Faculty-Librarian Collaboration and the Development of Critical Skills through Dynamic Purposeful Learning

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Abstract

This article focuses on the benefits of combining collaborative teaching and information literacy as a partnership between librarians and faculty members. It discusses how student learning is enhanced as a result of librarian and faculty member collaboration through the use of a three-stage pedagogical technique we call Dynamic Purposeful Learning (DPL). Through DPL, students learn information literacy, research skills, and other post-secondary critical skills. In order for students to benefit from a librarian and faculty collaborative approach, DPL is applied to a multi-stage sociological research methods assignment that includes students engaging in participant observation field research. The outcome of DLP is that students are assisted throughout all stages of the research process based on a partnership between the librarian and faculty member.

Introduction

Librarians have taught classes with faculty members for many years. Normally, these classes tend to be single sessions with some collaboration of varying sorts between the faculty member and librarian leading up to the session or occasionally post-session. Some models of faculty-librarian collaboration have been previously identified, and are not limited to Brown and Duke’s five basic models of collaboration (Brown and Duke 2005, 3). These models require librarians to work with faculty in various ways. Other academics admit the need for collaboration in teaching without the development of collaboration teaching models. Arp et al. (2006, 2) suggest that “…simply working with faculty is not enough; collaboration is only successful when the interaction between librarians and faculty results in an integration of the library into all elements of the curriculum planning...The library becomes an essential component of students’ formal education and informal education and informal research needs.” We argue that a complete collaboration between faculty and librarians has to be a totally symbiotic approach to an overall process throughout the breadth of a course. We further suggest a three-stage model to ensure and achieve “complete collaboration” between the faculty member and librarian through what we call Dynamic Purposeful Learning (DPL).

Ten years ago, we (a faculty member and a librarian) decided that if post-secondary critical skills were to be taught to students, there would have to be an extensive collaboration between the librarian and faculty member. Our aim in this article is to show, through our experience and research, that an integrated and collaborative pedagogical approach is better for students as well as gratifying for both faculty and librarians.

Post-secondary critical skills include writing, researching, information literacy, and critical thinking that is more analytical, as well as time management skills that requires a student to be more independent and autonomous (Chickering and Reisser 1993). We would argue that students are usually required to write more analytically as opposed to being descriptive. Students are required to have post-secondary research skills that are a more reflective approach to doing fieldwork and evaluating the result. The attainment of advanced information literacy skills benefits post-secondary students by aiding them in the development of necessary research skills. These students are often required to read so that they can independently analyze and evaluate authors’ arguments, pointing out strengths and weakness as well as ideological perspectives. Post-secondary students also need to know how to manage their time in a
more autonomous way, as they spend more time outside the classroom doing assignments and studying. Most importantly, post-secondary students often need critical skills that require them to analyze, synthesize, and evaluate arguments, readings, research, and other aspects of their learning (Bloom 1956).

We began a multi-year development of a technique we call Dynamic Purposeful Learning (DPL) within a Sociological Research Methods course. Student contact with the librarian was not just in the classroom but it was rather ongoing and continuous throughout the course. The aim was for the faculty member and the librarian to work together as a team, facilitating student learning throughout the entire course. The multi-stage approach and DPL that we applied entails several incremental phases to developing post-secondary critical skills in students.

At the earliest stage, the faculty member and librarian plan the course months before it is taught. Decisions are made about what assignment(s) would best teach the required skills. At the classroom stage, both the librarian and faculty member attend the information literacy session. A teaching dynamic becomes evident and the students understand the importance of what is taking place. Also, having a specific assignment associated with information literacy provides a clear reason why students are learning these skills and why they need to know how to use the library. Learning is more effective when there is a purpose or outcome. It helps students see the course, the information literacy session, and the assignment as a complete critical thinking cycle. The information literacy session is then not merely a stage within their learning cycle.

