Two recent innovations are likely to improve the effectiveness of organizational knowledge management (KM): the use of peers instead of experts and Wiki approaches. Both of these are associated with KM systems that focus on a codification strategy, as distinct from a personalization strategy. Codification KM strategies are exemplified by the creation of knowledge repositories — such as “lessons learned” or “best practices” — and are therefore not only difficult and costly to create, but also tedious and expensive to maintain.

The creation difficulties flow from the well-known GIGO (garbage in, garbage out) phenomenon of information systems. Repositories that prove to be effectively used contain useful, valuable knowledge that is of high quality and up-to-date. To maintain quality and currency, many repositories are set up so that submissions are reviewed, and possibly modified, by expert evaluators. Since the time of such experts is difficult to obtain and expensive, this evaluation process is often problematic.

The currency of the knowledge in a repository depends on continuous monitoring and the identification of when and how knowledge should be updated or replaced. Such continuous monitoring is virtually impossible to achieve. Even if one or more persons were to be delegated full-time to doing so, how could they possibly be expected to be aware of every innovative idea that may make existing knowledge obsolete?

The solutions to these practical problems of repository-based KM systems may well involve innovative techniques that have recently emerged in other areas and disciplines. In particular, I refer to the use of peers instead of experts in knowledge evaluation and refinement, and the use of “Wiki” approaches to the construction and/or maintenance of repositories.

Both of these approaches are based on a general notion that has been well researched and popularized by Surowicki’s *The Wisdom of Crowds* (2004) which provides many examples of how the consensus assessment of a “crowd” — a group of people, each having limited knowledge of a subject — can be far superior to expert assessments and even superior to the assessments of each and every individual member of the “crowd.”

To illustrate this point, Michael Muboussin had his students at Columbia Business School predict the winners of the Academy Awards in 12 categories. The student consensus was correct in 9 of the 12 categories, amazingly including film editing and art direction. Moreover, none of the individual
students did better, and many did far worse, than the consensus, indicating the value of consensus opinions in this popular context.

**PEERS VERSUS EXPERTS**

There is a growing body of evidence in cognitive psychology that peers of the intended system users may be best used to refine knowledge that is submitted to be included in a repository. “Refinement” is the term used in KM for the process of evaluating, modifying and finally determining whether a submission is to be included in a repository. It is usually done by an expert, or a panel of experts, with all of the delays and high costs that can be associated with this approach.

A recent study builds on a long line of expert-novice research to demonstrate that the use of multiple peers as reviewers can be as good as, or perhaps superior to, the use of experts (Cho et al., 2006). Cognitive research suggests that this may be because peers are cognitively “closer” to the intended users and therefore better able to understand their perspective and needs. “Expert versus novice” research has shown that experts do not “think like” novices; they have different mental models than do novices because, among other things, they know that certain aspects of a problem that novices might believe to be important, are not really that important. This trait makes experts good problem solvers, but poor at judging what novices need and what they will value in knowledge that they may obtain from a repository.

Since the use of multiple peers for knowledge refinement would presumably be less costly and more expeditious than an expert-based process (especially if a computer-based system is used to collect the evaluations as described in Cho et al., 2006), this innovation in repository-based knowledge management systems seems to warrant consideration.

**USE OF WIKI TECHNOLOGIES**

A “wiki” is a type of website that allows anyone visiting the site to add or edit existing content, sometimes without even registering. Wiki technology, which is closely related to open source software development approaches such as has been applied over a long period in the Linux software project, would seem to have similar potential in creating repository-based knowledge management systems. Wiki’s applications have been expanded to education and healthcare among other areas (Bruns and Humphrey, 2005; Nakata et al., 2005).

The best known application of Wiki is the Wikipedia, the online encyclopedia that has been evaluated to be equivalent to the Encyclopedia Britannica in terms of the accuracy of its content (Giles, 2005). Recently, there have been some revisions in Wikipedia’s “anyone can revise” policy (Hafner, 2006), resulting from concerns and contentions within the Wikipedia process as well as similar issues in the “quickly wiki” incident in which the Los Angeles Times was overwhelmed with inappropriate postings in its attempt to have readers contribute to an editorial.

However, the wiki approach would appear to be less problematic in an organizational context where the vast majority of submissions would probably not be intended to misrepresent the truth (as have some in Wikipedia) or to adopt a political viewpoint such as have been true in various public contexts (Denning et al., 2005).

The use of a wiki approach in which all organizational participants are free to contribute knowledge and to edit existing codified knowledge could address the maintenance issues of repositories since everyone who is aware of changes in knowledge would be able to update knowledge at any time. It may represent a good way of integrating the diverse knowledge of many organizational participants on an issue. Assuming that contributors are identified, as they are in the Linux project, it is also a way for people to build up their organizational credibility by demonstrating their knowledge.

**SUMMARY**

In the cases of peers versus experts and wiki, the classic problem of motivating people to contribute their knowledge to a repository might well be addressed by providing intangible benefits such as the recognition by the user community of the contributor’s expertise.

The wiki process may be the ultimate logical extension of the peer-based process for verifying the efficacy, legitimacy and relevance of knowledge.
that has been contributed for inclusion in a repository. So, the two innovations discussed here may be thought of as two stages in the evolution of a knowledge repository process.

REFERENCES


Copyright of Information Systems Management is the property of Taylor & Francis Ltd and its content may not be copied or emailed to multiple sites or posted to a listserv without the copyright holder's express written permission. However, users may print, download, or email articles for individual use.