



# KM REVIEW

Thank you for downloading from the *Knowledge Management Review* e-library. *Knowledge Management Review* is the leading bi-monthly publication providing the latest trends, techniques and ideas in knowledge management.

To find more articles on knowledge management or to order your subscription, just visit <http://www.melcrum.com>

Best practices, case  
studies and strategy

Corporations and educational institutions are different, but they share many of the same barriers that stop people from effectively sharing information. Here, Lisa Petrides and Thad Nodine describe how schools, colleges, and universities in the US have applied KM practices from business organizations, and what corporations can learn from KM in education.

# WHAT SCHOOLS CAN TEACH THE CORPORATE WORLD

## Balancing people, processes, and technology in education

By Lisa Petrides and Thad Nodine, Institute for the Study of Knowledge Management in Education



**Lisa Petrides** is president and founder of the Institute for the Study of Knowledge Management in Education. She is also a research scientist at Columbia University, Teachers College, and was formerly the coordinator for the joint MBA-EdD program at Columbia Business School.

Just as knowledge management plays a leading role in helping businesses support innovation and efficiency, educational institutions have begun to implement KM programs to support student and institutional success. Recently several schools, colleges, and universities in the US have received grants that use KM strategies to promote individual learning and institutional improvement (see sidebox, next page).

Although businesses and educational institutions operate differently, schools, colleges and universities have nonetheless adapted KM practices from the business world, and by doing so, can suggest ways for businesses to improve their KM programs.

### Building on strengths

Schools and universities are addressing the following three challenges with KM strategies:

- How to balance the information culture and the technology infrastructure.
- How to keep KM efforts building on the resources of people, processes, and technology.
- How to keep the institution moving along the “data-information-knowledge continuum.”

(See Figure 1, page 30)

Effective KM approaches bring together people, process, and technology to enable organizations to use and share information more effectively, and the same is true in education.

In educational settings, KM seeks to build on existing communities of practice in order to reach important institutional goals, such as improved student learning. In many schools, colleges, and universities, staff and teachers from across departments join together in working groups – such as informal study forums and lunch groups – because it makes their jobs more rewarding and their work more effective.

In schools, there are many formal and informal administrative processes, information sharing patterns, work incentives, information silos, and other work practices that have been developed over time that now impede information flow. Knowledge assessments, audits, maps, and improvement plans – combined with long-term support for better information sharing – can help to establish better ways to get information and share it with others.

A few of these initiatives have been undertaken in partnership with business consultants who have applied their knowledge of KM practices in business to the education arena. In turn, they are able to bring lessons from education back to the business world, especially in the areas of collaborative learning, teaching, and training for employees. For example, business tends to use

### The Institute for the Study of Knowledge Management in Education (ISKME)

is a research think tank based in Half Moon Bay, California. The Institute works with educational institutions in order to increase their capacity for knowledge-based decision-making as a way to improve student and institutional performance.

## KEYPOINTS

training to maintain ongoing processes or to fix existing problems, whereas schools take a more pedagogical approach – to impart the tacit knowledge necessary for making independent decisions within the institution.

Many school districts, colleges, and universities are saddled with an array of information systems that are incompatible with each other. The most effective technologies within a KM framework in education are broadly accessible to user groups and promote the tracking and exchange of useful information across departments and across systems.

### Borrowing from business

The business sector has taken the lead in developing and maintaining sophisticated feedback models for understanding system weaknesses and building toward success. In simple terms, many of the education models build upon a continuum that includes three elements:

1. *Data*: numbers and figures on student performance, grades, and other outcomes;
2. *Information*: data with context and meaning;
3. *Knowledge*: bringing people together to apply the results to a course of action, as well as making data collection more relevant to strategy.

While a commitment to the cyclical nature of the data-information-knowledge continuum may seem routine in business, maintaining the rigor of the feedback cycle is far from routine in education. But it does happen.

For instance, in one large urban high school, the assistant principal noticed that student suspensions had increased. After she spoke to the principal, they decided to design a system to track suspension data. They developed a team comprised of the school's guidance counselors and two teachers, and then brainstormed the variables they thought would be necessary to track, such as name, gender, and race, how many occurrences, and type of incident.

After implementing the data-gathering system, the team noticed that a first-year teacher had suspended several students, and that the names of a few students appeared regularly during a particular period of the day. With this information, the team uncovered the primary reason for the problem – a new teacher who needed additional management skills in the classroom.

