminating materials, and encouraging the use of relevant websites.

The implementation of the link officer concept can include a wide variety of activities. If the role is shared with a group of key managers, it could include monthly meetings that involve: (a) sharing external reports with specific staff along with an overview of key findings and possible relevance for practice, (b) assessing the transfer of learning from various learning events, (c) sharing information on agency intranet site, (d) coordinating student research projects by including relevant staff members, (e) assisting staff with the conduct of small evaluation projects, (f) supporting staff with the presentation of in-house or outside research at staff meetings, (g) promoting research collaboration with local universities, (h) fostering greater service user involvement in evaluating services, (i) including content on evidence-informed practice in staff induction programs, and (j) promoting more staff training related to becoming a more research-minded practitioner.

Evidence Request Service

While senior management often has access to analysts or evaluators who have the skills and resources to engage in quick literature searches, this is often not the case for middle-management and line staff. It is clear that the research interests of top management are often different than those of line staff. As a result, the search for evidence is different. Senior management tends to focus more on the issues facing populations being serviced (e.g., why are there so many children of color entering the child welfare system) while line staff tend to be more interested in learning about interventions or "what works" with specific types of clients.

One approach to address this dilemma is the development of an Evidence Request Service (ERS) by Barnardo's

in the United Kingdom. Building upon the publications from a nationally funded project (What Works for Children, Economic and Social Research Council, 2001–2005), the ERS was launched in 2004 to improve staff access to relevant and reliable research evidence and to increase the use of research evidence in service planning and delivery. Based on specific requests from staff that are refined for data-based searching, the ERS operation (one full time researcher and an assistant) informs staff to existing research and information inside and outside the organization through the use of a comprehensive online search for the most rigorous and relevant research related to the topic under investigation. Staff members are then provided with a clear and easy-to-read summary (3– 5 pages) that identifies some preliminary implications so that staff can meet to develop their own implications for practice. With a sufficiently refined search topic, the literature review summaries can be produced in up to eight weeks (at an average cost of $350 and an average time of 10.3 hours based on an hourly rate of $35 for skilled electronic database searcher, without costs associated with managing this service).

Some of the topics researched in the first several years of operation included:

- What is the best way to involve young fathers with children on the child protection register?
- What are the best counseling interventions for sexually abused children?
- What are the effects of abuse and neglect on brain functioning and cognitive development?
- What are the risk factors associated with sibling sexual abuse?
- What works with children of parents who abuse substances?
- What works in emergency and short-term foster placements?

Research and Development Unit

One of the most innovative forms of organizational support can be found in the local public social service agency in Helsinki, Finland. When staff members were unable to find relevant research related to their practice concerns, they needed a venue for engaging in small scale studies to build their own foundation for evidence-informed practice. When staff defined the research questions (in contract to those developed by academics, policy analysts, and/or senior management), a form of practice research was begun and needed a place to thrive. When the Helsinki department established an agency-based Practice Research & Development Unit

(R&D), it was created to help staff explore client and service delivery issues emerging from their practice.

The R&D Unit has several unique operating features: (a) staff can submit a plan for conducting a piece of exploratory research, provided that it relates to the strategic directions of the department, (b) if the topic is selected, they can be re-assigned to the R&D Unit for a period of time (a year or more) along with a small number of other staff working on different topics, (c) staff are supervised by a part-time researcher from the faculty of a local university social work department who rotate through the unit for a period of time (a year or more), (d) most approved research projects include multiple perspectives (staff, administration, service users, and faculty researchers), and (e) the research process includes weekly case presentations (internal staff or external experts), weekly journal clubs, involvement of students currently placed in the agency, and annual senior staff presentations. The outcomes of the R&D Unit include:

- Expanded number of research-minded practitioners,
- Increased faculty involvement in practice research,
- Increased agency capacity to identify and disseminate promising practices,
- Increased agency capacity to focus on service outcomes and improve service effectiveness,
- Increased opportunity to elicit service user perspectives,
- Expanded venue for agency–university collaborative research, and
- Enhanced in-house think tank capacity to engage in policy-relevant research.

