

Analysis

Technological Change

Colleen Boff and Catherine Cardwell

Libraries

Stephen F. Austin State University (SFA)
University of Alabama at Birmingham (UAB)
University of Virginia (UVA)
Vanderbilt University (Vanderbilt)

Introduction

The libraries at SFA and UVA have reputations for being early and innovative adopters of technologies. While SFA holds this reputation in its community, UVA is recognized nationally for its accomplishments in digital humanities projects. SFA is a small public institution with a Carnegie classification of Basic. Its technological story involved the changes made through its library's Center for Digital Scholarship to reboot its institutional repository, whereas the technological change at UVA, an R1, involved a deep examination of workflows across departments to manage digital humanities projects. The remaining two institutions in this category share the R1 Carnegie classification, but the change story at UAB is one of merging websites at two of its libraries; the change at Vanderbilt is a story of how the libraries re-engineered their internal communication system. Change stories in this category involved multiple libraries or multiple departments and ranged from a technology migration at UAB and Vanderbilt to a redesign of workflows at SFA and UVA. The change at three of the four institutions impacted services designed for external audiences, whereas the change at Vanderbilt was specifically targeted at staff.

I. Warm-up Phase

STAGE 1: ESTABLISHING A SENSE OF URGENCY

SFA was an early but quiet adopter of Digital Commons, an institutional repository (IR) platform. It did so because IRs and open access were emerging trends and, as good stewards, the library staff knew the importance of serving this role for their campus even if the campus did not quite know the value. However, the adoption and implementation of this tool was added to the responsibilities of one librarian and was organizationally not a high priority as it became overshadowed by a website redesign.

After realizing the exorbitant cost per item housed in the IR, the librarians who oversaw the project made a case for more robust support from library administration and librarians and more participation from campus stakeholders in determining the future of the IR. At UAB, a newly hired library dean was given the mandate in 2014 to centralize library operations into one library system. Merging the library websites of two libraries was the last step in this centralization process. The two independently operated websites confused patrons; they were costly for the library to run because it was paying for two instances of the catalog; and they used outdated technologies. The impetus for change at UVA was sparked by staff frustrated with inconsistent practices related to their digital projects. They lacked centralized and cohesive practices across units, which left them with backlogs of analog collections in need of digitization. The backdrop for change at Vanderbilt was spurred by staff frustration and complaints about communication. It took a turnover in the top leadership position for communication among staff to truly become a priority. The new university librarian appointed her deputy university librarian to head up an initial task force of seven members, all of whom had at least ten years of experience. They were given three months to gather data and to make recommendations. They used data from Google Analytics and gathered staff feedback through a survey. Their work resulted in four specific recommendations, which the university librarian assigned to an implementation team.

STAGE 2: CREATING THE GUIDING COALITION

In order to reboot SFA's IR, the associate director was empowered to create the Center for Digital Scholarship by pulling together four staff members from other areas of the library. Together, they actively promoted the capabilities of the IR to individuals and groups of faculty across campus. Once the IR was more populated with a variety of materials, they were able to continue to raise interest and awareness among campus stakeholders. The team at UAB took a slightly different approach to the website merger when the library administration outsourced the work related to the website revision to the UAB campus Digital Media Team. The team conducted a SWOT analysis to gain feedback about the website, and then the library dean formed a website committee with representation from employee groups, departments, and libraries to itemize and categorize all services offered by the libraries. The committee was given a simple charge to merge websites and an ambitious deadline of less than one year to do so. While UAB's goal was to have a small, agile committee in order to facilitate quick decision-making, UVA did the opposite by creating the Digital Production Workflow Team, a group that included many members with knowledge of workflows and appropriate expertise. This was done so that the team had the full picture of all of the disparate processes within the organization. As at SFA, the leadership at Vanderbilt pulled together a small guiding coalition of three to explore and implement a new communication system. The team included two members from the initial task force and a new member from the library's IT unit. These three individuals were hand-picked because they were trusted by the staff at large, worked well together, and had a reputation of creativity and follow-through.

