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Using Technology to Support Faculty and Enhance Coursework in Academic Institutions

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By Jeremy Donald

Academic librarians have been working their way into the college classroom for decades, moving from the collection-centered "bibliographic instruction" of the '70s and '80s into the student-centered, outcomes-based information literacy instruction of today. The current expectations on the part of higher education administrators for academic library professionals and staff to "more intensively focus on alignments and partnerships with faculty in supporting the curriculum" are clear (Walton, *Texas Library Journal*, Fall 2009, p. 90). Yet it remains up to librarians at all levels of an organization to determine what this means in terms of how best to spend limited time, energy, and resources.

The absence of a gap between technology and information characterizes library work as we approach the post-digital age, and still the challenge of how to support curricular needs regarding to both information *and* technology persists. This calls for creating new positions with hybrid skills which can bridge technology and information literacy, and for models of further-reaching kinds of collaboration between library staff and teaching faculty.

At Trinity University, the Coates Library initiated a Quality Enhancement Plan (QEP) called *Expanding Horizons: Using Information in the 21st Century*, designed to promote, deliver, and assess key information literacy goals across disciplines and throughout the four years of undergraduate study. Essential to the plan is the role of the library in promoting and supporting the use of information technology in the classroom and in course assignments. Quoting from the *Expanding Horizons* plan, a new position called the faculty technology liaison is to "work with teaching faculty to develop courses and/or class assignments and with library faculty to develop interactive teaching models, learning objects, and tutorials that introduce information literacy concepts, resources, and tools" (*Expanding Horizons*, p. 5).

The Trinity QEP has provided an opportunity for large-scale curricular support on the part of library staff. Included in the *Expanding Horizons* plan are incentives for faculty to re-think their course syllabi and assignments, while various grants, workshops, and forums have provided the outreach and professional development necessary to make the services of the library technology liaisons known to, understood by, and attractive to teaching faculty. What follows is a formula based on the academic support provided by the faculty technology liaison when collaborating with members of the teaching faculty and librarians to design and implement course assignments and projects. The goal is to explain both the components of the support model and the reasoning behind them in order to give others the greatest flexibility in adapting them for their own institutions, where differing conditions may obviate parts of this model. Indeed, the spirit of effective support involves sensitivity to individual teaching styles and course requirements, as well as to shifting attitudes and perceptions on the part of teaching faculty. Flexibility in the details and a commitment to core values are essential to successful collaborations, and thus the formula below is arranged as a list of essential "ingredients," presented as prescriptive steps.

Step One: Communication & Trust-Building

An initial meeting with a faculty collaborator should be devoted to cueing that person as to the nature of the collaboration: as a support person, you will be listening to their ideas and doing your best

to understand and then re-articulate their vision before considering the challenges of implementing it. Often this will be a brainstorming session in which the faculty member will discuss the "old" assignment first and then ask you to propose alternatives. They are likely to wait to hear your ideas before introducing their own, and they may re-state an idea of yours *as* one of their own. This is to be encouraged, as it signals their investment in the collaboration and its outcome.

It is likewise important to indicate that you are willing to work with any level of responsibility--and to find out how much responsibility the faculty member plans to retain during the collaboration. While you may end up providing much of the actual effort required to implement the assignment, the faculty member must retain investment throughout the collaboration in order to verify that what you are doing is consistent with their needs and comfort level and to work with you to re-direct things as they deem necessary. The faculty member's perception of the tone of their interaction with you will be remembered longer than any of the actual details of the discussion, and it matters much more than the actual success of the project. If a faculty member feels truly supported and empowered, they will return to you for future collaborations regardless of whether the project at hand turns out to be an unqualified success, an instructive failure, or somewhere in between.

Step Two: Establishing Learning Outcomes

 After establishing a trusting and flexible basis for communication, it is essential to determine what learning goals the faculty member has in mind for the assignment or project at hand. It can often be surprisingly hard to elicit clearly-articulated learning goals and outcomes from many teaching faculty. This is not because their course content fails to address goals and outcomes. Rather, teaching faculty often is simply not used to stating them as such. It is your job to detect learning goals and outcomes as the conversation unfolds and to then state them aloud and ask the faculty member if they sound right, and if any are missing. Once they see how the goals you have articulated match what they had in mind, they will quickly become more adept at articulating them themselves.

 This is your chance to see whether information literacy goals are represented by what has been articulated and to ask if an instruction librarian is to be included in the collaboration. Since a faculty member might be focused on technology at this stage, they may be concerned about their own ability or the ability of their students to handle challenges the technology will present. As a result, they may not be fully aware of the need for information literacy instruction, however obvious it is to you. If they seem uninterested in including an instruction librarian in the planning of the assignment now, you will have other opportunities to secure the inclusion of information literacy instruction (see Prototyping below).

Step Three: Determining Parameters

Before proposing an assignment and/or technology application to the faculty member, you must determine the parameters and limitations of the project at hand. How much credit will be awarded for the assignment? How much time are students expected to spend on it? Where does it fit in the semester, and how much will their prior work have prepared them for this project? To what extent is the application of technology itself part of the stated learning outcomes? Are there requirements in play related to course housekeeping or the assignment's place in a larger process (e.g., are student groups prohibited from viewing each others' work before the due date, but must later participate in a virtual peer review of completed work?) Does the faculty member have a particular technology tool firmly in mind for this assignment? These considerations must be noted before the design phase begins. This is also the right place to assess the faculty member's commitment to the project. If their level of

engagement is low and/or the responsibility they are placing on you is high, you must adjust your time and attention budget accordingly to ensure that you provide the necessary work to ensure the project's (and the students') success. Likewise, if the faculty member is highly invested and involved in the details of the project, you may tailor your role to provide more moral support, encouragement, and trouble-shooting, and less direct development of the assignment in order to allow the faculty member the full range of engagement they seek.