Service Standards

As noted earlier, one of the strongest rationales for providing organizational support for evidence-informed practice can be found in the current pressure on social service agencies for increased accountability in the form of measuring outcomes. These new pressures often require a change in the culture of an organization that has been more concerned with serving as many clients as possible than with measuring service outcomes. As a result, senior management often finds itself searching for tools to use in communicating the importance of outcomes with staff. However, Research in Practice (UK) has developed a promising communications tool called Performance Pointers.

These publications are designed for dissemination to staff and combine the following critical ingredients of outcome assessment:

- A full explanation of a service standard in terms of its policy origins and rationale (e.g., stability of placements of foster children in terms of number of moves

related to: (a) increasing choice of placements, (b) developing/supporting foster carers, (c) using multidisciplinary treatments, (d) stabilizing placements of older children, and (e) stabilizing residential care);
- A synthesis of relevant research (selected, not comprehensive);
- An identification of promising practices related to the service standard (selected, not comprehensive);
- An identification of key questions for staff to explore in staff meetings; and
- A selected list of references for further inquiry.

Lessons Learned: Implications for Practice

Implications for Practice: Identifying the Research-Minded Practitioner

This analysis provides an opportunity to explore the processes needed to identify research-minded practitioners and the types of organizational supports needed to promote evidence-informed practice. As noted in *Figure 2*, the activities of a research-minded practitioner might include: the search for promising practices (curiosity) to address practice dilemmas, integrating critical reflection into one's daily practice, and regularly engaging in critical thinking about the available knowledge and research related to one's practice. One of the first steps toward identifying research-minded practitioners and enhancing their professional development may include consulting with staff to locate practitioners who display considerable curiosity about the services provided, critically reflect on their practice, and critically think about the impact of research on their practice. Supervisors and administrators are often in a position to identify critically thinking practitioners who use organizational data and knowledge to inform their practice as well as request or seek out specific research to increase their understanding of specific practice questions.

Conversely, senior level administrators may find less interest in research-mindedness where practitioners are resistant to learning how to use data, reading reports, or seeking out practice relevant research. It may be that the previous attempts of staff members to pursue their curiosities and interests were met with organizational challenges and barriers. In a similar way, the tools being used to convey knowledge and research may be incomprehensible and confusing for practitioners (e.g., complicated graphs and reports with little clarification).

Supporting research-minded practitioners, once identified, often requires the development of organizational supports to promote evidence-informed practice. These

include focusing on staff and career development, revising job definitions to include research learning, incorporating evidence into ongoing managerial decision-making, and creating a culture of curiosity. Developing a culture of curiosity within human service organizations may help bridge the link between organizational supports and nurturing the growth of research-minded practitioners.

ORGANIZATIONAL SUPPORTS PROMOTING EVIDENCE-INFORMED PRACTICE

Culture of curiosity. The organizational culture of curiosity can be described in terms of goals, processes, and supports. The goals of such a culture could include efforts to create an organizational climate where there is room to be creative, where it is safe to question decisions and those in authority, and where there is a consistent message about pursuing new or better ways of doing business. The processes that would need to be visible in an organizational culture of curiosity include: (a) creating a sense of wonder about how things might be done better, (b) encouraging staff to ask why and to value the pursuit of more information, (c) encouraging the search for input from others at all levels of the organizations, and (d) clarifying boundaries for question-raising related to the rationale for work procedures and/or ways to improve them as they might relate to client outcomes. And finally, the organizational supports for a culture of curiosity might include: (a) increased recognition for those who develop new approaches, (b) encouragement of those who innovate by acknowledging their contributions, (c) increased attention to opening doors for staff to pursue ideas, and (d) providing resources for staff to search for alternatives and thereby cultivate individual and situational sources of curiosity.

Staff development and career development. The second crossover area between the research-minded practitioner and organizational supports relates to staff development in the form of learning/training events and career development in the form of project-based learning as noted in *Appendix A*. At least three core skills are needed to promote evidence-informed practice in an organizational environment of outcome assessment: (a) cultivating curiosity, (b) critical reflection, and (c) critical thinking. These three competency areas need to be reflected in all training programs and project learning opportunities, irrespective of their content.

