

Using Curriculum Distance Learning Tools to Implement a Districtwide Business IT Project

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INTRODUCTION

Broward's Innovative Tool for Education (BRITE) is the Enterprise Resource Planning (ERP) Department's IT project designed to bring one business system to Broward County Public Schools (BCPS). The 3-year initiative that replaces Broward's existing, independent business systems with one integrated system, replaces some legacy systems that are

more than three decades old. The BRITE project offers easy access to operational and educational information, including single point access and real-time information reporting through the use of SAP 6.0.

The ERP Department works to continually improve the business processes of BCPS. As the assistant director of the ERP Department, my responsibilities are to oversee the organizational change management team and the training and support center staff for the BRITE implementation. The BRITE project updated the school district's current SAP 4.6 Human Resources and Payroll modules to SAP 6.0, while implementing a brand new, fully integrated financial system for budget, materials management, and purchasing. SAP 6.0 delivers a comprehensive set of integrated, cross-functional business processes. With SAP 6.0 our school district benefited through:

- improvement in the efficiency of district operations and in our ability to manage them through an integrated finance and procurement, human resources, and payroll system;
- elimination or reduction in paperwork and redundant manual processes;
- increased accountability and transparency to the public in the use of public funds;



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- providing better data for decision makers and stakeholders at all levels;
- development of an integrated Web-based professional development system for both internal employees and external participants; and
- improved service delivery to schools to assist in obtainment of our district's strategic goal of increased student achievement.

My challenge was to determine how to best utilize Web 2.0 and distance learning technologies to manage organizational change while implementing a structured approach to training and transitioning individuals, teams, and the school organization from its current state to the desired future state. Web 2.0 is a living term describing changing trends in the use of World Wide Web technology and Web design that aims to enhance creativity, information sharing, collaboration, and functionality of the Web. Web 2.0 concepts have led to the development and evolution of Web-based communities and hosted services, such as social networking sites, video sharing sites, wikis, and blogs. Web 2.0 has numerous definitions. Basically, the term encompasses the idea of the proliferation of interconnectivity and interactivity of Web-delivered content. Many regard Web 2.0 as business embracing the Web as a platform and using its strengths. Web 2.0 Web sites allow users to do more than just retrieve information.

Besides utilizing SAP 6.0 as the proven foundation for business excellence and innovation, my team looked to proven Web 2.0 and distance learning technologies to assist in the training and support of its end users. Broward County Public Schools has approximately 40,000 employees, all of whom needed to learn how to use the new SAP 6.0 system in some capacity. Training the entire staff on the new SAP system could have been a tremendous stumbling block to the project and its timetable for completion. Success for implementation

hinged on identifying and successfully using twenty-first century technology tools in this process. Using robust technologies such as Remedy Incident Management System, Blackboard Academic Suite, Elluminate Live!, Trainer Blogs, Camtasia Studio screen recorder and presentation software, an interactive project Web site using Web application programming interfaces, and LANDesk software providing system management, security management, and process management, the BRITE project was able to deliver quality and speedy customer service.

INTERACTIVE PROJECT WEB SITE

The BRITE interactive Web site provides standards-based Web resources designed to enhance online learning opportunities for our school district end users. Our interactive Web site was designed to engage participants by providing information and resources along with practice, simulations, and other learning and follow-up activities. These resources include highly interactive, content-rich simulations along with the traditional drill and practice. The SAP 6.0 community interactive Web site is supported by the BRITE project to enable advanced distributed learning and to gain feedback from end users and business process owners. The intention is to bring together both resources (simulations, quick reference guides, tutorials, etc.) and people with similar interests (budget-keepers, requisitioners, payroll contact, human resource actions processor, inservice facilitators, ESS resident experts, etc.) to establish a vibrant community where all work together to share and improve the learning of new business processes. Some of these features include Easy buttons, Ask BRITE Questions, virtual simulations, online training library, work instructions, BRITE LITES and ESS resident experts, BRITE pay calculators, remedy incident management system, Blackboard Academic Suite, Elluminate Live!, BRITE train-

ing blog, Camtasia, LANDesk, and Communicating Across Broward (CAB) Conferences.

