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Harvesting Knowledge

Abstract

{Excerpt} If 80% of knowledge is unwritten and largely unspoken, we first need to elicit that before we can articulate, share, and make wider use of it. Knowledge harvesting is one way to draw out and package tacit knowledge to help others adapt, personalize, and apply it; build organizational capacity; and preserve institutional memory.

The so-called know-do gap is one outcome of poor knowledge translation and organizational forgetting. In decreasing order of incidence, that is commonly attributed to (i) shortage of resources, e.g., skills, time, and finance, (ii) lack of buy in at all levels within and across organizations, and (iii) information overload. Shortage of resources affects policymakers, researchers, and practitioners equally.

In the 21st century, intra-organizational flows of knowledge have become as important as the resource itself. And so, managing both stocks and flows has become an imperative rather than an alternative for most organizations. Knowledge harvesting is a means to draw out, express, and package tacit knowledge to help others adapt, personalize, and apply it; build organizational capacity; and preserve institutional memory. In addition to context and complexity, the concepts that relate to it are tacit knowledge stocks, tacit knowledge flows, and enablers and inhibitors of tacit knowledge work.

Keywords

Asian Development Bank, ADB, poverty, economic growth, sustainability, development

Comments

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Harvesting Knowledge

By Olivier Serrat

The Know-Do Gap

The so-called know-do gap is one outcome of poor knowledge translation¹ and organizational forgetting. In decreasing order of incidence, that is commonly attributed to (i) shortage of resources, e.g., skills, time, and finance, (ii) lack of buy-in at all levels within and across organizations, and (iii) information overload. Shortage of resources affects policy makers, researchers, and practitioners equally. Practitioners commonly think insufficient buy-in to be the greatest challenge.



If 80% of knowledge is unwritten and largely unspoken, we first need to elicit that before we can articulate, share, and make wider use of it. Knowledge harvesting is one way to draw out and package tacit knowledge to help others adapt, personalize, and apply it; build organizational capacity; and preserve institutional memory.

Except when messages are complex, the three most desirable knowledge translation strategies advocated in response are stakeholder engagement, dedicated knowledge brokers, and effective communications (with commensurate recognition, support, and funding in all three cases). Sure enough, the "wisdom of the crowd" element in these responses emphasizes the importance of paying due attention to the "who", "what", and "how" of knowledge translation.

It is indeed vital to get the right knowledge to the right people at the right time, and help them apply it, if we are to do something better every time we do it again.² However, if 80% of knowledge resides in the minds of people, both as a thing and as a flow, it is now recognized, we first need to elicit that before we can articulate, share, and make use of it.³ (Certainly, in most fields of human endeavor, current levels of explicit knowledge only reveal a fraction of what must be known to produce results.)⁴

¹ Knowledge translation is emerging as a paradigm to learn and act to close the know-do gap. It has been characterized as the synthesis, exchange, and application of knowledge.

² Little used databases of "lessons learned" from self- and independent evaluations are all-too-familiar artifacts of failed approaches.

³ Michael Polanyi (1891–1976), a Hungarian–British polymath whose work spanned physical chemistry, economics, and philosophy, held that all knowledge is either tacit or rooted in tacit knowledge. Using a mutually agreed language, much (but probably not all) can be communicated between individuals (even though we can never quite know what is implied by what we say because of the tacit nature of meaning.) However, paraphrasing David Snowden, we can probably convey more by storytelling than we can write. (This probably explains why apprenticeship was the dominant form of knowledge transfer until it succumbed to scientific management and other instruments of modernity.) See David Snowden. 2002. Complex Acts of Knowing: Paradox and Descriptive Self-Awareness. *Journal of Knowledge Management*. Vol. 6, No. 2, pp. 100–111. From there, the following types of knowledge emerge: (i) knowledge that cannot be communicated; (ii) knowledge that can be communicated but cannot be expressed in documents; and (iii) knowledge that can be made explicit and shared through written language, often embedded in documents.

⁴ Even then, the documents available on servers are not necessarily being exploited to potential. Most of us are merely more knowledgeable about their existence. Technologies remain to be developed and deployed, and much associated work conducted, before we can profit fully from the knowledge contained in such records. For instance, even simple memoranda contain valuable information such as tribal knowledge in a small group, opinions, and decision drivers. Yet, such knowledge is not codified. Where metadata has been inserted—incidentally, a rare occurrence—there are no set standards: it is therefore difficult to satisfy a particular query. Still, XML (Extensible Markup Language) topic maps, intended to convey knowledge of sets of resources, promise much. Three building blocks of topics, associations, and occurrences can be superimposed over the documents to describe them and enable that knowledge to be managed separately from what the documents describe.

In the 21st century, intra-organizational flows of knowledge have become as important as the resource itself.⁵ And so, managing both stocks and flows has become an imperative rather than an alternative for most organizations. Knowledge harvesting is a means⁶ to draw out, express, and package tacit knowledge to help others adapt, personalize, and apply it; build organizational capacity; and preserve institutional memory.⁷ In addition to context and complexity, the concepts that relate to it are tacit knowledge stocks, tacit knowledge flows, and enablers and inhibitors of tacit knowledge work.⁸

Harvesting Knowledge...

