BUILDING SUCCESFFUL KNOWLEDGE ORGANIZATION TROUGH KNOWLEDGE APLICATION AT THE INDIVIDUAL AND ORGANIZACIONAL LEVELS

STVARANJE USPJEŠNE ORGANIZACIJE ZNANJA KROZ APLIKACIJU ZNANJA NA INDIVIDULANIM I ORGANIZCIONIM NIVOIMA

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Abstract. *Knowledge application is the final step in the knowledge management (KM) cycle when the knowledge that has been captured, coded, shared, and otherwise made available is put to actual use. If this step is not accomplished success fully, all of the KM efforts will have been in vain, for KM can succeed only if the knowledge is used. However, it now becomes imperative to understand which knowledge is of use to which set of people and how best to make it available to them so that they not only understand how to use it but believe that using this knowledge will lead to an improvement in their work. This paper will try to contribute theoretical understanding how to improve knowledge application in a enterprise.*
Keywords: *Knowledge, Knowledge Application, Knowledge Internalization, Knowledge Reuse.*

Abstrakt. *Aplikacija znanja je finalni korak kod ciklusa menadžmenta znanja, koji obuhvata sticanjne znanja, kodiranje, dijeljenje, a nakon toga omogućavanje da se ono primjenjuje. Ako taj finalni korak nije izvršen u potpunosti uspješno, svi prethodni koraci su uzaludni. Menadžmet znanja se tek ostvaruje ako je završen primjenom znanja. Međutim, danas postaje imperativno da se razumije kojie znanje je potrebno određenim grupama, timovima ili pojedincima, i kako im ga učiniti raspoloživim u cilju da ga oni shavate i primjene za poboljšanje posla koji obavljaju. Ovaj rad je pokušaj da se da doprinos teorijskim rješenjima u poboljšanju prrimjene znanja u orgnizaciji.*
Ključne riječi: *znanje, primjena znanja, internalizacija znanja, ponovna upotreba znanja.*

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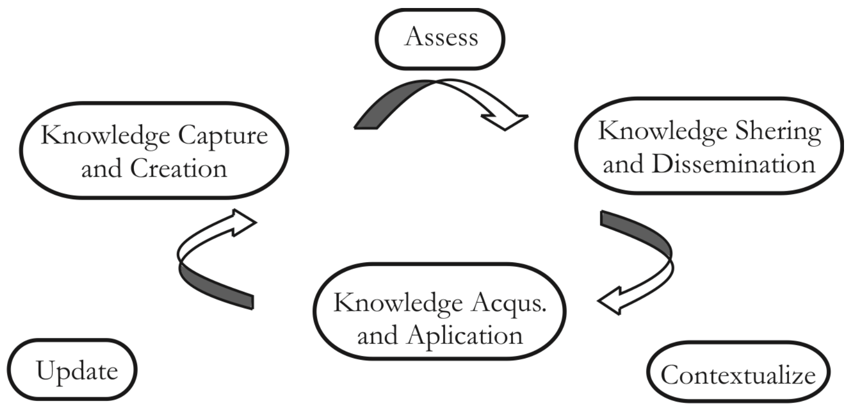
1. Intraduction

Knowledge management typically addresses one of two general objectives: knowledge reuse to promote efficiency and innovation to introduce more effective ways of doing things. Knowledge application refers to the actual use of knowledge that has been captured or created and put into the KM cycle (see Figure 1).

The knowledge spiral needs to be completed by successful internalization of knowledge. This process of internalization, it should be recalled, consists not only in accessing and understanding the content but in consciously deciding that this is indeed a good-ideally better-way of doing things, and hence the knowledge is applied to a real-world decision or problem.

Knowledge reuse is necessary, and savings involved in not "reinventing the wheel" can be considerable. Learning organizations is based on corporate memory and "knowledge objects" Corporate memory is often incomplete because it has captured only explicit knowledge. The valuable tacit knowledge has to be stored into corporate memory. That provides possibility to reuse not only tacit knowledge but also explicit knowledge. Reuse of explicit knowledge affords a longer-term advantage. Whereas tacit knowledge reuse can benefit the individual who sought the advice of a more experienced colleague, knowledge objects that are accessible through the knowledge repository are accessible to all workers and they remain so for as long as they are useful.

