In the following report, Hanover Research reviews guiding principles in knowledge management for K-12 school districts, including common challenges in implementing knowledge-sharing practices. In addition, we examine specific strategies of improvement for school districts in the areas of knowledge management and organizational development.
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EXECUTIVE SUMMARY AND KEY FINDINGS

INTRODUCTION

As a strategy for organizational improvement, knowledge management has been a popular topic in the business management field since the 1990s, when it was associated with the mantra “If only our company knew what our company knows.” Although there is no universal conception of what good knowledge management entails and best practices vary depending on the needs and characteristics of a particular organization, knowledge management broadly refers to “the process through which organizations generate value from their intellectual and knowledge-based assets.” These assets include the knowledge, skills, mindsets, and practices of an organization’s leaders, employees, and customers.

Because it seeks to identify critical knowledge for decision-making and to make this knowledge available as it is needed, effective knowledge management can be a key organizational strategy for continuous improvement. J.M. Carroll, professor in the School of Information Sciences and Technology at Pennsylvania State University, notes:

The challenge of knowledge management in organizations is to ensure that the organization continually learns, and that new knowledge is effectively incorporated into practices, so that it is accessible when needed.

As decision-making processes shift according to organizational strategy and needs, so should knowledge-sharing practices. Organizations thus require a knowledge management strategy that is not only comprehensive enough to be relevant to many different kinds of employees, but also nimble enough to evolve alongside the organization.

This report comprises two sections:

- **Section I** discusses guiding principles in knowledge management, including common challenges in implementing knowledge-sharing practices.
- **Section II** examines three specific strategies of improvement for school districts in the areas of knowledge management and organizational development. This section also includes an overview of the functions of knowledge management and organizational development offices at various U.S. school districts.

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2 Levinson, M. “Knowledge Management: Definition and Solutions.” CIO. http://www.cio.com/article/40343/Knowledge_Management_Definition_and_Solutions

KEY FINDINGS

- **Knowledge management and organizational development comprise many distinct but related practices.** At school districts, Offices of Knowledge Management tend to either oversee data-driven improvement or leverage technological platforms to promote organizational knowledge-sharing. Offices of Organizational Development are more varied in scope, and include professional development, human resources, strategic operations, and public relations functions.

- **Effective knowledge management strategies are job-embedded and provide opportunities for employees to interactively share tacit, or implicit, knowledge.** Knowledge repositories, expertise directories, and best practice replication are methods that aim to codify knowledge and share it in a centralized, usually online, location. Communities of practice, shadowing, collaborative problem-solving, and peer assists are organizational structures that provide employees opportunities to transfer and learn tacit knowledge through direct, on-the-job interaction.

- **Organizational culture, values, and habits, rather than technological or infrastructural limitations, are the most likely obstacles to effective knowledge management.** For instance, organizations may inadvertently promote knowledge-hoarding among employees, which increases the value of those individuals but hurts the organization as a whole. Consistent and proactive district leadership to promote job-embedded knowledge-sharing is essential for shifting organizational habits.

- **At least three examined school districts have Knowledge Management Offices that work to develop a district intranet as a site for knowledge-sharing across the organization.** These online knowledge repositories can serve as a centralized location for district documents as well as an interactive platform for teachers, staff, and administrators to share and locate tools, tips, and best practices through classroom artifacts, classroom demonstrations, annotated lesson plans and videos, discussion groups, blogs, and more.

- **Promoting principal-led human capital management in recruiting, hiring, developing, and evaluating teachers can improve employee engagement and focus professional development.** This strategy connects traditional human resources functions with professional development programs to create a more comprehensive and job-embedded human capital management system. By empowering principals to serve as human capital managers, districts support schools in cultivating engaging, supportive, and productive work environments.

- **Distributed leadership, a model that extends leadership responsibility throughout the organization, can build collaborative decision-making structures and thereby help to sustain knowledge-sharing practices.** Distributed leadership promotes regular communication across organizational hierarchies, which improves employees’ ability to identify what knowledge is critical for decision-making and offers them structured opportunities to share this knowledge.
SECTION I: PRINCIPLES OF KNOWLEDGE MANAGEMENT

INTRODUCTION

Lisa Petrides, the president and founder of the Institute for the Study of Knowledge Management in Education, a non-profit research organization dedicated to knowledge-sharing and educational innovation, notes, “At the most basic level, knowledge management can be described as a set of practices that helps to improve the use and sharing of data and information in decision-making.” 4 In other words, effective knowledge management must accomplish more than simply collecting information from various sectors and levels of an organization. Rather, when done right, managing knowledge involves pinpointing which parts of the organization need what kinds of information and strategically deploying this information where and when it is needed so that this knowledge can support decision-making and best practices.

Another critical element of knowledge management, and perhaps the reason it is often associated with professional development, resides in knowing how to use information effectively. At its core, knowledge management deals with how an organization moves from data or information to informed knowledge that can guide concrete decisions and actions.