Three primary connections need to be made in order to incorporate these areas into all practice learning opportunities. The first connection is between the *tacit knowledge* (stored in the head/experiences of all staff) and *the capacity to critically reflect on their practice*. Critical reflection capacities grow over time if they are nurtured and supported by peers, supervisors, and managers as part of life-long learning. The second connection is between explicit knowledge and critical thinking. Analyzing new social policies or recent research articles/reports involves critical thinking skills that are needed for evidence-informed practice. While it is often assumed that these critical thinking skills are acquired in undergraduate and graduate programs, it is not clear that these skills are well developed and/or effectively transferred to the workplace. For many staff members, years of experience with trial and error efforts have contributed to their own skill development in critical thinking.

The third connection that needs far more attention in the workplace as well as on campus involves *the interrelationship between practice skills and research skills*. Until staff and students fully recognize that engaging in practice is a form of research, it will be difficult to make this connection apparent to all. It means that practice and research need to be taught as two sides of the same coin and integrated on campus and in field work education. For example, efforts to assess client outcomes need to be integrated into all phases of case management practice. The challenges associated with this level of integration are beyond the scope of this analysis but call for considerable dialogue and creativity, especially since very few current training curricula, course outlines, or textbooks reflect this integration.

Job redefinition and research learning. In addition to the focus on a culture of curiosity, there are many implications for prioritizing organizational supports. For example, in the area of job descriptions, it is necessary to expand the definition of practice performed by line staff from worker–client facilitator and worker–supervisor facilitator to new collaborator roles "worker–evaluator" and "worker–policy analyst." The scope of practice needs to include the evaluator/researcher role as well as the policy practice role in order to help staff connect what they see in their caseloads with the broad policy dialogue about how policies need to be changed, enhanced, or created (Harris, Scott, & Skidmore, 2009). While some have noted that these multiple roles are part and parcel of generalist practice, they have rarely been integrated for students on campus or called for in agency practice.

Both agency senior management and university educators need to be able to articulate the theories of change that underlie practice and demonstrate how logic modeling

TABLE 1
Systems of Organizational Support for Evidence-informed Practice

	Practice wisdom (tacit knowledge)	Published research (explicit knowledge)
Evidence requesting	Survey promising practices	Search existing literature
Evidence linking	Convening staff to share	Routing and discussing relevant sources/citations
Evidence generating	Critical reflection for research questions	In-house research and development units (R&D)
Evidence monitoring	Case record review, case conferencing, and administrative after-action reviews	Administrative data and reports linked to national service standards

can inform research on practice. In addition to educating knowledgeable research consumers on campus and in the agencies, practitioners need to be equipped and supported in the conduct of exploratory pilot studies of practice issues. This often requires an in-house research and development capability. In a similar way, senior management needs to find ways to support the career trajectories of their most research-minded practitioners through in-house research opportunities and outside learning opportunities at universities and elsewhere.

Managerial leadership and organizational support mechanisms. Organizational supports for evidence-informed practice need to be mainstreamed into ongoing managerial decision making (Reynolds, 1998). As noted in *Table 1*, systems of organizational support need to be built in the four areas of evidence requesting, evidence linking, evidence generating, and evidence monitoring. Each of these can be described in terms of their relationship to tacit knowledge (practice wisdom) and explicit knowledge (published research).

First, evidence requesting involves the capacity to continuously scan the local, regional, national, and international environment for promising practice related to human service delivery. The same scanning is needed in the area of explicit knowledge through in-house and national databases, most frequently aided by experts in the field and on campuses. Second, evidence linking involves continuous efforts to convene staff to share in relationship to curiosity (e.g., raising questions), critical reflection (e.g., recent practice experiences), and critical thinking (e.g., issues raised in a Journal Club) as well as to learn from each other by the sharing of tacit knowledge and related practice wisdom. From the perspective of explicit knowledge, systems need to be created by senior management to enhance the routing,

sharing, and discussing of relevant research publications, policy analyses, and other citations. Third, the process of evidence generating involves efforts to support the translation of critical reflection questions emerging from staff into research questions to be addressed inside or outside the organization. In addition, the explicit knowledge generated by senior staff in the form of administrative data needs to be effectively disseminated in a form that all levels of staff can understand and ultimately utilize as part of service delivery decision making. Densely filled tables of numbers with little attention to the principles of effective dissemination and utilization are no longer effective evidence sharing activities.