STAGE 3: DEVELOPING A VISION AND STRATEGY

The newly formed unit at SFA unified their efforts as a team by revisiting and revising the mission statement for the IR, which in turn served as their shared vision as a department. They broadened the vision from the IR serving as a depository of print formats to it serving as an archive and showcase of all types of scholarship. The development of a shared vision and strategy at UAB was a bit more complicated and included a review by the committee of the libraries' strategic plan, past usability studies, prior knowledge of the UAB Digital Media team, the results of the SWOT analysis, and an informal review of websites of peer and aspirational institutions. In order to address common complaints from staff and users, the web committee surveyed each unit to determine which of its services it wanted prominently featured on the new website. The committee used this collective feedback to create the structure for the unified site map. As at UAB, the team at UVA looked outward to see what other institutions were doing in order for their vision to coalesce. Through this process, they were able to analyze the strengths and weaknesses of these programs to map out stages in their workflow. They subsequently began to devote meetings to each stage. The initial committee at Vanderbilt identified concrete recommendations to the implementation team, which included a participatory mechanism for sharing news, a revitalized intranet, and a shared calendar. The Vanderbilt team spent significant time at this stage testing a long list of technological tools in the hopes of finding an all-in-one tool, which proved elusive. The strategy they settled on was to go with WordPress, the platform already being used to report news in the organization. However, they devoted a great deal of time customizing it with themes and plug-ins to meet the expectations of the staff.

STAGE 4: COMMUNICATING THE CHANGE VISION

At SFA, the Center for Digital Scholarship team focused on creating a unified presentation of the IR. They stressed that their success hinged on their ability to leverage the relationships each of them had with departmental faculty. This resulted in the IR growing from 279 items in 2012/2013 to more than 6,000 items by 2017/2018. The web team at UAB did not have the benefit of being fully in control of their webpage redesign because they were working with the university's web design team. After the initial visioning process, there was not much communication with library staff or the wider community of users while the campus team was busily working on the landing pages. However, once the pages were ready, feedback forms were placed on the website so users could provide feedback. While the communication at UAB was admittedly spotty, the strategies at UVA were robust, layered, and somewhat unique. To facilitate productive discussion within the group, members were instructed to arrive at meetings ready to talk about ideas to improve the future environment rather than focusing on failures. They decided to label projects that began prior to the processes as "legacy projects" so that members could focus on future work and not get caught up in changing processes related to existing projects. They used Atlassian Confluence, a collaboration software program, to organize their work and make it available to all. They ultimately produced a detailed report with their recommendations and gave it to their library administration and subsequently used this approved report to present to the staff. The implementation at Vanderbilt pursued typical routes of communication, but the strength of the team's communication efforts

was attributed to their ability to make strategic and intentional communication decisions. They made sure to circle back to the initial recommending group to not only solicit their help with testing but to gain some buy-in and goodwill among the staff. In addition to making presentations at large staff gatherings, this team worked hard to communicate individually as a way to get staff to contribute to the new system.

II. Introducing New Practices Phase

STAGE 5: EMPOWERING BROAD-BASED ACTION

A crucial turning point for the Center for Digital Scholarship team at SFA came when they stopped asking faculty to simply deposit their articles and started involving faculty in shaping the scope of the IR. Though this proved to be a fresh start to the reboot of the IR at SFA, the web committee at UAB had the misfortune of their change initiative coming at the end of the centralization of their library system. Though the work got done a bit later than scheduled, they were overly ambitious with their timeline and bundled too many technological changes, including the simultaneous launch of a discovery layer with their web redesign. Other barriers to staff support of the redesign included mixed feelings among staff about outsourcing control of the library website to the campus team. UVA reported communication, especially between departments, as a problem it was trying to solve. Because workflows crossed over departmental lines, projects would get lost in the handoff from one department to another. Funding was sporadic, as was decision-making. As the authors state, “It was not one person’s job to make sure digital collections moved from ingest to access.” Lastly, the implementation team at Vanderbilt anticipated barriers to staff buy-in and designed the new communication system to be user-friendly and easy to use. They chose to have faith in their colleagues to make reasonable and professional posts, a belief that has proven to be true.

STAGE 6: GENERATING SHORT-TERM WINS

The very metric that served to create a sense of urgency to reboot the IR at SFA also served as the evidence of a short-term win. The cost to host documents in the IR went from \$100 a document at the launch of the IR to \$5 a document after the hard work of the reboot team. In addition to the growth in the number of items added to the IR each year, other short-term wins included the number of new journals published and the percentage of overall faculty participation. Though it was cause for concern among some UAB staff, the web team saw the decision by the library administration to outsource the creation and maintenance of the website as the first short-term win. The second short-term win was the creation of a new domain address for the website that made the task of centralizing not only the library website but UAB’s Springshare products much more seamless. Short-term wins by the UVA team were practical and included the decision to use a project management software program to help them track digital projects. They spent time to establish standardized descriptive workflows, including the investigation of a metadata management system. The Vanderbilt implementation team was encouraged by staff requests for additional improvements to their new communication system, which demonstrated that staff were engaged and actively reading and contributing communications.