EASY BUTTONS

Web sites are designed to offer information and assistance to those who visit the site. The BRITE Web site makes accessing vital information “easy” through its multiple “easy” buttons housed on our Web site’s home page. Easy buttons help end users log into the new SAP 6.0 through the BRITE Portal, as well as guide end users to the revised Business Practice Bulletins identifying the changes in district procedures and processes resulting from the new implementation of SAP 6.0. Visit our homepage at <http://www.broward.k12.fl.us/erp>

ASK BRITE QUESTIONS

This feature is an online database enabling end users to post general and specific questions on any of the implemented modules (budget, finance, payroll, human resources) along with their contact information. Behind the scene (called Inside ERP), the project team reviews these questions daily and provides answers to them directly onto the database. These, in turn, automatically generate the FAQs that are housed on the Web site under the appropriate project module. Having questions date-stamped assists end users in identifying more current questions and answers. View our database at <http://www.broward.k12.fl.us/erp/brite/contactus/comments.asp>

VIRTUAL SIMULATIONS

Housed on our BRITE Web site are virtual simulations created to imitate many of the system transactions that end users process while doing their daily job functions. The simulations are so close to actually being in the SAP 6.0 system, it is difficult for end users to tell the difference. By fol-

lowing step-by-step guided instructions, end users get a chance to practice within a training environment that has the same look and feel as the real system. The simulations are created by a product called RWD Info Pak. Using RWD Info Pak you can create procedural documentation automatically. A content developer simply runs a business task in the application software that is being documented. RWD Info Pak captures each step, and then converts the process into professionally formatted documentation. Documents can then be printed and used for training and reference purposes, or published to our Web-based online help system through which users can quickly access the most current support documentation. View our simulations at: <http://www.broward.k12.fl.us/erpdb/brite/onlinelibrary/sims/index.html>

ONLINE TRAINING LIBRARY

All face-to-face training and Elluminate Live! sessions offer training manuals for end users to reference after training has completed and they are back at their work locations. However, with an implementation of this magnitude, system changes, new configuration, and the application of additional transactions require constant updating of training material. Our online training library enables us to offer the most current up-to-date material for all BRITE training courses. These courses are stored as either .pdf files or PowerPoint presentations. View our online training library at: <http://www.broward.k12.fl.us/erpdb/brite/onlinelibrary/>

WORK INSTRUCTIONS

The BRITE work instructions are located on our interactive Web site and are designed to help end users with work-related tasks right at their own desktops. The detailed work instructions can be accessed by either Process (finance, budget, purchasing), Role (budgetkeeper, cafeteria manager, grant monitor, etc.), or

Transaction (a specific transaction that is conducted inside SAP 6.0). Work instructions can be displayed as either a cue card without screen shots, or as work instructions in .html or .pdf formats that display accompanying screen shots. These work instructions constitute a complete online library of just-in-time reference guides for all of the finance modules implemented in SAP 6.0. View our work instructions at: <http://www.broward.k12.fl.us/erp/infopak/nav/>

BRITE LITES AND ESS RESIDENT EXPERTS

How does the sixth-largest school district in the nation build capacity and expertise throughout the organization after the implementation of an IT project of this magnitude? A common factor in successful large scale software implementations is providing a combination of adequate training and support to end users. All of the SAP 6.0 end users received quality training, but they also needed a solid support system. Part of the support system was our BRITE Support Center, but the project also needed to provide “go to” people in the field in addition to the support center. These “go to” individuals were called BRITE LITES (Leaders in Training, Education, and Support), and were selected for each 28 school zones and major department areas. In addition to performing their normal job and providing 12 months of support to other end users in their zone or department, BRITE LITES participated in pilot training and testing.

The BRITE team engaged approximately 275 BRITE LITES and through training and support created a learning community that uses the interactive Web site as a tool to communicate with their cadre of trained professionals. An entire page has been dedicated to informing the school district about the BRITE LITES program, a listing of the current BRITE LITES by zone, and monthly BRITE LITES

updates. View our BRITE LITES Web page at <http://www.broward.k12.fl.us/erp/brite/lights/members.htm>

BRITE PAY CALCULATORS

While SAP 6.0 enabled the implementation of a fully integrated financial system, it also required the school district to change its practice of paying employees in advance of actual days worked. By implementing a “Perpetual Calendar” that crosses over fiscal years without interruption and is not tied to the school calendar, pay periods consist of 14 calendar days and are always paid on the Friday after the pay period ends. This is a significant advantage for district employees because the pay schedule will remain constant—even during holiday breaks, and is predictable for years to come. By combining the Perpetual Calendar with an “All Days Paid” payroll concept, the district is establishing regular pay periods with consistent pay dates every other Friday. This system benefits all employees by creating a standard payroll system across the district which pays employees for the work they have already performed, and not in advance, as was the previous practice.