In an interview with Education Week, Ms. Petrides observes that this process is not as simple as it may sound: “One thing we’ve seen over and over again with schools is that it has been easier to raise money for hardware and software than for the education and training necessary to support and sustain it.” 5 The Institute for the Study of Knowledge Management in Education describes several common challenges to effective knowledge management at educational organizations. Although the following list focuses on data collection, it applies to other kinds of knowledge-sharing efforts as well:

- **Lack of staff.** School, school district, and college personnel do not always have enough qualified staff to provide proper analysis of raw data.
- **Data collection not uniform.** Various units and departments within educational institutions often use different software, definitions, and other means to collect and organization data, which causes significant problems in analysis and use.
- **Lack of leadership.** Many schools, school districts, colleges, and postsecondary systems face high turnover rates among upper-level managers, which makes it difficult for them to remain consistent in using and sharing data and information.

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• **Lack of integration of technology.** Many teachers, faculty, and staff adopt a “hands-off” approach to technology issues, leaving them to “experts” who might know a lot about hardware but very little about the information needs of people in the organization.

• **Unclear priorities.** Information collection and analysis is often isolated and not clearly related to the mission of the organization.

• **Distrust of data use.** Many teachers and faculty have witnessed the manipulation of data, and are wary of any process that would have their work, class outcomes, or other activities subject to institutional “bean counting.”

It is important to note that four of the six above challenges concern organizational culture, values, and habits rather than technology or infrastructural limitations. In particular, these challenges highlight the importance of consistency in district leaders’ approach towards information and its intended use. Consistent and proactive leadership to promote job-embedded knowledge-sharing is essential for shifting organizational habits. Emily Douglas, the human capital director at Battelle for Kids, an organization committed to educational reform, notes that knowledge management “is not just a process adjustment or technology solution. It requires a culture change, which can be difficult. People have to be open and willing to not only share but listen.”

This section provides an overview of guiding principles for knowledge management as they apply to K-12 education and specific ways in which these principles have been realized at various school districts.

**CAPTURE TACIT KNOWLEDGE**

One of the central tasks of organizational knowledge management is learning how to effectively leverage individuals’ tacit knowledge. Tacit knowledge describes the kinds of knowledge that employees learn on the job about an organization’s culture, operational processes, and norms, but that is usually never codified in reports or other documents. It may contain both technical skills (i.e., “know how”) and cognitive skills (i.e., the mentalities and assumptions behind certain work processes). Tacit knowledge stands in contrast to explicit knowledge, which can be defined as knowledge that is “public and most widely known…. The sort of knowledge we are aware of using and [which] can be shared in the form of data, scientific formulae, manuals, [etc.].”

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Because tacit knowledge is often implicit and learned through experiences and interactions within the organization, it can be difficult to codify. Rather than attempting to make tacit knowledge explicit, in some cases it may be more productive to create opportunities for experiences and interactions that implicitly provide novice teachers and staff with the tacit knowledge necessary to perform their jobs effectively. Encouraging collaboration between novice and experienced teachers and staff through shadowing and collaborative problem-solving is one way to encourage the transfer of tacit knowledge.11

Communities of practice and knowledge repositories represent additional opportunities for teachers, staff, and administrators to externalize their tacit knowledge by sharing it and, in some cases, making it explicit. Communities of practice have three central features: sharing common work activities, recognizing the value of accessing others’ expertise, and “develop[ing] norms of trust, reciprocity, and cooperation that support knowledge-sharing.”12 Knowledge repositories refer to databases of knowledge (e.g., “lessons learned, best practices, proposals, presentations, templates,” etc.) that are organized for easy search and retrieval.13

In recent years, Professional Learning Communities (PLCs) have gained popularity as a method of promoting collaborative professional development among teachers. However, in order to increase access to valuable knowledge across the district, such communities of practice need not be limited to teachers. For example, Long Beach Unified School District in California has established PLCs for school principals, which consist of monthly meetings hosted by one school. At each meeting, the host principal identifies a critical issue of concern in his/her school. Visiting principals then sit in on classrooms and meet to discuss their observations and suggestions around the host principal’s identified concern. Similarly, in an Austin, Texas school district, high school principals meet twice a month to collaboratively develop strategies for shared instructional issues.14 These structures allow principals to learn from each other’s situations, accomplishments, and struggles.