Figure 1. An integrated KM cycle



Every organization is faced with a lot of problems related to knowledge application. Haw to applicate knowledge in problem solving, innovation, creativity, intuitive design, good analysis, and effective project management? Knowledge management systems that focus on gathering, recording, and accessing reams of "knowledge" at the expense of person-to-person interactions have proven to be expensive and less than satisfactory. Organizations that fail to understand tacit knowledge will repeat many of the mistakes made with methodologies. A common assumption in the past was that all relevant knowledge could be bundled up in nice, neat, easily accessible packages of "best practices" that practitioners could then "repeat."

When we attack reuse as a knowledge management problem, we begin to ask new questions, or at least look for different avenues for finding solutions to the problem. How do we go about finding the component we need? How do we gain confidence that the component does what we want it to do and does not do strange things that we do not want? What is the distance (organizationally or geographically) between the component developer and users? Are there other people who have used this component whom we could talk to and learn from? Do we have access to the author of this component? Have others found this component to be effective? How should we go about testing this component? How easily will this component integrate into our environment?

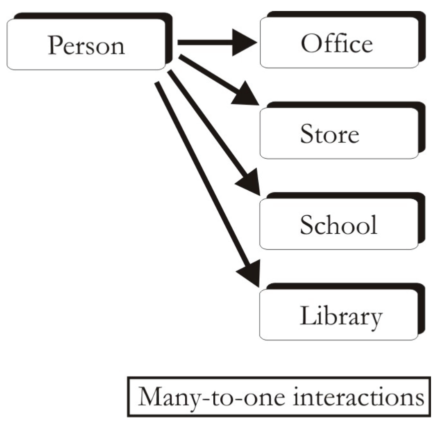
The objective of this paper is not to deal with knowledge application in detail, but rather to point out that a key to organizational success in the face of global competition is the ability to capture organizational learning, to effectively reuse the knowledge through efficient means, and to synthesize these into more intelligent problem recognition, strategic analysis, and choices in strategic directions. By tapping into their organization's memory, decision makers can make more intelligent business decisions. This is achieved when individuals access data, information, and knowledge residing in repositories. However, retrieval alone is not enough-knowledge application must follow, and the success of knowledge application appears to be a function of the characteristics of the individual, the knowledge content, the purpose of reuse for the particular task at hand, and the organizational context or culture.

2. Knowledge application at the individual level

Individual differences play a major role in knowledge-sharing behaviors (Hicks and Tochtermann, 2001). Knowledge workers vary with respect to their familiarity with the subject matter and their personality and cognitive styles. Cohen and Levinthal (1990) found that sharing is more likely to occur when a foundation of prior relevant knowledge exists. A number of studies (e.g., Ford et all., 2002; Kuhlthau, 1993; Spink et all., 2002) found significant correlations between online searching behaviors and the cognitive styles of learners. On the other hand, the business world heavily favors the use of instruments such as the Myer-Briggs Type Indicator (MBTI) personality style assessment (Myers et all., 1998) to assess differences in personality styles. Some research has been done to correlate MBTI type with knowledge-sharing behaviors. Webb (1998), in a study of the consulting firm Price Waterhouse Coopers, showed that a strong outgoing personality was important in knowledge sharing regardless of qualifications and prior experience.

Characteristics of the individual who is seeking to apply or reuse knowledge are likely to play a role in how effective he or she is at finding, understanding, and making use of organizational knowledge. Individual characteristics may include, for example, personality style, their preferences regarding how individuals best learn, how they prefer to receive their information, as well as how they can best be helped to put the knowledge to work.. One good framework, according to our opinion, is the Bloom taxonomy of learning objectives (Bloom, Mesia, and Krathwohl, 1964), which was designed to help teachers set learning goals for learning activities. We seem that the taxonomy can be easily adapted to knowledge application goals for each knowledge object in a repository.