We were now faced with the task of educating and enabling employees to determine what their first three paychecks in the new financial system would be under the Perpetual Calendar and All Days Paid concepts. Again we used our interactive Web site to create a Web application programming interface (API), a pay calculator; where individuals selected their yearly calendar, and by placing their annual salary into the calculator, determined their gross pay for those three pay periods. The payroll calculator provided comfort, relief, and acceptance of a new payroll system within the knowledge that users could determine whether the system paid them correctly. See the payroll calculator screen in Figure 1.



Figure 1. BRITE Pay Calculator.

REMEDY INCIDENT MANAGEMENT SYSTEM

Remedy Incident Management System is an escalation tool that helps to monitor, track, and react to high priority items resulting from project implementation. Its Web-based functionality enables multiple personnel to work on incident tickets simultaneously through task assignments and sign-offs. Multiple users can be situated anytime, anywhere there is an Internet connection, and immediately become part of the resolution team. Implementing this incident management system is an Information Technology Infrastructure Library (ITIL) best practice for resolving end user requests for service and restoring normal service operation as quickly as possible in the event of an interruption. Using this tool, the BRITE project was able to ensure the best use of resources in support of the success of end users and the school district, to develop and maintain meaningful records of all incidents, and to devise

and apply a consistent approach to all reported incidents. Incident management included incident detection and recording, classification of incidents and initial support, investigation and diagnosis, resolution and recovery, incident closure, and incident ownership, monitoring, tracking, and communication. By utilizing this incident resolution technology tool, BCPS was able to focus on the end user and collect rich data for use in developing processes that preempt interruptions to service or process errors that result in calls for assistance.

BLACKBOARD ACADEMIC SUITE

The BRITE project utilized the district-wide licensing of the Blackboard Academic Suite to deliver online courses for professional development opportunities, training staff on SAP 6.0 functionalities relating to the roles of budgetkeeper, requisitioner, payroll contact, human resource action processor, and employee self service (ESS).

All 40,000 BCPS employees needed to learn how to access and use ESS to update their personal (including banking information) and payment records. With gasoline prices still uncomfortably high, and with school and department-based personnel increasingly unable to leave their work locations, our school district professionals were looking to distance learning as the means to access the information they needed to continue to conduct their business.

Blackboard Academic Suite was the platform used for the projects eLearning courses. The eLearning approach facilitated end users in becoming familiar with the pre-requisites necessary prior to their face-to-face training. It enabled everyone to be on an even playing field when they arrived at the training lab. With its management system, the district was able to account for all individuals who were required to participate in preparatory training. It enabled the BRITE project to increase districtwide adoption of the SAP 6.0 “technology” implementation by using a “technology” tool in training, drive student engagement by offering training at the convenience of the end user, securely share and collaborate around content across the school district, and meet diverse needs and various learning styles of our staff. Visit our Broward County Blackboard Virtual Community at: <http://broward.blackboard.com/webapps/portal/frameset.jsp>

ELUMINATE LIVE!

Elluminate Live! is the electronic tool we used to reach the large volume of individuals needing just-in-time training. The software application puts the instructor in one place, the end users elsewhere—wherever it is convenient—and then the training begins. The software is compatible with all platforms, and the technology enables sessions to be recorded for future viewing. With limited training labs and trainers, Elluminate enabled the district to:

- add live interaction to distance education, where trainers can be seen and heard while demonstrating lessons during a real-time online class;
- extend the boundaries of the physical training classroom;
- engage more students in more ways, training hundreds of end users simultaneously;
- promote active learning by enabling end users to take over the desktop to demonstrate their problems, use the chat and audio features to participate in discussions, and watch instruction conducted on one computer while doing their own work on another computer
- create reusable learning objects through its recording functionality;
- foster social networking with participants;
- connect individuals in a blended environment, synchronously with each other and the trainer while being at any location convenient to them; and
- enhance collaboration with trainers, as trainers watched other trainers in the delivery of instruction.