Wikis, or web-based communities that are designed for multiple authors, have become more widespread in K-12 settings and constitute online repositories that facilitate knowledge-sharing among practitioners, including teachers, staff, and administrators. While many teachers use classroom wikis with their students, staff and administrators have noted that wikis can be useful as a tool for sharing best practices and other educational resources.15

13 Ibid., p. 45.
For instance, Michael Horton, a science coordinator for 23 school districts in Riverside, California, has created a public wiki specifically for science teachers. One of the most popular pages of this wiki lists free resources – podcasts, kits, videos, posters, etc. – that science teachers can use in their classrooms.16 Similarly, Geoffrey Sheehy, a high school English teacher in South Dakota, created a wiki for the language arts department at his high school. He notes that the wiki allows teachers to “locate tips, materials, and ideas from members of the department with whom they would otherwise not interact with on a regular basis.”17 In more recent years, wikis have shown promise when incorporated as an element of PLCs in order to promote teachers’ knowledge of inquiry-based teaching methods.18

**BUILD ORGANIZATIONAL CAPACITY FOR KNOWLEDGE-SHARING**

Organizational capacity refers to the collective resources, knowledge, processes, and personnel that an organization possesses in order to carry out its mission across all levels and sectors of the organization. Bruce King and Kate Bouchard, researchers affiliated with the University of Wisconsin, Madison’s Department of Educational Leadership and Policy Analysis, describe the concept of organizational capacity as it applies to schools in the following way:

> Teachers must be able to integrate knowledge of students, subject matter, and teaching context in planning units and lessons, carrying out instruction, assessing student work, and reflecting on practice. At the same time, to promote achievement among all students from one year to the next, teachers must employ their individual knowledge, skills, and dispositions in ways that advance the collective work of their schools. The **collective power of an entire faculty to strengthen student performance throughout their school can be summarized as school organizational capacity**.19

King and Bouchard thus highlight the interaction between individual knowledge and collective performance. In addition, they suggest that developing organizational capacity and promoting knowledge-sharing are mutually reinforcing practices. Schools need structures to ensure that knowledge-sharing becomes a sustained feature of organizational culture, rather than a practice that quickly fades into the background once the initial momentum is lost. As individual knowledge grows, the impact of knowledge-sharing on collective performance improves. In their experience with one struggling elementary school, King and Bouchard found that flipping professional development practices so that teachers, rather than the principal, were expected to lead the sessions helped encourage teachers to

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take ownership over their individual practices and to frame these practices as part of the school’s collective mission.20

Another component of building organizational capacity lies in developing structures that provide information as it is needed in order to prevent information overload and employee frustration. Ideally, developing a comprehensive infrastructure for knowledge-sharing will lead to relevant knowledge that is embedded in everyday work activities so that it can be easily and immediately accessed “just in time.”21 If an organization does not use the knowledge it collects due to poor structural planning, that knowledge is not only lost but represents a negative financial investment.22

For instance, in 2012, the Research Alliance for New York City Schools released a report on New York City’s Department of Education $80 million effort to support the use of the Achievement Reporting and Innovation System (ARIS), the country’s largest school data system.23 Researchers found that the average session lasted under five minutes, with minimal time spent using the “system’s analytic, knowledge management, and virtual collaboration tools.”24 While ARIS provided a convenient, centralized location for a wide variety of student data, the kinds of information it included, such as state assessment scores, grades, attendance, and credit accumulation were primarily useful for tracking broad trends and geared towards administrators.25 Teachers, by and large, were not using ARIS. Moreover, the Department’s investment of time and money was going to waste due to poor design, demonstrating that an investment in knowledge management can be a liability rather than an asset if not conducted properly.

Susan Fairchild argues that the lack of widespread use of ARIS among most teachers was due to the fact that ARIS functioned as a disruption to teachers’ daily activity.26 The director of program analysis at New Visions, a non-profit organization dedicated to education reform in New York City, Ms. Fairchild refers to work for which employees have to stop their normal process in order to complete an activity as “above-the-flow,” whereas work that does not constitute “an additional burden or interruption” is “within-the-flow.” A more teacher-friendly design for data management, Fairchild contends, has the student and classroom data embedded within a platform whose primary mode and function is a grade book, a tool that teachers refer to several times in their daily routine.27 By aligning the

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20 Ibid., p. 663.
24 Ibid., p. 2.
25 Ibid., p. 4.
27 Ibid.
platform with the day-to-day work of teachers, accessing student data becomes a “within-the-flow” activity.

**Distribute Knowledge Across the Organization**

Focusing on bottom-up, peer-driven, job-embedded mutual learning is a key method for building sustainable knowledge management in schools and districts. J.M. Carroll and fellow researchers note, “Top-down reform strategies (e.g., pre-service teacher training programs) must be deliberately complemented by and coordinated with peer-driven innovations in teachers’ professional practice.” In addition to communities of practice and knowledge repositories, discussed above, Carroll et al. list **expertise directories, peer assists, and best practice replication** as three strategies for promoting knowledge-sharing across all levels of the organization:

- **Expertise directories** allow users to find, contact, and consult with individuals who possess specific skills or experience. Well-designed expertise directories are supported by systems and procedures that keep employee profiles up-to-date, and allow individuals to review their profiles and control access. Expertise directories are in place at Hewlett-Packard, Microsoft, NASA, and many large pharmaceutical companies.

