

MATURE

Knowledge Maturing

A new perspective on knowledge development in organizations

Knowledge maturing is a new perspective on knowledge development at the workplace. It looks at how individual activities and learning processes contribute to overall progress of the organization, its innovativeness and agility. It unveils barriers where this doesn't happen. And it shows ways to overcome them.

KNOWLEDGE MATURING PHASE MODEL

Structuring and Describing Knowledge Maturing

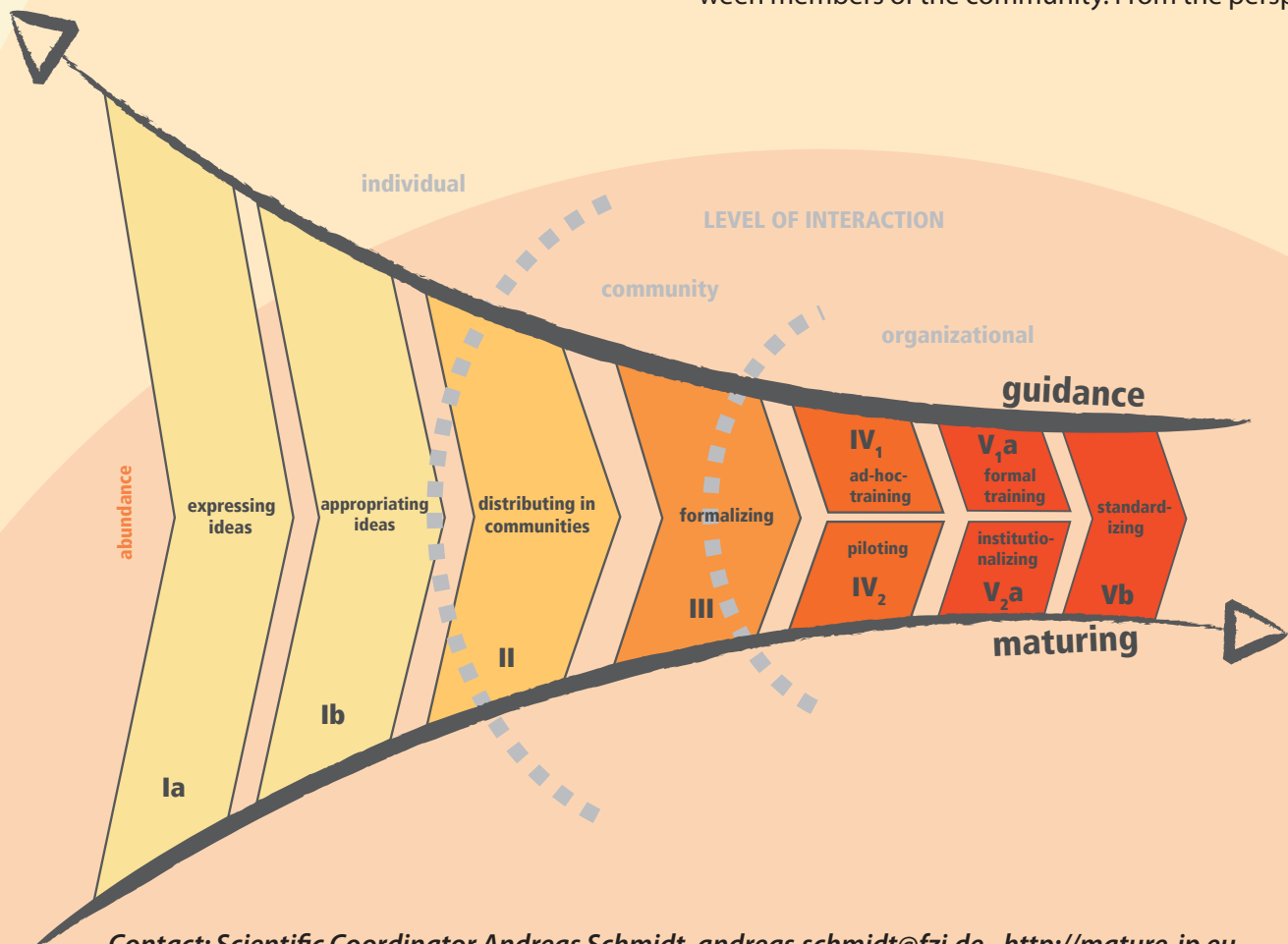
Knowledge maturing is based on the assumption that learning is an inherently social and collaborative activity in which individual learning processes are interdependent and dynamically interlinked with each other: the output of one learning process is input to the next. If we have a look at this phenomenon from a distance, we can observe a knowledge flow across different interlinked individual learning processes. Knowledge becomes less

contextualized, more explicitly linked, easier to communicate, in short: it matures. A closer look at this maturing has led to the identification of the following phases:

Ia. Expressing ideas (investigation). New ideas are developed by individuals in highly informal discussions or extensive search and retrieval activities. Knowledge is subjective, deeply embedded in the originator's context and the vocabulary used for communication might be vague and restricted to the originator.