Finally, the fourth dimension of organizational supports relates to evidence monitoring. The tacit knowledge dimensions of monitoring can be found in the processes of case record review, case conferencing, and after-action reviews where the tacit knowledge of staff can be shared, organized, and disseminated for future decision-making.

It is clear that developing a culture of curiosity involves special attention to staff/career development, job redefinition and research learning, and managerial leadership related to organizational support mechanisms. There are many challenges facing research-minded practitioners and senior managers engaged in creating organizational supports for evidence-informed practice. However, the opportunities to transform human service organizations into learning organizations that engage in data-based decision making at all levels are unlimited.

Conclusion

Evidence-informed practice continues to gain momentum as a framework for linking research and practice in human service organizations. Despite consistent offerings of research courses while preparing future social work practitioners during graduate school supplemented with much

attention to evidence-based and evidence-informed practice in the field, integration of data and research into daily practice remains an elusive goal for human service organizations. Delving further into the mechanisms that may be influencing the integration (or lack) of evidence in practice, it is clear that many factors come into play. By nurturing aspects of curiosity, critical reflection, and critical thinking in front-line practitioners, those that are responsible for implementing evidence-informed practice may be more capable of seeking out, consuming, and applying the knowledge needed to support evidenc-informed practice with clients. Simultaneously, putting in place organizational supports that promote the pursuit and application of information and knowledge is also needed for the research-minded practitioner to succeed. With administrators and managers leading the way, working to develop a culture of curiosity within their organizations, research-mindedness and evidence-informed practice can become the new norm needed to promote excellence in human service organizations.

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APPENDIX A

A Case Example of Organizational Career Development Supports for On-the-Job Continuing Professional Education*

1. Learning on the job following completion of professional education
   - Learning from other professionals through case conferences
   - Learning from a supervisor who encourages practitioners to be reflective about one's practice in order to identify future learning needs
   - Being given assistance in making conscious the impact of one's professional knowledge and practice experience on service users
   - Learning from other members of a service team
   - Being made aware of learning opportunities, formal and informal, that could be pursued or self-directed
2. Working in an organization that fosters learning by
   - Scheduling weekly staff development events in the form of an afternoon journal club, case discussion, in-house learning event, research presentation
   - Promoting links with local university research centers
   - Using case scenarios that simulate real cases and provide staff a safe place to unpack the service issues
   - Receiving special assignments to develop a program and search out resources electronically and through networks (small-scale literature reviews)
   - Receiving support for conducting a needs assessment related to a client population or participate in a program evaluation
   - Given opportunities to consult with researchers to find resources related to a client population

3. Providing support for pursuing further education (certificate or degree programs)
   - For example: "We were encouraged and coached to apply for a study fellowship through contacts with an academic researcher. I considered it because it was an exciting opportunity to work with researchers on a practice problem that I felt was important to our clients and for the opportunity to design a service that facilitated better client outcomes. Intellectually it was a huge opportunity and challenge as I increasingly found myself in a process of exploring research and thinking about methodological issues that were interesting, stimulating and empowering. I think it is interesting to reflect back on the links between my own intellectual curiosity, my practice concerns, the need for service design, my previous work experience, and exposure to critical and reflective thinking and the supportive organizational systems and structures. I'm not sure that if any of these elements were missing whether or not I would have found my way into the research arena. It was a very non-linear process that included a mix of several facilitative factors."
   - Reviewing literature fosters increased opportunities to reflect on one's own practice
   - The process of analyzing data in which one moves from concrete description to analysis of aggregated data can be challenging and provide for much learning
   - Making the transition from viewing individual clients as unique to seeing common patterns in their behaviors and searching for similarities and differences and speculating on the reasons why these patterns occurred.
   - For example: "This movement from the individual to the collective and the movement from being concrete

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*Developed with the assistance of Dr. Rhoda MacRae, Institute for Research and Innovation in Social Services, Dundee, Scotland

to identifying patterns that are informed by previous knowledge and theories were very enlightening. My feeling is that this intellectual work, required for evidence-informed practice can be very challenging for practitioners as it requires time and support to reflect and make judgments. Perhaps most challenging, the process raises questions about what you are doing and why (this uncertainty, in the first instance, can be quite overwhelming but it is part of the learning process that many practitioners are not exposed to)."