- **Peer assists** are semi-structured knowledge-sharing activities that occur near the beginning of a challenging work project. At British Petroleum, a team confronting a difficult problem can invite another team that has been through a similar experience to meet for one to three days, and follow a facilitated process to walk through the problem. The requesting team has the opportunity to tap the knowledge of the assisting team, while the assisting team adds breadth and depth to its own expertise.

- **Best practice replication** refers to planned processes that collect, codify, and transfer innovative practices developed at one location in an organization to the rest of the organization for possible adoption. For example, Ford deploys a formal system that “pushes” selected best practices to plants, based on the type of work conducted in each plant, and follows through by generating reports on how many practices each plant has submitted and implemented. A growing number of firms in manufacturing and process industries are capturing and replicating best practices.

One feature that the above practices share is that they focus on **directly sharing knowledge at the levels where the knowledge is most needed**. In other words, these practices do not depend upon lengthy training sessions facilitated by upper-level management, but rather create structures that directly connect practitioners without “a middle man.” However, it should be noted that these structures in and of themselves will do little to promote knowledge-sharing without a corresponding shift in organizational culture. To encourage the success of these efforts, districts must promote fluid boundaries between teachers, staff, and administrators and set a district-wide expectation for knowledge-sharing as the

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29 Bulleted items taken nearly verbatim from: Ibid., p. 45.
cultural norm. Distributed leadership, one organizational structure for knowledge-sharing across different hierarchical levels, is discussed in more detail in Section II.

Furthermore, according to the Bridgespan Group, a non-profit consulting firm that works with mission-driven institutions, the most common barriers to effective organizational structures are ineffective linkages among organizational departments and divisions. Underdeveloped linkages result in a lack of information flow across units in the organization and overreliance on centralized decision-making, while overdeveloped linkages result in unnecessary bureaucracy and information overload without a clear idea of what should be done with this information. Striking the optimal balance between the two is critical for effective knowledge-sharing. Common linking mechanisms include:

- **Liaison roles**: Trusted individuals who are formally assigned the task of communicating relevant information across groups, in addition to their normal duties.
- **Cross-unit groups**: Teams or committees that bring together key individuals from multiple groups in order to focus on common strategic goals.
- **Integrator roles**: Managers who are not direct supervisors, but who ensure that organizational objectives and decisions are being smoothly implemented across groups.

For strategic goals that will likely require coordination and knowledge-sharing between multiple units, promoting effective links through the above mechanisms can help ensure that critical information is shared with the relevant people and properly contextualized. To begin the process of evaluating the effectiveness of organizational linkages, having teachers, staff, and administrators create “knowledge maps” that display “the information they use on a day-to-day basis and the people with whom they work” can help to determine where the organization can strengthen or rearranges its linkages.

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30 Ibid., p. 46.
32 Ibid., p. 17.
SECTION II: STRATEGIES FOR KNOWLEDGE MANAGEMENT AND ORGANIZATIONAL DEVELOPMENT

INTRODUCTION

Although they are not widespread, several school districts in the United States have offices dedicated to Knowledge Management or Organizational Development. However, these offices differ in their goals and responsibilities, demonstrating that there is no one conception of how these fields operate in K-12 education. While the list below is not comprehensive, it provides an overview of how districts conceive of knowledge management and organizational development in K-12 education.

The goals of Knowledge Management offices tend to fall into the following categories:

- Developing Information Technology (IT) knowledge platform(s)
  - Aspire Public Schools (Oakland, CA)\textsuperscript{36}
  - Chicago Public Schools (Chicago, IL)\textsuperscript{37}

- Data-driven improvement
  - Baltimore City Public Schools (Baltimore, MD)\textsuperscript{38}
  - Green Dot Public Schools (Los Angeles, CA)\textsuperscript{39}

The goals of Organizational Development offices tend to fall into the following categories:

- Professional development
  - Henrico County Public Schools (Henrico, VA)\textsuperscript{40}
  - Montgomery County Public Schools (Rockville, MD)\textsuperscript{41} — recently reorganized as the Office of Professional Development and School Support\textsuperscript{42}
  - Pontiac School District (Pontiac, MI)\textsuperscript{43}

\textsuperscript{37} See subsection below on Chicago Public Schools.
\textsuperscript{38} “What We Do.” Baltimore City Public Schools. http://www.baltimorecityschools.org/Page/15261
\textsuperscript{40} “Elementary Education and Organizational Development.” Henrico County Public Schools. http://www.henrico.k12.va.us/ODQI/index.html
- **Human resources**
  - Fort Bend Independent School District (Fort Bend, TX)\(^{44}\)
  - Natrona County Schools (Casper, WY)\(^{45}\)
  - Pittsburgh Public Schools (Pittsburgh, PA)\(^{46}\)

- **Implementation of strategic goals**
  - Baltimore County Public Schools (Baltimore, MD)\(^{47}\)
  - Kent Intermediate School District (Grand Rapids, MI)\(^{48}\)

- **Public relations**
  - Sunnyside Unified School District 12 (Tucson, AZ)\(^{49}\)

In the above list, the specific functional categories in these two fields are not clearly differentiated and there are occasional overlaps among them. For instance, the Department of Knowledge Management at Green Dot Public Schools appears to manage both knowledge-sharing on a broad organizational scale and data-driven improvement.