Figure 2. Illustration of the personalize concept

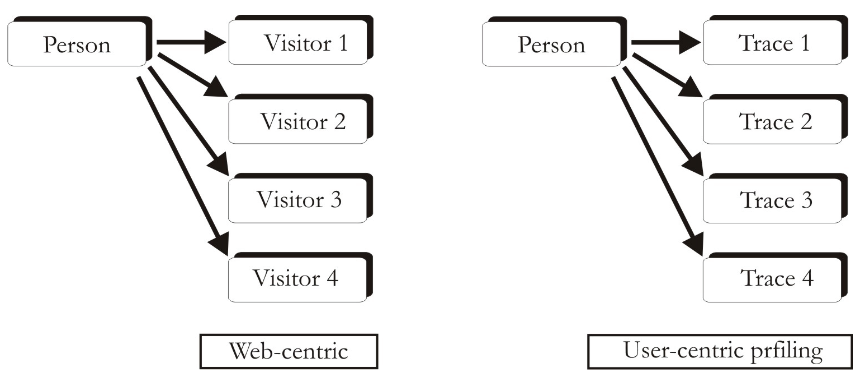


One way of visualizing personalization is to think of the one-person company or the one-person library. All of the knowledge resources in a given repository can be made to appear as if they were there at the disposal of a given person, reflecting their preferences, their background, and so forth. Figure 2 illustrates this concept of "many-to-one" interactions.

Personalization and profiling are currently a popular means of characterizing visitors to a given website. This is particularly true of virtual stores where customer data can then be analyzed in order to improve marketing efforts. However, in knowledge management we are less concerned with database marketing applications of personalization than with ensuring that information retrieval and knowledge application processes are tailor-made for each knowledge worker. The easier it is for a knowledge worker to find, understand, and internalize the knowledge, the greater their success in actually applying :his knowledge. An alternative approach to user modeling is proposed in Figure 3.

Instead of using profiling technologies to better understand all customers, we can make use of similar techniques to follow or trace a given individual's interactions with a number of corporate memory interfaces. This alternative approach will yield a user model that will help us to better understand the types of human-knowledge interactions that have occurred in order to optimize knowledge application within the organization. For example, push technologies are based on user models that look at historical information requests in order to push or automatically send out similar new content that becomes available. We will need to be able to find and use content based on individuals' personal model, and how they perceive the knowledge world around them. This is often influenced by their particular background (e.g., IT vs. sociology. These are often represented as semantic networks.

Figure 3. Alternative approach to personalization



There are also systems that monitor users' tasks online and interpret them in context, based on traces they leave behind. These systems work well for tasks that are well identified and where knowledge can be described in a clear ontology (e.g., a postal address template). In general, this approach is based on a user interacting with a computer system to perform a task that leads to changes in the system. An observer agent (a software routine) observes these changes according to an observation model to generate a log or trace of what the user has done. The trace is then analyzed to identify and extract significant episodes and interpret them according to explained task signatures. Each episode represents a pattern, and each pattern can be mapped onto a task, a subtask, or a more specific step that forms part of the subtask. For example, if the user is trying to locate, open, and print out a particular file, three distinct episodes can be identified: behaviors related to locating, opening, and printing the file. These episodes can then be reused by assistant agents that help the user to do what they are trying to do. The assistance episodes themselves can also be reused in the future). In this way, the system has modeled how users behave when they are undertaking these particular types of tasks.

The important factor to note here is that user modeling is an ongoing process, not a one-shot deal. Dynamic profiling systems need to be developed based on a mix of human and automated trace facilities, in order to be able to continually adapt to changes in the environment, changes in the organization, and changes in the individuals themselves (e.g., different job responsibilities, different preferences, new competencies, and new interests).

3. Bloom's Taxonomy of Learning Objectives

Bloom (1956) divided knowledge into a hierarchical scheme that distinguishes between psychomotor skills, the affective domain (e.g., attitudes), and the cognitive domain (e.g., knowledge). The cognitive domain is more commonly used, although attitudinal changes are often required in knowledge management too. Bloom emphasizes that learning is hierarchical, with learning (objectives) at the highest level dependent on the achievement of lower-level knowledge and skills first.

The cognitive domain taxonomy is shown in Table 1. The levels from low to high are: knowledge, comprehension, application, analysis, synthesis, and evaluation.