STAGE 7: CONSOLIDATING GAINS AND PRODUCING MORE CHANGE

The cycle of change continued at each of these institutions. At SFA, the Center for Digital Scholarship added more and more examples of creative projects hosted in the IR. These were featured during the team's presentations, which sparked even more ideas among faculty about ways to utilize the IR. The website committee at UAB continued their change momentum and worked on various library-related migrations and mergers while the campus Digital Media team was building the website over the summer. These included merging the libraries' two catalogs, creating a unified A–Z site for shared databases, and working on a single instance of UAB's Springshare products. The team at UVA tested their framework with two small digital projects that helped them refine their recommendations in their final report. They recommended the establishment of a permanent Digital Collections Team and a director position to lead the group. The new intranet and internal communication blog that the implementation put in place at Vanderbilt is actively being used as more staff are feeling comfortable posting. In fact, the team is getting requests from staff to replicate instances of this enhanced blog to meet additional needs of various working groups in the library.

III. Grounding Phase

STAGE 8: ANCHORING NEW APPROACHES IN THE CULTURE

To truly anchor their IR in the campus culture, the Center for Digital Scholarship team at SFA set their sights on solving a long-standing campus-wide problem by creating a centralized electronic platform to host theses and dissertations. This served only to heighten the value of their IR on their campus. The strategy for solidifying change at UAB and at UVA involved the creation of permanent working groups to continue the work at these two institutions. A permanent website committee was sanctioned at UAB, and the library administration at UVA agreed with the temporary team's recommendation to establish a permanent Digital Collections Team with a dedicated position to lead the group. This signaled to staff that library administration recognized the ongoing work necessary to keep these functions healthy. Finally, staff at Vanderbilt were actively using their new communication platform, which resulted in a more informed staff. In fact, some staff started to see other ways to use the enhanced communication for other work purposes.

Analysis and Conclusions

The technological enhancements made at SFU and UVA are anchored and continue. The work at Vanderbilt has mostly concluded. In spite of all of the hard work by the Center for Digital Scholarship staff, the future of the IR at SFA is tenuous due to four vacated positions out of five that remain unfilled and new library leadership. This suggests that future-facing initiatives such as this that fall outside of core and traditional library roles may become unstable if the shared vision in the organization is disrupted. Not only is this team of one faced with doing less outreach and doing the work of these vacated positions, they now have to strategize about how to make this a library priority once again.

TIPS FOR TECHNOLOGICAL CHANGE

- The amount of work and number of tasks to be completed as a result of the technological change should be considered when the task force, committee, working group, or guiding coalition is formed. The UAB website committee would have benefited from having more members to update and create content for the sub-pages of their newly merged website, especially given the quick turnaround. Although the working group at UVA sounded unusually large, they had a sufficient number of members to spread the workload around.
- The authors' explanation of the characteristics, traits, and qualities Vanderbilt was looking for when constructing its team was very detailed. They reinforced the importance of identifying committee members who are trusted by staff. They stressed the importance of a team that could maintain "good spirits" through the change process while being politically savvy. Vanderbilt's efforts to make thoughtful decisions at this juncture in the change process paid off, given that the implementation team received the Friends of the Vanderbilt University Libraries' award for excellence in a committee, task force, unit, or other working group.
- In a similar vein, the authors stress the importance to UVA of looking to the future and approaching the work with a positive state of mind, which they describe as "a determination to focus on an improved future environment instead of perceived failings with the current state."
- The danger of scope creep on projects involving technology is evident. As demonstrated by UAB, the merger went well beyond just their website and included catalogs, Springshare tools, and a discovery layer. It is difficult to isolate change when it comes to library technology because so many library systems are interconnected and so many of them have a direct impact on users.
- The authors from UAB stressed the importance of communication in the technological change process, especially to stakeholders who are not a part of the change team. The communication challenges were heightened due to outsourcing the library webpage development to the campus Digital Team. Though the library website committee was grateful for the technical expertise this team provided, they simply did not have enough or timely information to share from the Digital Team even though they were willing to do so and had internal mechanisms in place. UVA stressed effective communication among committee members. Taking the extra time to intentionally work through differences of opinion among committee members was likely a contributing factor to their success.
- Project management was a recurring theme among these stories of change related to technology. The use of a project management tool by the UVA team demonstrates the power of using such tools for complex projects. The Vanderbilt authors suggest creating a project plan and checklist based on the Kotter framework. Finally, setting realistic timelines for technological change is critical. Some takeaways from these change stories in particular include the adoption of a project management tool such as Confluence, taking an inventory of the work that needs to be done and by whom, and establishing deadlines for specific phases of the project to be completed.