The assignment is a two stage research methods paper based on carrying out an actual participant observation study. The first part is based on completing a literature review using academic journal articles. The second part involves doing actual participant observation fieldwork. In the first stage, students do a literature review based on their search for potential journal articles on the topic they are considering (i.e., “panhandling and the homeless,” “pedestrian behavior and the homeless,” or whatever topic they select). In short, for stage one of the assignment, students would be required to hand in an introduction and literature review, providing the faculty member with information as to how students are planning to do their study; a literature review; and a write up of the ideas that they brainstormed and learned from the literature review. The faculty member then grades it, providing detailed feedback in the form of written comments and a rubric/detailed grid. Students then have the opportunity to improve the first section and begin their study based on the faculty member’s comments. In the second part of the assignment, students complete the participant observation study; comment on and analyze their findings, and handing in an improved first section, as well as the second section as one complete participant observation assignment for grading. They also hand in detailed observation sheets as a part of a full-fledged study. The entire assignment is graded again and returned to students with written comments and an attached rubric/grid in order to give clear feedback.

We have discovered over the years of developing DPL that a staged-assignment process is the best method for student learning. Staged assignments are set up so students receive constant feedback from the faculty member and librarian in terms of finding appropriate academic resources for a literature review and to support them through the writing process of their final papers. These types of assignments ensure that the students know what is expected of them early in the assignment writing process and guide them along before and after the first part is handed in. It is especially vital for students to get early feedback as well as a grade after handing in the first part of the sociological research methods assignment, which is more technical and has specific requirements. The specific assignment was set up so students not only learn, but can make appropriate changes and hand in an improved literature review as part of the final assignment (stage 2). The key aspect of this staged assignment is pedagogical in terms of learning, improving the first part of the assignment once it is graded, and handing it back in with the final assignment. The major advantage of handing in staged assignments as opposed to traditional non-staged assignments is that students learn by making errors and have the opportunity to improve their work. In traditional assignments, they complete the assignment and get a grade at the end, not having the chance to improve their work and possibly learn from their mistakes.

Through summative course evaluations, students have consistently reported that information literacy sessions enhance their learning and increase their capabilities as researchers. Students also commented throughout the evaluations that they found both the
librarian and faculty member worked as a part of a team (Kenedy 2005). For the faculty member, it is essential to have a librarian provide clear instructions about information literacy. For students, the librarian provides specialized information about the library and other research resources. Most importantly, the partnership between the librarian and faculty member starts with the development of the curriculum and the assignment, and continues well past the library session to the mentoring of students throughout the course. To students, help from both the librarian and faculty member was seamless as both were partners in the learning process.

Review of the literature

There is limited literature about the collaboration of librarians and faculty, while the literature concerning librarians and information literacy is extensive. We found limited data on the roles of faculty-librarian partnerships and the “… collaborative process of planning, delivering and evaluating learning programs” (Ivey 2003, 20). Few articles discuss the collaboration of sociologists and librarians (Abowitz 1994; Demers and Malenfant 2004; Dodgen et al. 2003; Glasberg et al. 1990). Kempcke (2002) points out that librarian pedagogy often revolves around teaching one class for a faculty member and, occasionally, reference is made to librarians providing aid in curriculum development. Often ignored are the librarian’s involvement and contributions to curriculum development and the continued contact with students as a mentor and teacher. A complete partnership is missing from the equation (Kotter 1999) and seems to be attained through course integrated instruction. For complete collaboration to take place, the librarian must not only teach a class for the faculty member, but must also be involved in the curriculum and syllabus development, as well as post class instruction, mentoring, and encouraging student skills on an ongoing basis in tandem with the faculty member.

Assignments that incorporate information competencies provide effective student experiences through the use of a variety of resources and thus improve the quality of student research. “Librarians know sources and strategies to access information, and professors’ best understand the subject content and can help students evaluate and apply information” (Farmer and Mech 1992, 74). Librarians can and must show students how to analyze information, as it cannot be assumed that students are able to go from teacher-defined purpose to understanding. Skills for critical and analytical use of information are seldom coached by faculties or the library, and this often results in recycled information rather than cognitively processed knowledge (Lantz and Brage 2006).

As Lorenzen argues, active learning entails bringing the students into the process of their own education: “Lecturing promotes the acquisition of facts rather than the development of higher cognitive processes such as analyzing, synthesizing and evaluation” (Lorenzen 2001, 50). Instead, it is best to work with students over a longer period to require them to find answers on their own by leading them into the research process. According to Piaget (1985), exploring the research environment helps students develop abstract and critical thinking skills. Piaget also noted that only in the highest levels of cognitive development can critical thinking take place (Piaget 1985). Thus it is important to engage students in questions about the relevance of materials being presented. Felder states that, “If the objective relates to what the students learn as opposed to what you present, then the goal should not be to cover the syllabus but to uncover the most important part of it” (Felder and Brent 1999, 46).