Knowledge harvesting is not a catch-all solution. It hinges on trust and that is engendered by shared context.⁹ It cannot succeed in adversarial environments, where potential knowledge contributors think they will jeopardize their status or job security if they share their know-how. However, in learning organizations, it can be leveraged judiciously to codify some human expertise in such ways that others can make use of it, for instance during staff induction or through learning and development programs, good practices, and how-to guides.¹⁰ Numerous benefits can flow from enabling the movement of knowledge stocks between entities: (i) the knowledge of individuals (but also groups) is made available to who might need it independently of human memory, (ii) a wide range of solutions to organizational issues is produced, (iii) the ability to manage change is increased, (iv) the likelihood of repeated mistakes is reduced, (v) the learning curve of new personnel is shortened, (vi) precious knowledge is not lost when personnel leaves, and (vii) the tangible knowledge assets of the organization can be increased to create organizational value.

If nature has made any one thing less susceptible than all others of exclusive property, it is the action of the thinking power called an idea, which an individual may exclusively possess as long as he keeps it to himself; but the moment it is divulged, it forces itself into the possession of every one, and the receiver cannot dispossess himself of it. Its peculiar character, too, is that no one possesses the less, because every other possesses the whole of it. He who receives an idea from me, receives instruction himself without lessening mine; as he who lights his taper at mine, receives light without darkening me.

—Thomas Jefferson

With care, knowledge harvesting can be applied to any field of human activity. In organizations, ready opportunities lie in operations, products, services, strategies, and even management. In association with other techniques for knowledge capture and storage, it might one day inform organization-wide Total Quality Management systems that deliberately elicit, organize, package, and share know-how. Several intra-organizational factors drive its design: the principal are (i) tacit knowledge

⁵ Until the mid-1990s, knowledge management was synonymous with process reengineering and underpinned by the computerization of business applications. Thereafter, excessive distinction between the tacit and explicit nature of knowledge encouraged useful but limiting attempts to build stocks. (The fabrication of repositories—platforms containing sets of guidance or support information—was integral to this.) The accent is now put on content, narrative, and context management to encourage the emergence of new meaning through the interactions of the formal and informal. Notions of complexity offer a wealth of insights and guidance with which to do so.

⁶ Other techniques for knowledge capture and storage before, during, or after include peer assists, after-action reviews and retrospects, storytelling, staff profile pages, and exit interviews. (This said, knowledge harvesting is less about capture and decidedly much more about connection and conversation.)

⁷ Institutional memory is the interrelated framework of an organization's concepts, rationales, policies, procedures, experiences, decisions, know-how, good practices, and facts that exists independently of the tenure of the individuals who contribute to it. Organizational forgetting is accidental but can also be purposeful. By accident, the dominant mode of organizational forgetting, new knowledge can fail to consolidate and thereby dissipates while established knowledge is not maintained and degrades. But innovations can also be abandoned or suspended on purpose while established knowledge may be purged under managed unlearning. Much as knowledge, organizational forgetting is context-dependent.

⁸ Tacit knowledge enablers and inhibitors include an organization's culture, policies, structures, processes, technologies, working arrangements, and activities, not forgetting individuals, that can potentially influence knowledge flows and consequently impact knowledge stocks.

⁹ Knowledge is the emergent, transient, active process of experiencing, often in communities. Accordingly, knowledge harvesting stands to thrive in communities of practice that encourage informal and social learning, where narrative is primordial.

¹⁰ Expert systems, that is, software that attempts to provide an answer to a problem or clarify uncertainties where normally one or more human experts would need to be consulted, were quickly proposed as tools with which to harvest knowledge. The experience has not been fully satisfactory. Expert systems require well-bounded, static domains and do not easily incorporate learning: they are most useful in narrow problem domains.

enablers and inhibitors, (ii) the criticality of the knowledge to the organization, (iii) the need for immediate transfer, (iv) the complexity of the knowledge topic, (v) the qualities of knowledge contributors, (vi) the characteristics of knowledge seekers, (vii) the dispersion of knowledge contributors and knowledge seekers, (viii) the type of facilitation required, and (ix) the need for external review and validation.¹¹

... in Steps

Approaches to knowledge harvesting typically follow seven steps, the intricacies and resource requirements of which necessarily depend on the object and scale of the exercise:

- **Focus.** It is impossible to collect and transmit everything that individuals know. An organization should determine what critical knowledge it wishes to connect more intimately with, and be clear about the benefits from that. Where does it expend the bulk of its resources? What does it need to do better or continue doing well to accomplish its objectives? What role does tacit knowledge play in helping it achieve that? It is crucial to focus: only individuals who are likely to contribute critical knowledge that can be profitably transferred can justify the investment of time and talent that knowledge harvesting requires. Obviously, an inseparable issue relates to the knowledge seekers: who are they, what are their specific needs, and how will they use the information generated? The organization can then harvest mindfully, with reuse and learning and development in sight.
- **Find.** Next, the organization should locate the critical positions where knowledge harvesting stands to generate most benefits, or where knowledge loss is the greatest threat, and identify and prioritize the specific know-how at risk. (Logically, this also calls for an examination of existing, useful documents.) Planning at this stage relates to identification and logistics. First, it should be understood that the holders of the critical knowledge are not necessarily the most senior. Second, some effort should be devoted to circumscribing their qualities and identifying gaps and overlaps with the knowledge of others. Relevant biodata information can be collated including languages and degrees of proficiency, education and training, countries of work experience, job descriptions, roles and responsibilities, details of work experience, etc.
- **Elicit.** To elicit is to generate, obtain, or provoke a response or answer. Here, this entails effectively guiding a person through the process of expressing what he or she feels or knows about a particular topic or theme, preferably using one-on-one, face-to-face interviews supported by video and audio recording.¹² (In addition, transcribing the audio into text will enable tagging, distillation, and conversion to other formats, to name a few possible enhancements that will make the information more visible to and accessible by others.) Interviews can be structured, semi-structured, or (preferably) unstructured.¹³ They must be well-prepared. The lists of questions or topic and thematic guides developed should be shared in advance, aiming to provoke reflection and draw out details. Effective harvesting persuades participants to speak concretely, shun blame, temper judgment, and anchor assumptions in shared meaning. Some advocate a process under which the knowledge harvester conducts a preliminary interview with knowledge contributors, and then presents the results to representatives of the knowledge seekers. Gaps in what the latter need to know or in their understanding of what has been communicated can then inform a second interview. (Knowledge seekers have a natural, vested interest in the outcome of interviews and, presumably, a clear and practical understanding of what

¹¹ High-performance organizations harness the intellectual capital of retirees. They enable them to deploy needed skills and experience on specific projects or programs, mentor junior personnel, and participate in storytelling and learning and development activities. In the same spirit, they can also help review and validate harvested knowledge.

¹² Other methods exist, including laddering and concept mapping, process modeling, commentating, observation, constrained tasks, concept sorting, and repertory grids. Like expert systems, however, these are bounded in ways that constrain learning.

¹³ In structured interviews, questions are preset, ordered, and closed, and enable replication with other knowledge contributors. The questions (and responses) can be coded to collect quantitative data. In semi-structured interviews, harvesters also use preset questions but can make spontaneous investigations. Quantitative data can still be collected and some coding used. In unstructured interviews, harvesters do not use preset questions but must still have a topic and some idea of the depth of information needed. Unstructured interviews allow harvesters to be responsive to the knowledge contributor and are probably better instruments to deal with multiple simple, complicated, complex, and chaotic contexts, all of which are apt to provoke emotions. (Knowledge harvesting is not so much about what the knowledge harvester wants to hear but rather what the knowledge contributor thinks is important for others to know.) However, the harvester's control of the process can be limited, the data produced is qualitative and therefore more difficult to cross-reference, and interviews can take time. There is also potential for interviewer bias.

they want to know.) Cycling between knowledge contributors and seekers can promote a good fit between what is desired and what is imparted, propitious also to later brokering by the knowledge seekers. Of course, effective knowledge harvesters are a key to success: they must have strong communication, interpersonal, and interviewing skills coupled with high emotional intelligence.

- **Organize.** The knowledge elicited must be examined for sense, recurrent patterns, as well as gaps and inconsistencies, and then arranged in coherent and systematic forms for ease of access. By and large, the materials can be ordered and structured into logical groups comprising signals that provide context, guidance that enhances action, and support information that develops understanding.
- **Package.** After they have been organized, insights must be packaged into deliverable knowledge assets and made available through media that are tightly integrated with the original purpose of knowledge harvesting. Again, it is essential to consider knowledge seekers and their needs. What formats will best serve them? For effect, this stage must include individuals from other functions and disciplines, including methodology keepers, learning and development specialists, and marketing experts. The miscellaneous outcomes may include manuals, checklists, guidelines, collections of reminiscences on topics and themes,¹⁴ films, etc.
- **Evaluate.** Based on feedback from knowledge seekers, and further enrichment from continual harvesting, the relevance, efficiency, effectiveness, sustainability, and impact of outreach should be monitored and evaluated. Organizations should also consider the value of know-how over time: knowledge that is codified in static documents can quickly date.
- **Adapt.** To adapt means to make fit for, or change to suit, a new purpose. As knowledge assets are shared and applied, new requirements will inevitably emerge. Organizations must facilitate, empower, and document instances of learning so that critical knowledge assets incessantly evolve.

Further Reading

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For further information

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¹⁴ Stories are a good vehicle for capturing and storing tacit knowledge. An organizational story is a detailed narrative of management actions, personnel interactions, and significant intra-organizational events that are communicated informally in an organization. It provides very rich cultural context, so that the story remains in the conscious memory longer and leaves more trace. Organizational stories impart common values and rule sets and boost organizational learning.

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Asian Development Bank

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