In another example, at a small liberal arts college, two faculty members, one in biology and one in English, found out that each had begun developing and implementing a community service component to a course. The two began meeting to share their experiences, and within a month, two other faculty members had joined the meetings.

- Just as knowledge management plays a leading role in helping businesses support innovation and efficiency, educational institutions have begun to implement KM programs to support student and institutional success.
- A few of these initiatives have been undertaken in partnership with business consultants who have applied their knowledge of KM practices in business to the education arena. In turn, they are able to bring lessons from education back to the business world, especially in the areas of collaborative learning, teaching, and training for employees.
- There are many educational organizations applying KM strategies without necessarily employing the term knowledge management.
- Change can be difficult for everyone, and appropriate professional development needs to be provided when KM practices are adopted.

The administration decided to provide technical support, and the team created a Web site and a user's group dedicated to their work. Through the Web site, direct e-mails, and announcements at faculty meetings, the faculty members publicized the meetings, and over the next six months they were joined by individual faculty members from several departments, some of who were looking for ideas on how to include a community service component to their own courses.

Throughout the year, the teachers agreed that these courses were popular among students, but enrollment had remained moderate because of the additional time required for students to complete the community service elements of the course. Yet the payoffs had been significant: anecdotally, the teachers had seen their students develop a deeper understanding of the issues. The teachers wanted to add credit hours to their courses, but faced procedural difficulties in doing so. In preparing to make their case for the additional credit hours, they decided to collect information about the number of student hours required and about the relationship between student enrollment in these courses and measures of persistence and completion.

They found that students spent almost twice as many hours in these courses as in similar courses that did not have the community service



**Thad Nodine**

is a senior writer and editor at the Institute for the Study of Knowledge Management in Education. He has a background in higher education and public policy, and is a trustee of the Santa Cruz School Board in California.

### KM in American education: recent developments

- The Model Secondary School Project received funding from the Bill and Melinda Gates Foundation to work with several urban high schools across the US, in order to implement student learning strategies that build from a KM framework.
- Cuyahoga Community College in Cleveland, Ohio, received matching funding from a foundation in Cleveland to hire a chief knowledge officer to improve information sharing throughout the organization.
- Foothill De Anza Community College District, in Cupertino, California, received a federal grant to implement KM practices to enhance the evaluation of student outcomes.
- And Jackson State University, in Jackson, Mississippi, received a federal grant to hire a vice president for KM systems, and to implement technologies that improve information flow.

○ requirement. They also found that students who took these courses were more likely than other students to complete their major.

**What business can learn from education**

The use of KM in education offers many insights into the development of KM – both for nonprofit organizations and businesses. The following five examples emphasize the importance of recognizing organizational context in building KM within any enterprise.

**1. Build on existing vocabulary**

There are many educational organizations applying KM strategies without necessarily employing the term “knowledge management.” Examples include:

- Teachers using KM practices within their own classrooms to improve how students learn and work with each other.
- Academic counselors at the college level using KM strategies to track and promote student progress through a wide range of academic and service-oriented interventions.
- Community colleges using KM approaches to streamline curriculum development, so departments can be more responsive in offering new classes to meet community demand.

Those implementing KM practices in educational institutions have found that the term “knowledge management” does not necessarily engender trust

among educators, however. Selecting the best terms to describe the practices of KM to others can grow from the organizational context and the organization’s vision. Using bywords and practices within the environment – in education these words could be collegiality, collaboration, and teamwork, to name just a few – can build support for KM.

**2. Go where the energy is**

KM is more likely to take root in communities that need to share knowledge to realize their goals and that have some information-sharing norms in place. For example, a group of middle school teachers who had been feeling powerless about their curriculum development process began meeting on their own to discuss ways to improve it. They identified gaps and overlap in the curriculum, and found and modified a tool used by another district, which they then used to review their entire school curriculum. The curriculum was adjusted to eliminate duplication, to include material that had been omitted, and most importantly, to strengthen teaching. In this case, no one talked about KM or communities of practice, yet they were energized around areas of real concern to improve a process – using technology to facilitate discussions and share results.