- Pursuing doctoral education does not mean a commitment to an academic career when there are numerous opportunities in an agency to promote evidence-informed practice

- For example: "I was totally inspired by my academic supervisor but I never for a moment thought I would be able intellectually, practically or financially pursue a PhD. The issues of confidence and identity were pertinent here. In my mind at the time, someone who pursued a PhD was clever, had done well at the university, and was a good student prior to university enrollment. When I got the "research bug," my mind had been opened up and I was seeing practice and service delivery in a new light. I was

questioning pretty much everything and my efforts to challenge common practices probably threatened some of my colleagues. I wanted my work to impact on practice—directly and immediately—but of course the relationship between evidence and practice is not straight forward and implementing research findings is most challenging."

- For example: "After my PhD, which I found to the most stimulating and challenging of processes, I was driven to undertake research that had a relevance to and currency with practice. I took a job as a researcher in a social work research centre and worked there for 4 years as a contract researcher. However it continued to frustrate me that not enough of the research focused on practice. So when this position came up I saw it as a an opportunity to promote evidence-informed practice at strategic and operational levels by encouraging government to fund practitioners and managers to use research in a way that benefits their services and service users as well as expanding the use of technologies to increase access to knowledge and working with managers to see the value in it."

Role of Senior Management in Promoting Evidence-informed Practice (EiP)—Barnardo's Northern Ireland

1. Supporting and enabling critical thinking about practice and applying evidence to improve services for users
   - Exercises in critical thinking built into EiP training related to Research in Practice materials and searching electronic databases
   - Working with staff to define models of service user assessment and engagement
   - Evaluating services using surveys and focus groups of service users and service referral sources
   - Helping staff use appropriate research methods in evaluating service outcomes
   - Sharing logic modeling with staff
2. Generating and sharing evidence

   - Encouraging staff to write-up and share their evaluation results at conferences and online
   - Help staff prepare briefings for senior management and other staff
   - Encourage staff to participate in larger, multi-country studies
3. Modeling appropriate behaviors
   - Making sure that evidence is incorporated in annual reports, business plans, communication tools, and communications with funders
4. Creating strategic partnerships
   - Maintain relationships with other EiP organizations
   - Maintain university partnerships

APPENDIX C

FIRM FOUNDATIONS
A Practical Guide to Organizational Support for the Use of Research Evidence*

I. USING RESEARCH EVIDENCE

What do we mean by research evidence?

Although few people would dispute that decision-making should be informed by the best available research evidence, there is still vigorous debate about what constitutes credible and robust research in the social science context. There has been much debate about the validity of different research methods—for example, the relative merits of studies based on experimental designs to determine the effect of an intervention (such as randomized control trials) versus studies using qualitative methods (concerned with people's experiences and opinions). It depends on the question you are seeking to answer as to which is the most valid or appropriate research method. But just as important as an appropriate research design is that the research has been soundly conducted so that the results are reliable.

How should research be used?

Research can be used in individual cases to inform the assessment or planning of services for children, young people and their families. It can also be used more strategically to inform policy, procedures and service developments. The ways in which research is used can be challenging because:

- The nature of research in social care is that it is often more about increasing background understanding, giving insights into the nature of problems, changing attitudes and beliefs, and generating ideas, rather than prescribing action. Child welfare research rarely provides strong, directive evidence or definitive answers that signpost what to do.
- Research findings cannot just simply be taken at face value and applied to any situation. Messages must be assessed for their relevance and transferability to the local context and circumstances (which might be a complex family situation with ill-defined, contradictory or competing goals and multiple stakeholders).
- Practitioners are not passive recipients of research. They have to make sense of research by reconstructing or synthesizing it with other sources of knowledge (such as professional experience and the views of service users).
- Research must also be melded with other (sometimes conflicting) factors that influence decisions about the way forward (such as the resources available or the risks involved).

According to Brechin and Sidell (2000), social care practitioners are likely to draw on 'different ways of knowing, moving in and out of them seamlessly or engaging in them simultaneously.' Such 'ways of knowing' include empirical knowing (where a practitioner

uses research evidence), theoretical knowing (where a practitioner recognizes different ways of approaching a problem), and experiential knowing (a tacit knowledge based upon years of experience). All three are useful 'evidence' when reaching a decision.