Tabele 1. Bloom "Taxonomy of the cognitive domain"

Level	*Description*	*Action verbs that can be used*
Knowledge	Remembering of previously learned material.	Recall, repeat, define, describe, list, identify, label, match, name, state.
Comprehension	Ability to grasp the meaning of material (e.g., translating from one form to another, estimating future trends, explaining or giving examples of).	Classify, convert, discuss, explain, generalize, give an example of, paraphrase, restate in your own words, summarize, review.
Application	Ability to use learned material in new and concrete situations by applying rules, methods, concepts, principles, laws, and theories.	Articulate, assess, chart, computer construct, determine, develop, discover, establish, extend, operationalize, participate, predict, provide, show, solve, use, apply, demonstrate, sketch, practice, illustrate.
Analysis	Ability to break down material into its component parts so that its organizational structure may be understood. Identification of parts, relationships between parts, recognition of organizational principles.	Break down, correlate, diagram, differentiate, discriminate, distinguish, focus, infer, outline, point out, recognize, separate, subdivide, compare, contrast, inspect, inventory, relate, examine.
Synthesis	Ability to put parts together to form a new whole. Creative behaviors stressed in the formulation of something new~.	Adapt, categorize, collaborate, combine, communicate, compile, compose, create, design, devise, facilitate, formulate, generate, incorporate, individualize, initiate, integrate, model, plan, propose, assemble, organize.
Evaluation	Ability to judge the value of material based on definite criteria.	Appraise, conclude, criticize, decide, defend, judge, justify, support, evaluate, rate, value, score, prioritize, selec

Source: Adapted from Bloom, 1956.

The affective domain includes the manner in which we deal with things emotionally, such as feelings, values, appreciation, enthusiasms, motivations, and attributes. The psychomotor domain includes physical movement, coordination, and use of the motor skills areas. Development of these skills requires practice and is measured in terms of speed, precision, distance, procedures, or techniques in execution.

These taxonomic categories can be used "inside out" to help understand what users are trying to do. The level of internalization can be identified for effective performance; for example, one can set a minimum threshold that must be reached in order for the worker to be able to understand and make appropriate use of the knowledge object. This feature can in turn be incorporated into a user model. The Bloom taxonomy serves as a means of determining not only what knowledge workers are expected to do (usually referred to as skills or expertise) but also the level of performance that is expected (also referred to as mastery level). For example, by using the cognitive skill portion of the Bloom taxonomy, it is possible to characterize a particular knowledge object, say, a best practice procedure on how best to present a project team members' resumes when preparing a project proposal. The knowledge worker who prepares the bid is expected to have a level of understanding that allows for the critical judgment needed to execute this task at the required proficiency level. He or she must not only be skilled in the selection of team members to be included in the proposal but also be able to repackage their resumes in the form that has been shown to be the best based on past successes. Another example, using the affective domain Bloom taxonomy, once again can make use of this best practice but this time address the best way to judge whether candidates who meet the technical skill requirements also possess the appropriate "soft skills," such as being a good team player, having a collaborative approach to work, and not hoarding knowledge or claiming individual credit for group work.

The Bloom taxonomy provides a good basis for assessing knowledge application. All too often in KM, simply having accessed content is taken to mean that knowledge workers are using (and reusing) this content. It is far more useful to assess the impact that the knowledge residing in the knowledge base has had on learning, understanding, and "buying in" to a new way of doing things. Only through changes in behavior can knowledge use be inferred; the taxonomy provides a more detailed framework to evaluate the extent to which knowledge has been internalized (using the Nonaka and Takeuchi, 1995, model). For example, at the lower cognitive skill levels, simply being aware that knowledge exists within the organization is easily observed when knowledge workers are able to locate the content within a knowledge repository. Access is typically tracked using log file statistics, which are similar to the number of hits or visitors that a website has attracted. Knowledge application, however, requires that knowledge workers have attained much higher levels of comprehension such as analysis, synthesis, and evaluation. Only at these levels can knowledge be said to truly be applied. In contrast to someone who can point to a template in the knowledge base, knowledge application will be manifested by a change in how a knowledge worker goes about doing his or her job.

It is equally important to take the affective component into consideration when analyzing knowledge application. Often, knowledge fails to be used not because it has not been understood but because the knowledge worker is not convinced that this new best practice or lesson learned represents any significant improvement over the way he or she is already working. An attitudinal change is more often than not a critical prerequisite to internalization. It is not enough that someone be made aware of and understand a given practice. People must also believe that it is indeed a better way of doing things and that they stand to gain by adopting this new way of working.