In a concerted effort to identify and resolve end user issues resulting from the implementation of SAP 6.0, the BRITE Organizational Change Management Team utilized the incidents recorded through the Remedy Incident Management system, with questions posted on the Training Blog, to deliver just-in-time Elluminate sessions offering solutions to these specifically reported concerns. Elluminate sessions enabled the project team to deliver training to literally hundreds of people at one time, demonstrating solutions to frequently asked questions, in a manner that could be archived and reviewed over and over again. Please visit our recorded Elluminate sessions at:

- <http://www.broward.k12.fl.us/erp/brite/HR/ess.html>

- <http://www.broward.k12.fl.us/erp/brite/HR/mss.html>
- <http://www.broward.k12.fl.us/erp/brite/payroll/>

BRITE TRAINING BLOG

Bloggging is sweeping the Internet. It is estimated that there are at least 8 million blogs in the United States alone, 32.5 million worldwide. Most of those blogs are individual diaries, but many businesses have started their own blogs. The BRITE project is just one of those businesses, instituting its BRITE Training Blog!

A blog (a contraction for Web Log) is basically a program that once installed on your Web site, enables you to simply type into a form and, when you press submit, it is automatically and immediately uploaded to the Web. It is a quick and easy way to publish our content to the Web. Although the Web has always provided a platform for expression, blogs have removed many of the technical and financial barriers that existed previously. Blogs enable anyone, both technical experts and casual browsers, to write Web pages and publish them for other Internet users to see.

Bloggging is an easy-to-use yet structured communications medium, not only for personal use but also as a business development tool. In many ways, blogs are the embodiment of the Web 2.0 concept, because they are representative of the evolution from the technological focus of the Web 1.0; into a business medium, where the technology is a means of delivery. Our Training Blog provided the business services, independence, and collective intelligence that our training staff needed, in a lightweight interface that is flexible enough for our business model.

Use of our Training Blog delivered significant benefits to the training and support team throughout the duration of the BRITE project:

- Our blog made it incredibly easy to publish to the Web by simply typing and pressing submit.
- Our blog was a very inexpensive way to publish to the Web. Once our blog was established; anyone, even the most technologically challenged, was able to create blog entries. There was no longer the need to pay an outside contractor an hourly rate or ask our IT guy to create a Web page for us.
- Bloggging was a fast way to publish, we simply typed and hit submit.
- Bloggging was immediate. There was no more waiting for our webmaster to get around to making changes to our site. We were literally able to react on a moment-by-moment basis with our blog, putting our point of view on a crisis or other issue for the trainers to view immediately.
- Our blog was used for a wide variety of content. We were not confined to writing about one thing. The possibilities were endless. Our Training Blog enhanced collaboration and information exchange within the organization.
- Our Training Blog was great for communicating within our organization (our blog was not open to be public). This, plus its ease of use, made it a great source for internal communications, project tracking, issue resolution, and so on.

Like e-mail, blogs are now moving into mainstream business services, and it is important to establish good practice for their planning, deployment, and management, because business tools deliver increased productivity only if you implement them effectively. Our blog offered an immediate, impromptu, and simple means of expressing project ideas that a trainer could publish for others to read. Unlike instant messaging (IM), these ideas have a permanent location, which is accessible by any number of people, all of whom can respond with their own ideas. These post-

ings were not as intrusive as using either IM or e-mail messages, because our trainers were able to pick the time that best suited them to look at our blog. The BRITE Training Blog also negated the necessity for sending bulk e-mail. Our blog displays content in chronological order, so users were able to review the thread of a discussion with a greater degree of ease and certainty than is available with e-mail.

All project managers know that the key to success is communication. Often, project communication is independent of other project documentation. The use of our Training Blog centralized all documentation and provided a structured repository for current discussion; and an archive, when project elements finished. Our Training blog provided a shared space for public project notices and notes, a discussion forum for project planning, and an ongoing resource for the life of the project, which captured the decision-making processes throughout the project life cycle. Used as an ongoing project notice and discussion board, our Training Blog provided an invaluable tool for project and training management. Visit our BRITE Training Blog at <http://briteupdates.blogspot.com/>

CAMTASIA

Camtasia Studio allowed the training and support team to capture SAP processes conducted on a computer screen, and then shares them as videos to anyone, anywhere. Camtasia Studio was used to develop everything from training videos to PowerPoint presentations and made them look better and accessible to more people. We were able to record whatever we wanted and then we edited and enhanced it to clarify and amplify our message. We were then able to place our creation anywhere, on our Web site or blog.