**3. Find the need**

As we have learned from business, the process of examining work processes and information flow can

Figure 1: The data-information-knowledge continuum in education

Data are raw numbers without context, information is data in context, and knowledge is the application of information to solve an organizational problem. Turning data into knowledge can make data collection more relevant to organizational needs.			
Function	Data	Information	Knowledge
Two examples from primary and secondary schools			
Integrating Technology into the Curriculum	Teachers meet by grade level to test age-appropriate and subject-specific software applications. Each grade-level team creates a rubric that outlines what they expect the technology to do for them and the children.	The principal, a member from each grade-level team, and the technology support staff, plan to modify the computer lab schedule, purchase and install new software, and offer staff development to meet the needs the teachers raised.	This school-wide team meets bi-monthly to discuss and assess the effectiveness of the technology implementations and makes changes accordingly.
Student Learning	Web-based interactive worksheets provide ongoing assessments of student learning.	Based on assessment results, teachers begin to revise the timeline of classroom activities to better account for student needs.	Teachers meet and learn that several children in each class need additional reading skills. They brainstorm interventions and take their proposal to the principal.
Two examples from colleges and universities			
Academic Counseling	During the first semester, student plans are entered into a database and made available to the student and counselor via a Web portal.	The student and/or counselor update plans annually and interventions (tutoring, etc.) are recorded.	Counselors shared aggregated as well as individual information, and strategized with teachers from the findings in the database regarding the interventions.
Enrollment Planning	Deans have access to real-time, daily head counts by section. Students enroll electronically.	Deans work with faculty members to offer more sections as they fill up.	Faculty, deans, and executive staff meet to discuss long-term enrollment trends and courses to meet changing community needs.

be valuable in helping key people in the organization to recognize day-to-day patterns that are no longer helpful. Determining which administrators and faculty are hampered by these kinds of ingrained patterns can help them tie these processes to institutional missions and organizational goals.

For example, determine which processes – such as textbook selection, library purchases, curriculum development, or program approval – are helping or hindering the institution in fulfilling its mission. Work processes that engender high levels of frustration among students, staff, or faculty prevent the organization from achieving its goals, and therefore offer prime opportunities for KM initiatives.

#### **4. Communities support technology**

Organizations are well served by creating communities of practice – or similar collaborative teams by another name – around any significant technology purchase. Since one goal is to integrate knowledge-sharing practices into everyday work, those whose jobs will be changed by technology implementation – that is, the primary end users – need to be at the table and have a real voice in selecting, designing, and implementing new technologies. In education, these collaborative teams typically bring together management, teachers, faculty, counselors, information systems specialists, business specialists, and others. To that end, Web-based systems provide easy access to team members and an automated way to post and update content.

#### **5. Build trust with communication**

Department heads, program managers, deans, and others whose sense of power has been directly related to selectively sharing information may resist organizational changes that improve sharing of data and information, particularly involving outcomes.

Change can be difficult for everyone, and appropriate professional development needs to be provided when KM practices are adopted. This includes meetings for people to voice their concerns and ideas, and training in new technologies and procedural systems. Leadership training and skill-building opportunities are particularly effective in helping people establish and reaffirm their own sense of worth and value within an information-sharing environment.

#### **Conclusions**

Educational institutions provide a fruitful context for developing KM practices in response to particular teaching, learning, and accountability

pressures and needs. As in business, however, where the ultimate aim of KM practices concerns the customer rather than the employee, the overall goal of KM in education involves the organization's ability to provide effective teaching and services that promote student learning. In this as well as many other contexts, the growth of KM practices in education is reflective of, and synchronistic with, many KM practices in business. KM REVIEW

Contact

Lisa Petrides

Institute for the Study of Knowledge Management in Education

E-mail: [lisa@iskme.org](mailto:lisa@iskme.org)

#### **Overcoming barriers to using and sharing information**

Most educational institutions have processes and technology that should allow teachers and administrators to use and share information to improve student performance. However, just as in other organizations, simply having technology and processes in place isn't enough to ensure effectiveness. Here are six common barriers – many of which are also common to business – and what educational institutions are doing to overcome them.