So, research evidence should not (and cannot) drive decisions. Rather, the practitioner goes through a considered and thoughtful process where a range of factors (including research) influence the judgment or proposal made. It is this thoughtful process that we call evidence-informed practice (EIP). The evidence-informed practitioner carefully considers what research evidence tells them in the context of a particular child, family or service, and then weighs this up alongside knowledge drawn from professional experience and the views of service users to inform decisions about the way forward.

> **evidence-informed practice = research evidence
> + practice wisdom + user views**

Evidence-informed practitioners: Adopted from Lewis (2002)
- ask challenging questions about current practice
- know where and how to find relevant research
- are aware of research about what is likely to improve outcomes for children and families
- consider the implications of research in different case contexts
- reflect on their experiences in order to learn
- measure the impact their work is having for users
- listen to what users have to say about services
- are explicit about how research, experience and user views have informed their conclusions, proposals and decisions
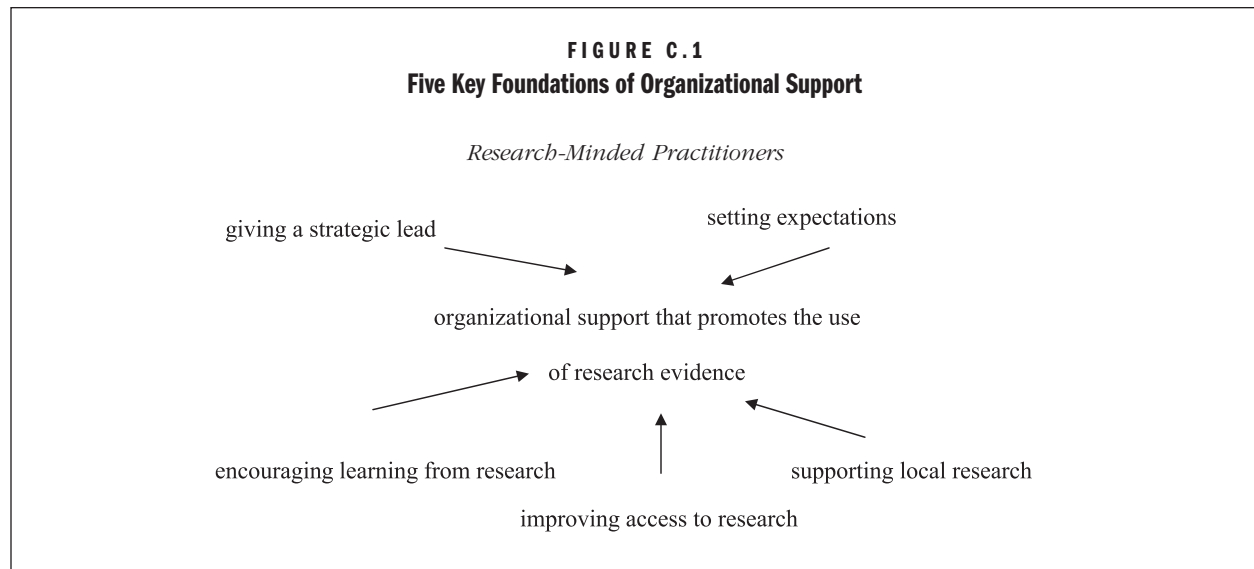- share their knowledge and best practice with others.

It is because research evidence is just ONE of the factors that needs to influence practitioners' decisions and judgments that we think the term 'evidence-informed practice' is much more appropriate than the more commonly encountered phrase 'evidence-based practice.'

Why using research is important

Social service staff members make significant interventions in the lives of children, young people and families, with possibly far-reaching and permanent consequences. It is the responsibility of professionals to do so only on the basis of the best available evidence of what is likely to help. Otherwise, their actions become nothing more than experiments in helping (and worse, may actually do some significant harm). It is not enough to mean well. Making proper, transparent use of the research evidence base will improve the likelihood of positive outcomes for children and families.

Every child has the right to expect that anyone involved in practice decisions about them and their family knows what is most likely to work—thereby increasing the likelihood of achieving positive results, and also making sure that time and money is not wasted on things that have little, no, or even a negative effect.