The psychomotor domain is less widely used in knowledge management and is often more related to physical work and skills. A user model is not enough, however, for the facilitation of knowledge application. We also need to know what the users are doing and what their goals or purposes are in applying this knowledge object. To this end, we will also require a task model. As with the user model, the task model will serve to better characterize why someone would apply a particular knowledge item.

A user and task-adapted approach is highly recommended in order to facilitate internalization processes. This means that we need to know enough about the users and what they are trying to do in order to support them in the best possible way. This is, of course, quite similar to what a good reference librarian or coach would do-that is, try to understand who you are and what you are trying to accomplish before beginning to attempt to help out. Someone who is browsing to pick up general information and background on a subject of interest may be mistakenly taken for someone who is "lost in a sea of information" or someone who has a looming deadline to meet and is looking for a specific template to help him or her complete the task at hand as quickly as possible without too many errors. Such a person would not appreciate being flooded with too much information. They are looking only for the specially selected, vetted, and guided nuggets of knowledge-sometimes referred to as just-in-time (lIT) knowledge and just-enough knowledge.

4. Task Analysis and Modeling

Task analysis studies what knowledge workers must do with respect to specific actions to be taken and/or cognitive processes that must be called upon to achieve a particular task (e.g., Preece et all., 1994). The most commonly used method is task decomposition, which breaks down higher-level tasks into their subtasks and operations. The lower levels may make use of task flow diagrams, decision flowcharts, or even screen layouts to better illustrate the step-by-step process that has to be undertaken in order to complete a task successfully. A good task analysis should show the sequencing of activities by ordering them from left to right. In order to break down a task, a question should be asked, "how is this task done?" If a subtask is identified at a lower level, it is possible to build up the structure by asking "why is this done?"

The task decomposition can be carried out using the following stages:

- Identify the task to be analyzed.
- Break this down into four to eight subtasks. These subtasks should be specified in terms of objectives and, between them, should cover the whole area of interest.
- Draw the subtasks as a layered diagram ensuring that it is complete.
- Decide upon the level of detail into which to decompose. Making a conscious decision at this stage will ensure that all the subtask decompositions are treated consistently. It may be decided that the decomposition should continue until flows are more easily represented as a task flow diagram.
- Continue the decomposition process, ensuring that the decompositions and numbering are consistent. It is usually helpful to produce a written account as well as the decomposition diagram.
- Present the analysis to someone else who has not been involved in the decomposition but who knows the tasks well enough to check for consistency.

Task flow analysis can include details of interactions between the user and the current system, or other individuals, and any problems related to them. Copies of screens from the current system may also be taken to provide details of interactive tasks. Task flows will not only show the specific details of current work processes but may also highlight areas where task processes are poorly understood, are carried out differently by different staff, or are inconsistent with the higher-level task structure.

Such task analyses are an important first step in the design of knowledge application support systems. A popular form of these analyses has been around long before the term *knowledge management* came into common usage. Electronic Performance Support Systems (EPSSs) were and continue to be widely used to provide on-the-job learning and advice. E-learning is also currently enjoying a high level of usage and can be seen as a subset of EPSS, as described in the next sections.

5. Knowledge application at group and organizational levels

Knowledge management systems (KMSs) are tools aimed at supporting knowledge management. They evolved from information management tools that integrated many aspects of computer-supported collaborative work (CSCW) environments with information and document management system (Ganesan, Edmonds, and Spector, 2001; Greif, 1988; Kling, 1991). Key characteristics of a KMS are support for:

- Communication among various users.
- Coordination of users' activities.
- Collaboration among user groups on the creation, modification, and dissemination of artifacts and products.
- Control processes to ensure integrity and to track the progress of projects.

Systems that support KM provide specific functions related to communication (e-mail and discussion forums); coordination (shareable calendars and task lists); collaboration (shareable artifacts and workspaces); and control (internal audit trails and automatic version control). A user-centered KMS contributes to an organizational culture of sharing by providing a sense of belonging to a community of users and by supporting reciprocity among users (Marshall and Rossett, 2000). KMSs extend the perspective of employees as knowledge workers by providing them with the means to create knowledge and to actively contribute to a shared and dynamic body of knowledge. A KMS provides support for many information functions, including:

- Acquiring and indexing, capturing, and archiving.
- Finding and accessing.
- Creating and annotating.
- Combining, collating, and modifying.
- Tracking. (See Edmonds and Pusch, 2002.)