Step Four: Building a Prototype

This step has two results: a draft of the assignment documentation (description and instructions) and a sample of a finished product. The sample should come first, as the experience of doing the assignment and using the technology will allow you to create thorough and effective documentation, and it will help you create an assessment tool (that will be Step Five).

When doing the assignment, you will have the opportunity to test one or more technology applications to see if they will serve the needs of the assignment. Requirements (such as groups editing a single document, keeping Web content private, or using only free, browser-based tools) can be challenging to meet, especially when combining more than one. Any particular technology is only as good as its ability to provide for all the essential learning outcomes *and* requirements.

The extent to which you apply information literacy skills not already addressed in the syllabus will determine if an information literacy librarian needs to be involved in the planning and support of the assignment. This experience will arm you to make such a case to the faculty member. Doing the assignment for the purposes of the prototype will also reveal unexpected opportunities to meet desirable learning goals or to further motivate and engage students in the project. Lastly, the prototype you create will serve to confirm to the faculty member that you have understood their vision, and it must be presented to them with the understanding that they can approve or reject any aspect of it that deviates from what they had in mind.

Step Five: Create an Assessment Tool

With completed assignment documentation and a prototype approved by the faculty member both in hand, it is time to create an assessment tool blending learning outcomes with appropriate use of technology and basic information literacy goals (particularly the ethical use of materials and the creation of thorough metadata for new digital content). A rubric often serves as the best assessment tool for collaboratively-designed projects, as it makes the expectations of the assignment explicit to the collaborators as well as to the students. Learning goals and outcomes should be clearly evident in the rows of the rubric's matrix. A good rubric should resonate with the assignment documentation, serving to confirm the importance of the steps detailed in the instructions and cueing the student as to which components of the assignment require the most attention.

Step Six: Instructional Design

How will you teach students the skills they need to complete the assignment? I recommend the following approach: First, make a list of all the tasks students will need to undertake in the process of completing the assignment and then rank them from hardest to easiest. Select the two to three most difficult and design one or more hands-on activities which allow students to practice those tasks. Plan to

give these activities 50% of the time of your classroom session, and be prepared to offer floating help to students as they experiment with the tools and tasks you have placed before them.

Second: What do students need to know in order to do the activities above? Particularly, what criteria will students need to apply as they experiment with tools and resources during the activity portion? Design a pre-instruction content piece (for purely knowledge-type content), and/or a brief instructor-led discussion or activity to prepare them with background information. Examples of this could include links brief readings, media, or quizzes placed on the courses content management system (CMS), or clicker-based games or quizzes in the classroom. The idea here is that more than the briefest lecture will likely go ignored, and it is better to use class time for active engagement, and to stress that the information you've shared and reviewed with your students is essential to the hands-on work which will make up the bulk of their time with you.

Third: What do students need to learn from their experimentation during the activity? Design an interactive reflection activity centered on modeling preferred ways of interpreting the results of the hands-on time. Have students show each other how to apply the relevant criteria and use their mistakes and questions as brief opportunities to apply quick, relevant hits of knowledge-type information.

Fourth: Did students learn what they needed to learn from the session? Design a quick self-assessment for students to complete that will let both you and the students see what they need to work on in order to master the tasks required to complete the assignment. How can students get further help and instruction to address the remaining gaps in their skills and abilities? Include contact information and ways to get help in all of your course content and state that information clearly at the beginning and end of the class.

Lastly: What conditions need to be in place for the activity to take place? Does each student need to be seated at a computer? Is special software required? Is group work, access to other parts of the library, assistance from a library staff member, peer tutor, or faculty technology liaison desirable? Create a list of preferred conditions and use this list to choose and prepare a learning space. After all this, digest the goals of the session you have just planned into one or two sentences. This, along with your name and title and the location of your office, will serve as your introduction, and will cue students immediately that their time with you will be well spent.

Step Seven: Reflection

 After the assignments have been completed and graded, meet with your collaborator(s) to evaluate the positives and negatives of the collaboration. Did students achieve the outcomes? Were they the right outcomes? Was the technology appropriate for the assignment? What aspects of the implementation and instruction could have been improved? Did students get help when they needed it? There are any number of questions like these to ask, depending on your sense of the situation. What is important here is to cement the trust you established at the initial phases of the collaboration by continuing to listen. Ideally, you and your collaborators will maintain a spirit of experimentation throughout the process, and this will allow you all to fairly critique your work and to make improvements to future iterations of the assignment without bruising anyone's feelings or pride.

Closing thoughts

The key to successful support lies in the amount of energy each collaborator brings to the project. Ideally, the teaching faculty, technologist, and librarian are each inspired by the opportunity to apply their creativity to something new and effective, and *this creative energy is transmitted to the students*. Technology holds out the promise to make possible what was previously impractical, and to connect what happens in the classroom with the venues to which students naturally direct their attention. It has been surprising for me to learn that students so often do perfunctory work not because they prefer to, but rather, because many assignments are--in their eyes--composed and presented perfunctorily, with predictable and uninspiring criteria for success. This same pattern is also surprisingly true for the teaching faculty who write these assignments. Once the support is available to go beyond routine assignments, faculty members more than rise to the occasion by championing new assignments, their results, and the library support that enabled them. Most important of all, they will express the value of the project by taking ownership of the effort's continued refinement and implementation in future iterations.

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