Camtasia Studio captured videos of anything on our screen, whether demonstrating a form or a process within the system, with no compromise between quality

and file size. Its compression technology gave us perfect-quality recordings and compact file sizes. Even when a presentation was recorded, allowing viewers to see the speaker in a video screen, helped create a human connection. We were able to aim a webcam at the presenter and Camtasia Studio captured and synchronized that video with the screen recording.

Our next steps in using the Camtasia Studio application is to align it with the Archos 604 WIFI handheld video player to upload all training material, Elluminate sessions, and video tutorials for anywhere, anytime access to important SAP 6.0 content. View some featured videos at:

- http://web.broward.k12.fl.us/erp/erptv/video/Dont%20Guess_Reset%20/Dont%20Guess_Reset%20.html
- <http://web.broward.k12.fl.us/erp/erptv/video/news/Settings%20Video%20/Setting%20Check%20for%20Using%20SAP2.html>
- <http://web.broward.k12.fl.us/erp/erptv/video/website%20tour%20with%20betty%20brite%20flash/Website%20tour%20with%20Betty%20BRITEflash.html>

LANDESK

LANDesk delivers cost-effective systems, security, and process management solutions that help IT teams automate and simplify the management of desktops, servers, and mobile devices. Our training and support center staff utilized the software package to offer problem resolutions for end users participating in the SAP 6.0 implementation. Having the ability to take over the desktops of our end users, the staff immediately identified errors in process and was able to correct those errors through demonstration. LANDesk has increased our productivity, decreased our time of call closure, minimized our down time, and has saved us significant time and money. Our support center personnel are now able to provide faster and more efficient customer

service, which has freed them to concentrate on more in-depth and time consuming projects. LANDesk has changed the way we work, allowing our customer service analysts to be better partners with our end users, prove to them the value of the software, and be more proactive in creating and easily deploying solutions that help the BRITE project succeed. The remote control feature has turned out to be not only a practical way of fixing problems, but also a very efficient and cost-effective e-learning tool. There are so many things we do with LANDesk that it has become the single most useful tool in our arsenal. This online business tool helped us resolve support and service issues more quickly than we had previously been able to do, while empowering end users to actively participate in solving support issues.

COMMUNICATING ACROSS BROWARD (CAB) CONFERENCES (E-MAIL)

The CAB e-mail System is built on FirstClass, a leading communication platform for education. With its unique architecture, accessibility, scalability, reliability and security features, FirstClass provides a stable and more efficient solution for the needs of Broward County. The CAB System provides users with the ability to effectively communicate and share information anytime, anyplace, through e-mail, conferencing, calendars, and instant messaging.

The BRITE Organizational Change Management team utilized our district-wide e-mail system to organize conferences within the system. End users would be placed into the appropriate conferences to receive the news and updates specific to their role in the SAP 6.0 system. These conferences became a repository of critical information needed for end users to suc-

cessfully complete their job functions in the new SAP 6.0 system. New e-mails are red-flagged so that end users know what was currently residing for their review.

LESSONS LEARNED AND MOVING FORWARD

Web 1.0 was the movement that took place during the beginning of the Internet. At that point, the primary use of the Internet was to take print media and post it online. Web 1.0 saw books, news, music and everything else being moved into a digital format. After all these data were posted online, the online community began to look for ways to share it all. Here entered Web 2.0, which aims to enhance creativity, information sharing, collaboration and functionality of the Web. One of the most adopted solutions involves the idea of social networking to create a community.

Using our Web site and other distance learning technologies, the Organizational Change Management Team and the Training and Support Center staff hope to further develop this sense of community for our SAP 6.0 district end users. In addition, we promote each community member to be responsible for contributing information to the rest of the users. Some profess that where Web 1.0 was "read-only," and Web 2.0 is "read-write," Web 3.0 will be "read-write-execute." With data online thanks to Web 1.0, and with sites able to share data through social networks (Web 2.0), the next obvious direction is to do something with this massive amount of data we have available. A common way of viewing the potential for Web 3.0 is the use of the Internet as a platform where we will see the data being integrated and applying it into innovative ways that were never possible before.