These KMS functions allow multiple individuals to organize meaningful activities around shared and reusable artifacts to achieve specific goals. In short, a KMS addresses the distributed nature of work and expertise (Salomon, 1993). Within business and industry, KM technology is being used to support organization learning (Morecroft and Sterman, 1994; Senge, 1990). The dynamics of the global economy place a premium on organizational responsiveness and flexibility. Partly as a response to the demands of a highly competitive global economy, KMS technology has emerged as a new generation of information management systems. In contrast with previous information management systems, a KMS is designed for multiple users with different and changing requirements.

Key enabling technologies include object orientation, broadband communications, and adaptive systems. Object orientation provides for the creation of knowledge objects that can be easily found, modified, and reused. Broadband communication allows users separated in time or space to work on large data objects effectively as a team. Adaptive systems recognize that different users may have different requirements and preferred working styles.

A KMS can be viewed as an activity system that involves people making use of objects (tools and technologies) to create artifacts and products that represent knowledge in order to achieve a shared goal. Previous information management systems focused on a small portion of such a system, such as a narrow set of objects in the form of a collection of records or simple communication between team members. A KMS embraces the entire activity system but maintains a focus on the human-use aspects (people with shared goals) as opposed to the underlying or enabling technology aspects. KMSs have already met with significant success in the business sector and are spreading to other sectors, including education (Marshall and Rossett, 2000) and instructional design (Ganesan, Edmonds, and Spector, 2001).

The organizational knowledge management architecture will be comprised of at least three levels: the data layer, which is the unifying abstraction across different types of data, with potentially different storage mechanisms (e.g., database, text documents, video, audio); the process layer, which describes the logic that links the data with its use and its users (other people or other systems who use that data); and the user interface, which provides access to the information assets of the company via the logic incorporated in the process layer.

KM cannot be supported, however, by the simple amalgamation of masses of data. KM requires the structuring and navigation of this content supported by metadata, the formal description of the content, and its interrelationships with other content or other knowledge objects. Metadata encompasses infor variety of tools and techniques are available for the knowledge application phase of the KM cycle. Dissemination and publication tools typically involve some type of knowledge repository design. They will have features, such as the routing and delivery of information to those who have a need rho have subscribed (push vs. pull approach). E-mail and workflow are examples of push technologies that notify users of any changes such as newly posted or expired content. Pattern matching can be done against user profiles in order to better target where pushed content should go.

Other tools help structure and navigate through the content. They provide classification scheme for the organization's knowledge assets. The user interface, is where such navigation guides are to be found. Once the content has properly indexed and organized, multiple views can be made available for same underlying content in order to accommodate user and task needs. Tonic linkages can be used to cross-reference this content, and thesauri encapsulate these cross-linkages. Similarly, expertise location systems should be available from the user interface layer of the KM architecture. In way, links are made from the user interface topics to the relevant KM content, people, and processes.

5.1 Knowledge Reuse

Reusing knowledge involves recall and recognition, as well as actually applying knowledge, if we use Bloom's taxonomy. Reusing knowledge typically begins with the formulation of a search question. It is here that expert-novice differences quickly become apparent, as experts know the right questions to ask. Next, experts are searched for and located, using expertise location systems or yellow pages. The appropriate expert and/or advice is then chosen, and the knowledge nugget is applied. Knowledge application may involve taking a general guide and making it specific to the situation at hand, which is sometimes referred to as recontextualization of knowledge (where decontextualization to some degree occurred during knowledge capture and codification). There are three major roles required for knowledge reuse: the knowledge producer*,* the person who produced or documented the knowledge object; the knowledge intermediar*y,* who prepares knowledge for reuse by indexing, sanitizing, packaging, and even marketing the knowledge object; and the knowledge reuser*,* who retrieves, understands, and applies it. Of course, these roles are neither permanent nor dedicated-individuals will perform all three at some time during their knowledge work. Knowledge repackaging is an important value-added step that may involve people, information technology, or, as is often the case, a mixture of the two. For example, automatic classification systems can index content, but a human is almost always needed in the loop to validate and to add context, caveats, and other useful indicators for the most effective use of that knowledge object. Markus (2001) suggests there are four distinct types of knowledge reuse situations according to the individual who is doing the reusing and the purpose of knowledge reuse, which is quite compatible with the user and task-adapted approach outlined in this chapter. The four reuse situations are:

- Shared work producers, who produce knowledge they later reuse.
- Shared work practitioners, who reuse each others' knowledge contributions.
- Expertise-seeking novices.
- Secondary knowledge miners.

