Evolution of the Milwaukee Public Schools Portal

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INTRODUCTION

In discussing education portals and the Web, Richard N. Katz & Associates (2002) state that the Web is the ultimate frontier. Katz observed that this frontier is inherently messy and in need of guidance, "if not law and order." In this context, a portal is more than a gateway. It has the potential of functioning as a unifying principle around which educational institutions can leverage their resources, talents, and vision (Richard N. Katz & Associates, 2002). The Milwaukee Professional Support Portal (PSP) is a case study in how the development of an educational portal can serve as an agent for district-wide reform, while at the same time responding to specific needs for collaborative online venues, data warehousing, and personalized access to online information. This article examines the conditions that motivated the creation of the portal, traces how human dynamics contributed to the portal's development, and follows the interaction between portal infrastructure and culture change. It concludes with a discussion of district adoption and scaling.

BACKGROUND

The Milwaukee Public School District (MPS) is one of the largest and poorest districts in the country. The current enrollment is reported to be 97,359, with 72% being economically disadvantaged (schoolmatters.com, accessed 12/15/05). Eighty-two percent of the school population is non-white and a sizable portion of the population has a disability or limited English proficiency (Eddy-Spicer, Dede, & Nelson, 2004).

Milwaukee has been faced with low student achievement, high dropout rates, low graduation rates, and a high turnover of new teachers. The 2003 Enrollment Study indicated that almost 10% of the students in grades 5 or higher were academically at risk according to state standards. In addition, the district reported a graduation rate for 2003 of just 61% (Redovich, 2004).

The problem of low student achievement is exacerbated by the fact that teachers are leaving the district at ever increasing rates. In 2001-2002, teachers were leaving the district at a rate of 37% a year. Notably, the highest teacher attrition is also at schools with the lowest academic achievement. It was clear that student achievement in Milwaukee could not improve unless the district did something to retain its teachers.

The poor retention rate among new teachers coupled with the fact that more and more veteran teachers were approaching retirement age meant that the problem of finding, inducting, and retaining new teachers was an ever-growing challenge. Further, as the number of new hires grew traditional face-to-face professional support programs were no longer practical, sustainable, or scalable.

In addition to these specific challenges, the district was also facing the pressures of preparing to meet the new goals for 21st century education. In order to prepare students for this "new world," teachers also needed to become competent in using 21st century skills and in thinking like "accomplished novices" as opposed to "answered filled experts" (Bransford et al., 2000). Consequently, teachers needed a flexible mechanism through which to receive "just-in-time" information, access online administrative tools, participate in professional development, and collaborate with their peers.

THE MPS PROCESS

To address this critical situation, Milwaukee embarked on a strategic initiative to create a Web-based portal that was effective, *scalable*, and *sustainable*. The goal was to provide professional development that would increase teacher retention and productivity and thereby improve student achievement. In 2001, a Portal Project Team (PPT) was formed to spearhead the initiative. At that time, the team was comprised of two technology directors and one teacher. By 2005, the team had grown to include three teachers, one principal, and one independent consultant.

Despite its clear mandate, the portal experienced a difficult start. Shortly after the initiative began, Milwaukee encountered a change in leadership at the district level and with it a shift in priorities. The spotlight that placed the portal initiative at the center of district attention all but faded away. Since funds were scarce, support limited, and the concept new, the district elected to use a local company to build the portal from the ground up. This choice led to a major set back when it became clear that the project was beyond the expertise and abilities of the agency.

Although this discovery cost the project a year, the time was not completely lost. The district leveraged existing partnerships with business, national experts, local institutions of higher education, and parents to gain advice as to how best to address the problems at hand, as well as to gather suggestions for the development of the portal. They also forged new alliances with other groups, like the Harvard Graduate School of Education. With Joyce Foundation funding, academic experts using IP-based videoconferencing built collaborations across distance that facilitated new processes of design across institutional and geographical barriers (see Eddy-Spicer et al., 2004). With the additional support, the PPT was able to run focus groups to determine teacher needs, conduct surveys to gather content ideas, lead discussion groups to identify teaching challenges, and pilot test segments of the alpha version of the portal to gather feedback on content and user interface. The PPT provided informational sessions throughout the district to explain the concept of a portal and to field questions and gather additional ideas for content development.

Upon selecting a new vendor, *Plumtree*, the portal obtained an infrastructure that could support an expanded vision: that of a school district functioning as a *learning community*. As Bielaczyc and Collins point out, "The defining quality of a learning community is that there is a culture of learning, in which everyone is involved in a collective effort of understanding" (1999, p. 2). In this spirit, the portal supported a significant paradigm shift within professional development. Teachers were not only being offered prescriptive courses, but an open opportunity to collaboratively construct their own definition of quality teaching and learning.

In turn, student achievement was seen to involve the entire community, not just teacher/student interactions. Therefore the portal's development required extensive input from numerous stakeholders. In addition as a result of working within the various partnerships, MPS realized that the portal needed to function as a unifying force in the district where people could find not only the materials and information they needed but where they could exchange ideas and build knowledge and understanding.

To that end, the district leveraged a highly successful and well established face-to-face teacher mentoring program. This program was identified as a foundation for the creation of an online cadre system. By eliciting the help of the existing face-to-face mentors, literacy and math coaches, the PPT started to train and build a team of online facilitators. These facilitators then served as the core group around which cadres were assembled.

Milwaukee expended title IID funds and state competitive grants to provide new teachers engaged in the mentoring program with laptops and the training to use them. In exchange, these teachers agreed to provide feedback for formative evaluations of the portal, engage in online professional development activities provided through the portal,

and participate in cadres. The mentoring program became a virtual community that interacted around and through the portal.

Cadre participation meant that teachers met online to engage in inquiry about pedagogy and best practice, discuss content issues, review strategies for classroom management, and develop ways of dealing with complex problems by drawing on different expertise within the community. The cadres were to seek information from the portal and to make suggestions for additional content to the developers. Over time, the cadre system swelled from its original assemblage of 150 teachers to over 41 cadre groups totaling 366 members with more than 82 facilitators. It became an important network for informing decisions about content and design issues for the portal, as well as advancing the goals of building a learning community in Milwaukee and addressing the needs of new teachers.

Although the cadre system was growing nicely, portal development lagged. It became clear that in order to develop a useful definition of learning and teaching, teachers needed a strong understanding of their core subject areas as well as appropriate pedagogy (see e.g., Wilson, Shulman, & Richert, 1987, p. 105). The challenge became delegating the responsibilities for finding, organizing, developing, and posting portal content to address these issues. Again the portal team turned to leveraging existing resources.

THE MPS PORTAL

The team selected pre-existing technology initiatives that could be easily adapted to the *Plumtree* (www.plumtree.com) portal environment. The portal itself was structured around easy-to-use customized work spaces, called portlets. These had a frame-like appearance and could be nested and linked according to end-user needs. Portlets accommodated documents, links, asynchronous discussions, bulletin boards, calendars, and so forth, and could be placed almost anywhere throughout the portal. They were made to function on an individual level, a group level, or a community level. Specific resources were linked to various portlets and collaborative tools were readily available. The Knowledge Directory, a unique section of the portal, provided an interconnected resource base of content and materials, including professional development opportunities. This portal structure easily accommodated the integration of existing technology and materials.

Several applications were integrated into and mediated through the MPS Professional Support Portal (http://mps-portal.milwaukee.k12.wi.us/portal/server.pt). The Curriculum Development Assistant (CDA), a pre-existing online tool, enabled teachers to create lesson plans that would go through a peer-review process before being posted for use by others. TappedIn®, an online professional multi-user

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