1. *Lack of staff – school, school district, and college personnel do not always have enough qualified staff to properly analyze raw data.*  
Train and assist existing staff to interpret raw data to turn it into useful information and knowledge (see Figure 1). Some primary and secondary schools provide workshops to train teachers and administrators in using data for decision-making.
2. *Data definitions and collection methods are not uniform – different schools, and departments within the same schools, often use different software, definitions, and other means to collect and organize data.*  
Leaders must set and enforce standards. People will come on board if leaders allow input from staff, then clearly explain the reasons for definitions (defining “drop-out” as a student who has been gone for one year, as opposed to one semester, for example).
3. *Lack of leadership – many schools, school districts, colleges, and post-secondary systems have high turnover rates for senior managers.*  
Processes must be in place in order to ensure uniform standards are followed, particularly in times of high turnover.
4. *No integration between technology and actual information needs – many teachers, faculty, and staff adopt a “hands-off” approach to technology, leaving it to “experts” who might know a lot about hardware but very little about the information needs of people in the organization.*  
Colleges and universities create committees made up of teachers, administrators, and staff to discuss real end-user needs.
5. *Unclear priorities – information collection and analysis is often isolated and not clearly related to the mission of the organization.*  
Successful schools, colleges and universities align their information procedures with clear mission and value statements.
6. *Distrust of data – many teachers and faculty have witnessed the manipulation of data, and are wary of any process that would have their work, student outcomes, or other activities subject to “bean counting.”*  
Convincing staff that data will not be used against them is often difficult, especially in times of budget cuts. When possible, better communication is the answer, discussing how to put the data in a context that serves a shared goal – such as improving student outcomes.

# SAMPLE COPY REQUEST SERVICE

Simply choose the product you would like to review, complete your mailing details below and fax or mail your request to us.

## FREE SAMPLE COPY ORDER FORM

### PLEASE SEND ME A SAMPLE COPY OF:

- STRATEGIC COMMUNICATION MANAGEMENT**  
*Subscription publication: Six issues per year with best practices, case studies and research for communicators*
- THE BUSINESS COMMUNICATOR:  
WHAT'S WORKING IN CORPORATE COMMUNICATION**  
*Subscription publication: Ten issues per year with tried and tested ideas ready to be used in your daily work*
- KNOWLEDGE MANAGEMENT REVIEW**  
*Subscription publication: Six issues per year with best practices, case studies and research for KM practitioners*
- STRATEGIC HR REVIEW**  
*Subscription publication: Six issues per year with the latest trends, techniques and ideas in human resource strategy*
- TOTAL REWARDS STRATEGY**  
*Subscription publication: Ten issues per year with best practices, case studies and tips you can use straight away*

### PLEASE ALSO SEND ME INFORMATION ABOUT: MANUALS AND REPORTS:

- BUILDING A STRATEGY FOR REMOTE COMMUNICATION**  
*In-depth research report with detailed case studies, analysis, interviews, planning tools and templates*
- MEASURING INTERNAL COMMUNICATION**  
*Everything you need to measure the performance of your internal communication with case studies and templates*
- HIGH IMPACT E-LEARNING STRATEGIES**  
*NEW research report on world-class e-learning and KM programs in over 150 organizations*
- MANAGING INTRANETS AND PORTALS**  
*160 page binder packed with proven techniques to build a more effective intranet*

### PLEASE PRINT DETAILS CLEARLY OR AFFIX YOUR BUSINESS CARD

NAME .....

E-MAIL\* .....

POSITION .....

COMPANY .....

ADDRESS.....  
..... or attach your business card .....

CITY .....

STATE/COUNTY.....

ZIP/POSTAL CODE .....

COUNTRY.....

PHONE.....

FAX.....

### PLUS! SIGN UP TO *theSource* - THE FREE MONTHLY E-ZINE FOR CORPORATE COMMUNICATORS NOW!

Every month, we'll research a hot communication topic and deliver our findings right to your inbox in a punchy, entertaining style. You'll get great ideas, tips, case studies, recruitment news, resources and freebies every month.

- YES, please sign me up to *theSource* – the free e-newsletter for corporate communicators.**

*\* Remember to include your e-mail address above. We'll send you confirmation as part of our two-step sign-up process.*

#### OUR GUARANTEE:

*We will not share your e-mail address with any third parties.*

## RETURN YOUR COMPLETED ORDER FORM TO EITHER OFFICE:

**US Office: Melcrum Publishing Ltd, 311 South Wacker Drive, Ste. 4550, Chicago, IL 60606, USA**  
Tel: (877) 226 2764 • Fax: (312) 803 1871 • E-Mail: [info@melcrum.com](mailto:info@melcrum.com)

**UK Office: Melcrum Publishing Ltd, 1st Floor, Chelsea Reach, 79-89 Lots Road, London SW10 0RN, UK**  
Tel: +44 (0)20 7795 2205 • Fax: +44 (0)20 7795 2156 • E-Mail: [info@melcrum.com](mailto:info@melcrum.com)

www.melcrum.com  
**MELCRUM**  
PUBLISHING

Melcrum is a provider of strategic business information. We gather best practices from expert practitioners to help you make better business decisions.