Shared work producers usually consist of teams or workgroups that have collaborated together. A common example is an MD who consults a patient's chart to see what medications had been prescribed recently by other physicians, or special education teachers and therapists who share student files to see what sorts of interventions worked and which ones did not have any effect. This is the easiest form of knowledge reuse, for everyone is quite familiar with the knowledge content-they share the same context that makes knowledge application rapid and effective.

Shared work practitioners are members of the same community of practice. They are peers who share a profession. This form of knowledge reuse will require a higher degree of filtering and personalization, typically done by CoP knowledge librarians. Reusers would need more reassurance about the source's credibility; they would need to be able to trust that the content is valid and should be applied. Their contexts are less likely to completely overlap, so knowledge reuse would likely require contact with others knowledgeable about the knowledge object.

Expertise-seeking novices are often in a learning scenario. Unlike the previous two types of reusers, novices are the most distant or different from the knowledge object authors and those experienced with its use. Knowledge intermediaries have a much greater role to play here in making sure novices begin by accessing more general information (e.g., FAQs, introductory texts, glossaries) before they attempt to apply the knowledge object or to directly contact those who are more expert in using it. EPSS and other performance support aids such as e-learning modules would also be of great use to such reusers.

Secondary knowledge miners are analysts who attempt to extract interesting and hopefully meaningful patterns by studying knowledge repository use. They are analogous to the usage analysts who perform similar roles for a CoP library. They are also analogous to librarians who periodically assess the collective holdings of a library, whether physical or digital, to see which items are no longer being actively accessed and should perhaps be archived, which have been superseded by newer and better best practices and so forth.

Different types of reusers will thus interface differently with knowledge repositories, and they will differ in their support needs. Repositories therefore need to be able to personalize-either at the extreme of treating each individual differently or, at the very least, personalizing at the level of a community of practice.

5.2 Knowledge Repositories

Knowledge repositories are usually intranets or portals of some kind that serve to preserve, manage, and leverage organizational memory. Many different types of knowledge repositories are in use today, and they can be categorized in a number of different ways. In general, a knowledge repository will contain more than documents (document management system), data (database), or records (record management system). A knowledge repository will contain valuable content that is a mix of tacit and explicit knowledge, based on the unique experiences of the individuals who are or were a part of that company as well as the know-how that has been tried, tested, and found to work in work situations.

Davenport, De Long, and Beers (1998) make a distinction between repositories that store external knowledge such as that gathered from competitive intelligence, demographic, or statistical data from data resellers and other public sources, and internal knowledge repositories that store informal information such as transcripts of group discussions, e-mails, or other forms of internal communications. Internal knowledge repositories will have a less constraining or less formal structure in order to be able to better accommodate its fluid, subjective knowledge content.

Zack (1999) classifies repositories based on the type of content they contain such as general knowledge (e.g., published scientific literature) and specific knowledge (which includes knowledge of the local context of the organization). This distinction is most useful, for knowledge reusers need to know whether the credibility of the knowledge comes from general or common knowledge or whether it was discovered by their colleagues. it makes sense to partition the global knowledge repository along similar lines. Careful attention must also be paid to the roles of intermediaries needed to develop and maintain the organization's corporate memory. Content authors are as vital to successful knowledge application and reuse as are container maintainers.

6. Conclusion

There are number of ways of ensuring that individual apply knowledge such as deriving user and task models in order to better much knowledge content to individual knowledge workers' performance and requirements.

EPSS, the Bloom taxonomies of cognitive, affective, an psychomotor skills, an content chunking are all good means of providing learning an task support to knowledge workers who apply knowledge and optimizing the match between user needs and the content that is to be applied.

A KM organizational architecture needs to be designed, developed, and implemented in order to facilitate knowledge application at the organizational level.

Knowledge reuse is a good measure of haw well valuable content has been preserved and managed in organizational memory management systems.

Knowledge Support System can assist in organizational knowledge use and reuse, typically through some form of knowledge repository or internet application.

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