Given the range of possible applications, this section discusses a broad variety of possible knowledge management and organizational development strategies that have been employed in or are recommended for K-12 school districts. Below, we examine the following strategies:

- **Online Knowledge Repository**: Leveraging IT to promote knowledge-sharing across the organization

- **Human Capital Management**: Developing human resources strategies to strengthen long-term organizational capacity and performance

- **Distributed Leadership**: Redesigning leadership structures to distribute knowledge and decision-making across the organization

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\(^{45}\) "Organizational Development." Natrona County Schools. http://www.natronaschools.org/view_department.php?id=44&name=Organizational+Development


**Online Knowledge Repository**

Chicago Public Schools (CPS) in Illinois recently established a Department of Knowledge Management, housed within the Chief Instruction Office, which currently consists of a director and one staff member. The mission of this department is to “[help] ensure all students graduate college and career ready by creating, publishing, and maintaining an interactive library of educational tools, resources, and exemplars for school leaders and teachers.”

The Department’s mission has been shaped by the current CPS vision for the district central office and the district’s role in supporting schools. Under recent leadership, the central office has focused on the task of producing district-wide educational standards and frameworks. The mission of the Chief Instruction Office clearly articulates this emphasis:

> The mission of the Chief Instruction Office is to set clear standards for school quality (e.g., curriculum, instruction, assessment, intervention, professional learning, etc.), provide diagnostics to measure program quality for targeted populations/programs (e.g., Special Education, English Language Learners, Career and Tech Ed) and to provide tools and resources to help educators implement effective practices aligned with the standards. The Chief Instruction Office is also tasked with documenting and dissemination innovative practices and resources to drive improvement. As a standards-setting and knowledge-sharing organization, the Chief Instruction Office will help drive educator effectiveness to ensure all students have the supports they need to graduate college and career ready.

The Chief Instruction Office’s focus on setting standards and sharing knowledge, rather than managing schools, is a consequence of the district’s organizational structure. CPS schools are organized into five geographic regions and 19 individual networks. Each network offers its schools direct district support in family and community engagement, data analytics, early childhood programs, bilingual programs, and instructional support for all subject areas. Thus, much of the work of supporting and managing these schools in meeting district standards falls to the Office of Network Support. The Network Support staff members are fairly autonomous and directly oversee many of the district-wide educational initiatives.

At CPS, the Department of Knowledge Management has developed an online repository known as the Knowledge Center, which functions as the primary knowledge-sharing tool for the entire district. The Knowledge Center is available to all staff members, which comprises over 40,000 individuals. As described below, the ongoing rollout of the Knowledge Center

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50 Details regarding CPS’s Department of Knowledge Management and Knowledge Center repository were provided by Secatore, Lauren. Director of Knowledge Management, Chicago Public Schools. Phone Interview. Feb. 25, 2013.
includes processes: centrally housing district-wide documents and promoting interactivity with teachers and developing user analytics.

**Phase I (2011-2013): Centrally House District-Wide Documents**

While the new vision for CPS understands the central office as the producer of district-wide educational standards, it soon became apparent that there was no centrally-housed location for the standards, rubrics, and frameworks coming out of the central office. Rather, these resources were posted on a variety of internal and external-facing sites, with no clear process governing their location.

The district often relied on school principals to send the relevant documents to the appropriate teachers and staff, which led to inconsistency in when and whether the documents were received. This method also forced principals to expend considerable effort organizing the documents themselves and ensuring that they were forwarded to the appropriate teachers and staff. Furthermore, recent calendar changes at CPS made it increasingly difficult for teachers, staff, and administrators to leave schools in order to participate in in-person, district-wide professional development.

In 2011-12, CPS addressed these issues by developing an initial version of the Knowledge Center on the district’s Sharepoint platform. As of April 2012, the Knowledge Center began hosting numerous tools and resources in support of two CPS initiatives: the implementation of Common Core State Standards and the rollout of Full School Day, which ensures additional instructional time and recess for students. To assist the implementation of these district-wide initiatives, the Knowledge Center hosted “tools and toolkits, guidance documents, calendars, video examples, templates, data tools, and website resources.”

While developing the Knowledge Center, the Department realized that the district required better internal communications processes so that teachers, staff, and administrators could take full advantage of the resources available on the new repository. In October 2012, the Department began producing newsletters in order to advertise materials on the Knowledge Center and share professional learning and development opportunities across the district. It now sends daily and weekly newsletters directly to principals, as well as weekly newsletters to teachers.