Ib. Appropriating ideas (individuation). New ideas or results are enriched, refined or otherwise contextualized with respect to their use are now appropriated by the individual, i.e. personalised and contributions are marked so that an individual can benefit from its future (re-)use.

II. Distributing in communities (community interaction). This step is driven by social motives and focuses on the establishment of a shared understanding between members of the community. From the perspective



of semantics, a common terminology is developed and shared among community members.

III. Formalising (in-form-ation). Artefacts created in the preceding phases are often inherently unstructured and still highly subjective and embedded in the community context. In this phase, structured documents are created in which knowledge is de-subjectified and context is made explicit with the explicit purpose to ease the transfer to collectives other than the originating community.

In phase IV and V, two different strands can be identified. (1) an instructional strand more focussed on knowing-what and (2) an implementation-oriented strand focussed on knowing-how.

IV₁. Ad-hoc training (instruction). Documents produced in the preceding phase are typically not well suited as learning materials because no didactical considerations are taken into account. Now the topic is refined to improve comprehensibility in order to ease its consumption or re-use.

IV₂. Piloting (implementation). A piloting phase deliberately deals with collecting experiences with a test case before a larger roll-out of, e.g., a product, a service to customers, or new organisational processes to an organisational-internal target community.

V_{1a}. Formal training (instruction). In an instructional setting, the subject area becomes teachable to novices. A curriculum integrates learning content into a sequence using sophisticated didactical concepts in order to guide learners in their learning journeys to capture a subject area thus increasing the probability of successful knowledge transfer.

V_{2a}. Institutionalising (introduction). Formalised documents that have been learned by knowledge workers are solidified and implemented into the organisational infrastructure in the form of processes, business rules and/or standard operating procedures. Products or services are launched on the market.

V_b. Standardising (incorporation). In this phase, gaining efficiency and comparability play a prominent role so that certificates, standards, compliance etc. are in the focus.

Each of these phases requires different forms of learning and different forms of support. While in earlier phases, informal learning and learning in networks prevail, driven by individual interests, in later phases formal settings play a bigger role where efficiency gains need to be realized and learning is driven by business objectives.

And the phases also point towards barriers and disruptions between the phases, which may be based on organizational barriers, such as operating departments as the main driver in the earlier phases whereas in the latter phases higher-level management, HR departments, and staff departments are key actors in knowledge maturing.

KNOWLEDGE MATURING INDICATORS AND SCORECARDS

Making Knowledge Maturing Traceable

Knowledge maturing shares with other approaches to knowledge management and human resource development that both individual and collective learning processes are invisible. To make these processes traceable and measurable, MATURE has developed a flexible and comprehensive indicator system. Indicators encompass the individual, the artefact, the social, and the organizational dimension and are based on either quality (e.g., structuredness of articles) or on activities related to knowledge maturing (e.g., usage of artefacts, interaction patterns, participation rate), which are particularly useful when analyzed with respect to changes over time.

We have developed a maturing scorecard that aggregates individual indicators into company context-specific dashboards, connecting the knowledge maturing perspective with the business objectives and showing how measures to improving knowledge maturing have (or have not) had their anticipated effects.

FACTS

The knowledge maturing model allows for analyzing and describing real-world contexts with respect to collective knowledge development. A knowledge maturing model landscape has been developed that includes

- a **phase model** that identifies phases of knowledge maturing and their impact on how learning takes place
- an **indicator system** that makes knowledge maturing traceable and can be used for diagnosing, monitoring, and evaluating knowledge maturing
- a set of **activities** contributing to knowledge maturing and their prioritization in terms of support
- a **model of levers and effects** that describes and explains the business impacts of knowledge maturing
- a **motivation model** that allows for analyzing motivational barriers and opportunities for individual and team contributions

The model landscape has been **empirically validated** through ethnographically informed studies, a large-scale interview study, in-depth case studies, and implementation in toolsets and their evaluation in real-world practices.

We offer training and consulting on applying these models in practical projects.

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