F I G U R E   C . 1
Five Key Foundations of Organizational Support

Research-Minded Practitioners

giving a strategic lead   setting expectations

organizational support that promotes the use

of research evidence

encouraging learning from research   supporting local research

improving access to research

Are there other benefits to using research?

Apart from the obvious gain of better outcomes for service users (as discussed above), practitioners have also reported that making greater use of research evidence:

- makes work more rewarding by delivering better results and experiences for service users
- enables us to articulate why we think a particular course of action will produce effective outcomes
- helps us to explain to service users the rationale for our decisions and actions
- encourages a reflective and learning culture that prepares us to meet the challenge of the Every Child Matters change agenda
- ensures our precious time and resources aren't wasted on things that are less likely to work
- is a source of new ideas and innovation, which is motivating
- gives us a sense of professional confidence and identity
- provides a theoretical framework for our practice.

WHY IS ORGANISATIONAL SUPPORT SO IMPORTANT?

Getting research into the bloodstream

Spreading the use of research into routine, mainstream practice requires your agency to take purposeful action to overcome barriers, create incentives and make it easier for people to use research. This is what we mean by providing organizational support for evidence-informed practice.

Your agency will have a number of individuals (or maybe whole teams) who are research-minded. You can probably think of several staff members who are:

- committed to making sure they keep up-to-date with research in their field
- feel confident about their knowledge base actually use research to guide their decisions and explain their rationale.

The problem is that these committed enthusiasts are probably in rather isolated pockets around your agency.

- For example, they will need:
- access to good-quality research (through journals, libraries, the internet or a budget to purchase materials)
- forums to discuss research with the authors themselves, and with their colleagues to debate the practice implications
- opportunities to develop their skills in finding and understanding research; the space to think about how research fits with their existing knowledge
- an expectation and encouragement from their managers to work in this way.

These facilities and opportunities depend on action being taken on an agency-wide basis, rather than by individuals or teams. Research about how to achieve changes in any sort of behavior suggests that success depends upon people:

- knowing what they are expected to do (**what**)
- being committed to it (**why**)
- being enabled to do what's expected (**how**).

Dissemination of research is clearly an important enabling action, but it's only one of the things staff need to help them do what's expected of them. And of course, focusing on dissemination alone fails to address both the 'what' (setting clear expectations) and the 'why' (winning hearts and minds).

What sort of organizational support is important?

The evidence indicates that these are the key ingredients of effective organizational support:

- senior leadership that clearly signals the importance of research as a source for new ideas, 'sells' the benefits and models EIP personally
- strategic oversight and effective co-ordination of efforts to take EIP forward
- credible 'champions' who act as catalysts in promoting integration of research into practice
- clear expectations about research knowledge and its use in job descriptions
- procedures which embed the use of research in working practices

FIGURE C.2
Organizational Support Audit

A. Giving a strategic lead

	1	2	3	4

1. There is a senior manager and steering group clearly responsible for supporting the development of EIP
2. There has been a debate about what evidence-informed practice means in reality, and a shared vision documented
3. There is a published action plan that sets out what steps will be taken to encourage greater use of research
4. Practice development posts (e.g., senior SWs) are used to promote learning from research, consultation & evaluation.
5. The extent to which research actually informs policy and practice decisions is monitored and formally measured

Key strengths	Key areas of improvement

B. Setting expectations

	1	2	3	4

1. Job descriptions, competencies & progression criteria state what is expected of staff in terms of research awareness & use
2. Practitioners are expected to record how research evidence and user views have informed their assessments and plans
3. Service strategies & plans are required to demonstrate how they've been shaped by research evidence & user consultation
4. Managers understand their role to develop a research-minded culture and how to model EIP themselves
5. There are incentives to work in an evidence-informed way and mechanisms to recognize and reward achievements

Key strengths	Key areas of improvement

C. Encouraging learning from research

	1	2	3	4

1. In-house events for staff are often used to raise their research awareness & keep them abreast of developments
2. Supervision & annual personal reviews are used to develop reflection & professional research-based knowledge
3. There are many examples of innovations, pilots and trials of new models & services which are formally evaluated
4. The research expertise, events and resources of partners, universities and professional bodies are fully exploited
5. There are regular opportunities to share professional expertise and good practice between teams