During this stage, the district’s response to the Knowledge Center has been generally positive. Lauren Secatore, the director of the Department, attributes this in part to the district’s previous failure to provide any centralized library for district-wide resources. In particular, principals and administrators have commented that the Knowledge Center helps them organize and filter all of the district’s documents, a task which they previously had to complete on their own. As of February 2013, the CPS Knowledge Center houses approximately 6,000 documents and has been visited by almost 70,000 unique visitors.

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**Phase II (2013-): Promote Interactivity and Develop Analytics**

Now that the Department has established a process for hosting the documents that relate to the district’s instructional standards, rubrics, and frameworks, it is currently focused on developing the Knowledge Center’s functionality for teachers and other school-level staff. The Department’s vision of the Knowledge Center is that of a resource library produced by teachers for teachers, where they can share tools, tips, and best practices through classroom artifacts, classroom demonstrations, annotated lesson plans and videos, discussion groups, blogs, and more. In February 2013, the Department began holding teacher leadership programs in the following areas:

- **Content creators** will share artifacts and resources from their classrooms aligned to the Framework
- **Professional development facilitators** will lead adult learners in Professional Development about the Framework
- **Demonstration classrooms** will be videotaped to showcase practice aligned to the Framework[^56]

The “Framework” refers to the CPS Framework of Teaching, or the district’s blueprint of effective teaching practices. The Department plans to collect initial teacher-driven resources through summer 2013. In fall 2013, the Department plans to implement the new, interactive components of the Knowledge Center.

Currently, the Department relies on Google Sites to host the Knowledge Center. Although this platform is quite basic, Ms. Secatore notes that the decision to keep the project scaled back, at least at first, helped CPS avoid the technological setbacks that occasionally plague knowledge management efforts. As a result, CPS was able to get the Knowledge Center off the ground and into the hands of users relatively quickly. However, one of the costs of this simplicity and usability has been limited user analytics.

Eventually, the Department plans to develop its Knowledge Center platform so that it is offers detailed analytics regarding which users are accessing which kinds of resources. In addition, the Department would like to implement an identity management system that fully integrates the Knowledge Center with CPS’ other online tools and technological platforms, so that users of the Knowledge Center are associated with their classes, scheduling, human resources information, and professional development experiences. Finally, as the Knowledge Center becomes more interactive, the Department plans to rely more heavily on survey data and user analytics in guiding the development of the platform.

[^56]: Bulleted items taken verbatim from “CPS Framework Specialists,” provided by Lauren Secatore.
**Human Capital Management**

Human capital refers to the collective knowledge, skills, and values held by an organization’s personnel. The need to effectively support and retain human capital relates to both knowledge management and organizational development, as it helps to ensure that organizational knowledge is not lost due to lack of employee engagement or high turnover and because it offers focused professional development to employees so that they can continuously improve their performance.

In recent years, school districts have prioritized human capital, and especially the need to identify and support effective teachers, as a crucial step towards improving student achievement. To this end, many districts have begun to connect their traditional human resources functions, such as recruiting, hiring, and placement, with their professional development programs, which generally operate orientation, training, and mentoring, in order to create a more cohesive and comprehensive human capital management system.

Tony Milanowski and Steven Kimball, two researchers affiliated with the Consortium for Policy Research in Education, have argued that K-12 public education can learn from the human capital investments made by private sector companies in order to improve performance. In particular, they note that the role of school principals in recruiting, hiring, developing, and evaluating teachers is analogous to that of middle managers at many private companies.

Milanowski and Kimball observe that the most “forward-thinking” private companies rely on middle managers to cultivate an engaging, supportive, and productive work environment: “this culture includes a shared conception of good performance, shared values about developing human capital, and sharing of expertise among employees.” In addition, the best companies communicate the clear expectation that middle managers fulfill this role, hold them accountable for effective human capital management, and support them with the necessary tools, such as “electronic recruitment and screening systems, talent inventories, and performance management systems.”

Effective human capital management reaches across many different aspects of the organization, including employee engagement; the organization’s training, development, and support mechanisms; and employees’ ability to access and share organizational

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59 Ibid., p. 5.

60 Ibid., p. 9.
knowledge. The Aspen Institute, a non-profit organization for educational and policy studies, notes that human capital management relies on and extends traditional human resources function:

Identifying and nurturing talent, allocating resources, providing support to ensure principals are well prepared to serve as human capital managers, holding them accountable for this work, defining the metrics to be used to assess teacher performance and developing an information management system to track it are just a few of the components of an effective human capital system. HR can be a strategic resource for this work but the work must be owned and championed by a cross-functional team of district leaders.

Based on the best practices of private companies that depend on middle managers for essential activities such as talent recruitment, development, and retention, Milanowski and Kimball outline the following recommendations for K-12 school districts:

- **District leaders should clearly convey the importance of the principal's role in human capital management.** This goal can be accomplished by:
  - Reinforcing this message and publicizing effective human capital management practices through district-wide events, newsletters, and websites.
  - Training principals and teacher leaders in essential human capital management strategies, such as recruitment, selection, induction, development, and performance management.
  - Examining surveys, professional development participation rates, turnover rates, principals’ performance reviews, etc. to learn how effectively schools practice human capital management.
  - Encouraging schools to develop their own human capital metrics to demonstrate the relationship between schools’ investment in human capital, teacher growth, and students’ academic outcomes.

- **Develop a best human capital practices model for principals.** Principals can use the model to guide professional development programs and to self-assess how well their current practices meet district expectations. This model should include guidance on recruitment, selection, induction, mentoring, and performance management.
  - In addition, the model should discuss ways to promote productive school climate and working conditions. Although these two aspects are difficult to measure precisely, they nevertheless influence the instructional program and student achievement outcomes, as well as teacher retention.

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Select and train principals for human capital management skills. When evaluating principal candidates, selection committees should pay attention to whether the candidates demonstrate potential for effective human capital management. This may include the following skills:

- Ability to analyze school goals and translate them into what staff need to know and be able to do
- Knowledge of what good teaching looks like, how to assess it, and how to talk about it
- Understanding the principles of effective recruitment and selection
- Ability to provide specific, honest, and useful feedback about job performance
- Ability to understand and respond to the different development needs and interests of teachers based on their performance and their stage of career

Evaluate and reward principals for effective human capital management. District principal performance evaluation systems should include human capital management skills, based on the model referenced above. The performance evaluation goals for principals should include their efforts in human capital attraction, retention, and development. To measure how well principals are fulfilling the role of human capital manager, districts might want to consider developing indicators to represent the effectiveness of their human capital management skills. Examples of indicators may include:

- Percentage of teachers hired after school year begins
- Average number of times per year teachers are observed in their classrooms
- Teacher turnover, including turnover by performance level, experience level, and teaching specialty
- Staff responses to school climate surveys
- Quality of performance evaluation feedback provided to teachers by principal
- Alignment between area identified for improvement in evaluations and teacher professional development plans

Review district policies and practices at key periods for school human capital management. There are three key periods for building an effective faculty: teacher hiring, the tenure decision, and professional development. District policies should support the principals’ ability for effective decision-making at these times.

- For example, district policies and provisions relating to voluntary transfers, excess requirements, and late hiring practices create difficulties for principals seeking to staff their schools on time and with the best teachers. In addition, the period before a teacher is tenured should be treated as the final stage in the hiring process and districts should focus evaluation resources at this stage.
- Finally, principals may need flexibility to create and fund teacher-leader roles, such as professional development coordinator, grade or subject team leader, and instructional coach. These positions offer job-embedded professional development and allow good teachers to take on challenging assignments that keep them engaged.
Free up principals’ time and energy for effective human capital management. Expecting principals to take on human capital management without providing additional support is unfair and unlikely to be effective. To support better human capital management at schools, districts can consider the following steps:

- Provide principals will school-based administrative managers to handle finances, facilities, and routine HR functions.
- Develop and fund teacher leaders to assist with school instructional leadership. Distributed leadership across tasks and people can create the expectation for teachers to participate beyond their classes in roles and initiatives important for school success.\(^{63}\)
- Rely primarily on central office specialists to manage remediation and potential termination of non-performers.
- Review and streamline district administrative policies that tie up principal time and effort so that principals’ efforts can be redirected to instructional and human capital leadership.

Ensure that the HR Department is an effective partner. Some districts have actively restructured the HR department to provide flexibility for principal-led human capital management. For example, HR staff may be appointed to certain schools so those principals have a single contact for inquiries and assistance. In the past few years, Atlanta Public Schools has reoriented central office HR staff to support specific school needs in this way.\(^{64}\) Reorganizing and training HR staff to support human capital management efforts at schools also sends a powerful signal about the district’s focus on this issue.\(^{65}\)

While the specific focus areas of school-led human capital management will differ depending on the district’s strategic goals and plans, the above approach outlines specific ways in which the district can support principals in hiring top talent, promoting employee engagement, cultivating a productive work environment, and offering high-quality, job-embedded professional development.

Distributed Leadership

One of the common challenges associated with knowledge management lies in persuading individuals to “surrender their knowledge and experience – the very traits that make them valuable as individuals.”\(^{66}\) In fact, certain organizational cultures may inadvertently promote knowledge-hoarding among employees, who recognize critical knowledge as valuable and wish to ensure their importance to and job security with the organization.

\(^{63}\) Distributed leadership is discussed below.


While knowledge-hoarding may make an individual employee more valuable, it can damage the organization as a whole, which benefits from fluid collaboration and knowledge-sharing. One method to avoid this problem is to promote knowledge-sharing in a way that explicitly and publicly acknowledges the value of those employees who have critical knowledge to share. In school districts, distributed leadership may offer such a knowledge-sharing model. Although this model is primarily a decision-making and leadership structure, it inherently includes opportunities for distributing knowledge across different levels of the organization and for publicly recognizing the value of this knowledge.