Key strengths	Key areas of improvement

D. Improving access to research

	1	2	3	4

1. Training and professional help is available on where to look for research and on getting, understanding & applying it
2. A library of agreed key research publications (e.g. journals, reports, bulletins, books) is available at each worksite
3. All managers and practitioners have access to the internet at work at a time and location convenient to them
4. There is a managed process for disseminating to target staff any new research publications and the practice implications
5. The results of local research (e.g. projects. evaluations and consultation are shared with staff as sources of learning)

Key strengths	Key areas of improvement

E. Supporting local research

	1	2	3	4

1. There is a strategy to promote more effective consultation with all children, young people and families using services.
2. Services are supported to routinely evaluate the outcomes and impact of their work and how users think it could improve.
3. The use of published scales and tests to measure the outcomes of interventions is common.
4. A program of research work that explores priority issues and gaps in knowledge has been agreed and is resourced.
5. The projects undertaken by PQ students are shaped by the agency's research priorities and are centrally logged

- incentives to work in an evidence-informed way and to try new approaches
- a culture that rewards constructive challenge and values research-informed behaviors and decisions
- opportunities for reflection and to look for and read research
- adequate training to develop skills in finding research, reading it critically and applying the messages
- easy access to digestible research to promote and research literacy and awareness
- information and research support staff to offer expertise in finding, interpreting and using research
- time with researchers and colleagues to consider together the practice implications of research findings
- a local program of research studies, routine service evaluation and systematic consultation with users.

The five key foundations of organizational support

It's clear from the list above that a number of elements need to be in place to create the right infrastructure and climate for evidence-informed practice to thrive in your agency. As noted in *Figure C1*, we have crystallized into five key foundations the support that organizations need to put in place.

II. GETTING STARTED

How to use the organizational support audit tool

The self-assessment exercise has five sections—one for each of the key foundations of support described above—but it's not a test! Instead, think of it as a helpful tool that prompts you to stand back and reflect critically on what's going well, and what isn't.

We recommend that a group of people complete the self-assessment together, rather than one person doing it alone. This way, you are more likely to get a balanced view of the current state of support for EIP, gather a richer mix of ideas for improvement and start to build some ownership of the need for action. You might want to use an existing forum (such as a practice development group or research committee) or you might need to convene a special group. The group will probably need to meet twice—once to kick-off the audit, and once to share and discuss the results. In either case, make sure the group has cross-agency representation. It's important that you capture the perspectives of staff:

- who work in a range of children's services
- from different professional disciplines (e.g., social work, education, health)
- in front-line, higher and management grades
- in strategy and planning roles
- in support functions (like personnel, information and performance).

If these perspectives are not represented in the group, you may need to do some consultation as part of the audit process to make sure you build a balanced picture of what's going on. You might also like to think of inviting someone from outside your agency to offer an independent perspective and some new ideas perhaps a contact at your local university, or a colleague from another agency.

The group might want to work through the audit together, or you could allocate each section to one or more people to complete

separately and report back. Encourage participants to do some digging to answer the questions.

III. GIVING A STRATEGIC LEAD

Nominating a senior leader

- developing a vision of evidence-informed practice and communicating it
- giving strategic direction about how to get there
- bidding for any additional resources that might be needed
- motivating followers and building allies (both internally and with outside partners)
- monitoring progress and sustaining momentum.

Setting up a steering group

- debate what you actually mean by 'evidence-informed practice'
- develop a shared vision of how research should influence practice and policy decisions
- agree some realistic actions that will develop the necessary culture, systems and skills to support learning from research
- co-ordinate progress and ensure it is tied in to other related initiatives.

Setting objectives

on giving a strategic lead time
on setting expectations
on encouraging learning
on improving access to evidence
on supporting local research

Action planning

Evaluating impact

IV. SETTING EXPECTATIONS (see full report)

V. ENCOURAGING LEARNING FROM RESEARCH (see full report)

VI. IMPROVING ACCESS TO RESEARCH (see full report)

VII. SUPPORTING LOCAL RESEARCH (see full report)

VIII. REFERENCES AND FURTHER READING (see full report)

References

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