**Distributed leadership extends leadership responsibility throughout the organization by “weaving” it into the relationships, activities, and interactions of stakeholders.** Long Beach Unified School District (LBUSD) in California has recently received attention for its use of distributed leadership (also known as “distributive leadership”) from the School Redesign Network (SRN) at Stanford University, a national research and professional development organization for school systems and districts. Unlike a traditional hierarchical model of leadership, a distributed approach engages individuals at all levels of the organization in the knowledge-sharing and decision-making processes. This approach has been identified as a critical element of many successful school reform initiatives.

At LBUSD, distributed leadership has facilitated the implementation of the ambitious Linked Learning initiative, which is overseen by the state of California. The goal of this initiative is to increase postsecondary readiness by bringing together traditional academics, real-world technical skills, work-based applications, and numerous support mechanisms. Guided by research indicating that successful reform benefits from multiple voices at different levels of the organization, the district used a combination of top-down and bottom-up approaches to develop leadership teams at multiple levels. This is displayed in Figure 2.1 on the following page.

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69 Ibid.
The table shows the elements of distributed leadership at different levels in LBUSD:

**Element of Distributed Leadership at Different Levels in LBUSD**

<table>
<thead>
<tr>
<th>SCHOOL LEVEL</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pathway Leadership Team</strong></td>
</tr>
<tr>
<td>- Include school site administrators, teachers, counselors, and others.</td>
</tr>
<tr>
<td>- Lead the work to change schools’ current structures, policies, and instructional practices to align with the district initiative.</td>
</tr>
<tr>
<td>- Connect with the central office system through the project director.</td>
</tr>
</tbody>
</table>

| **Small Learning Community (SLC) Coordinators** |
| - Meet with district project director and a district SLC coach. |
| - Meet monthly to work on shared concerns and build ownership around the components of the initiative. |

<table>
<thead>
<tr>
<th>DISTRICT LEVEL</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Project Director, Smaller Learning Communities and Expanding Pathways</strong></td>
</tr>
<tr>
<td>- The district point person who takes primary responsibility for LBUSD’s participation in the Linked Learning Initiative.</td>
</tr>
</tbody>
</table>

| **Extended Implementation Team** |
| - Includes academic and career technical education curriculum leaders, work-based learning coordinator, and a research analyst. |
| - Works closely with the project director. |

| **Executive Team** |
| - Includes members of the superintendent’s cabinet. |
| - Works with the project director to maintain alignment with high priority district initiatives. |

<table>
<thead>
<tr>
<th>COMMUNITY LEVEL</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Expanding Pathways Implementation Council</strong></td>
</tr>
<tr>
<td>- Includes school curriculum leaders, postsecondary partners, Regional Occupation Programs and Career Technical Education leaders, principals, counselors, SLC coordinators, community leaders, executive district staff, and others.</td>
</tr>
<tr>
<td>- Meets monthly to facilitate the implementation and expansion of the Linked Learning approach.</td>
</tr>
</tbody>
</table>

Source: School Redesign Network

At each of these levels, the traditional organizational hierarchies are deemphasized in favor of a more inclusive model that offers greater autonomy and decision-making authority to different levels of the organization. For example, at the district level, the Project Director is designated as the “point person” for the initiative and is responsible for leading the Extended Implementation Team. Oversight is offered by the Executive Team, but day-to-day decision-making is distributed across the district office rather than confined to senior executives.

School leaders are actively involved in the initiative as well. By creating the Pathway Leadership Teams, the district has given school administrators, teachers, and counselors...
authority over the implementation of the initiative “on the ground.” While the framework and requirements are established by the district, school leaders are granted substantial autonomy, in conjunction with the SLC coordinators, in deciding the best ways to roll out the initiative in their school.

Finally, the model engages the broader community through the Expanding Pathways Implementation Council. This coalition meets monthly to communicate with key stakeholders, recommend strategic adjustments, and benefit from the expertise of community members. These partnerships with external stakeholders help enforce district accountability throughout implementation.

Distributed leadership structures serve both to facilitate reform and to sustain it. The model produces a sustainable infrastructure by involving multiple stakeholders, a structural feature that is often absent in reform efforts. At LBUSD, the use of distributed leadership in the Linked Learning initiative is one example of the more widespread “culture of consultation” adopted by LBUSD leaders. By regularly involving stakeholders in the step-by-step process of school improvement, district leaders communicate that the district is willing to be held accountable for its decisions while also developing a community-wide network that is crucial to sustain long-term reform.

In addition to improving communications with stakeholders, distributed leadership promotes regular communications across organizational hierarchies, which improves employees’ ability to identify what knowledge is critical for decision-making and offers them opportunities to share this knowledge. Furthermore, by granting greater autonomy and decision-making authority to lower levels of the organization, distributed leadership not only recognizes the value of knowledge-sharing, but provides opportunities for mutual learning through shared responsibility.

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71 Ibid., pp. 2-3.
http://www.mckinsey.com/client_service/social_sector/latest_thinking/worlds_most_improved_schools
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