Stein and Lamb (1998, 31) have reported that students’ “… evaluation forms indicated that students found the library session useful but thought the class period inadequate for covering all the basic and the sophisticated research strategies necessary for the assignment”. They further stated that “progressive research skill development into the structure of the course” was necessary (Stein and Lamb 1998, 31).

Framework, development and analysis of Dynamic Purposeful Learning

We offer a scaffolding to our “… assignments that leads the students through the process of acquiring and evaluating information as they question their hypotheses about the issues they have elected to research” (Demers and Malenfant 2004, 266). The “scaffolding” approach is a process by which students learn gradually with guidance, support, and direction from experts (Bhavnagri and Bielat 2005, 126). The faculty member ensures that “… assignments require the students to provide evidence that they have accessed and evaluated a variety of re-
sources on their topic. These assignments are intended to help them gain proficiency in demonstrating their skill in skeptical inquiry and improve their ability to provide a well presented argument to support their stance in their final presentation” (Demers and Malenfant 2004, 271).

Faculty-librarian partnerships that are transforming student learning in higher education appear to be based on changing views of the world from both the librarian and faculty perspectives. According to Bruce (2001, 108), “[l]ibrarians are beginning to recognise the need to move away from a library and information retrieval centred view of information literacy toward a broader understanding of the role of information literacy, and the role of the information professional in fostering student learning.”

Nimon makes the idea of a “gap” between library-centred and academic ways of thinking about information literacy explicit; a gap that needs to be bridged for student learning to be supported and transformed. As faculty and librarians work together, they are likely to “…develop shared understandings of how student learning can be supported” (Nimon, 1–2).

With our “staged scaffold” approach, we follow the American Library Association’s Information Literacy Standards (Association of College and Research Libraries 2000). Such standards are defined by the following:

- Assess the needed information effectively and efficiently
- Determine the extent of information needed
- Evaluate information and its sources critically
- Incorporate selected information into one’s knowledge base
- Use information effectively to accomplish a specific purpose
- Understand the economic, legal, and social issues surrounding the use of information, and access and use information ethically and legally

DPL began by employing various pedagogical strategies such as active learning (Cameron 1999), cognitive scaffolding (Glaser and Resnick 1989), and collaborative learning (Dodgen et al. 2003). DPL is related to active learning and the processes by which students become engaged with the material using a student-centered hands-on approach, which “… involves more control of the learning process to

the students” (Cameron 1999, 15) Coupled with cognitive apprenticeship, learning is guided by using an apprenticeship process where students are supported throughout various stages of the assignment by modeling, coaching, and fading (Brown et al. 1989).

We are presenting DPL as a pedagogical model that is based upon three essential elements:

1. A faculty member working with librarians in the context of an assignment;
2. Purposeful learning that is applied to the assignment;
3. An assignment that is completed in different stages.

The “dynamic” aspect of DPL is based on collaborative learning which involves a faculty member working with a librarian on a specific research assignment. Dodgen et al. points out that this cannot be done properly without a librarian (Dodgen et al. 2003). A key aspect to the “dynamic” is the initial stage of contact with students when the librarian and faculty member are in the classroom together and working in unison during the librarian’s presentation. This interactive exchange between the librarian and faculty member often encourages higher participation levels rather than a more traditional approach of librarians presenting without the presence and active participation of the faculty member. At this stage, the librarian instructs students on how to find the required research materials. During this session, the faculty member actively participates, pointing out to students the essential aspects of what is being taught and how this relates to the specific literature review and the ongoing assignment of the research process and the final paper.

Purposeful learning is activity-based in terms of students applying what they learn through completing assignments or specific tasks related to the assignment. It is a planned and conscious form of learning that emphasizes student learning by connecting transferable skills to course content. It is based on learning outcomes and a process that includes stages. Purposeful learning has specific outcomes in terms of acquiring essential university, post-secondary critical skills. These are the skills that students need to develop in order to successfully complete their degree requirements. Integrating critical skills into course syllabi is an example of purposeful learning. These post-secondary critical skills include writing,
researching, information literacy, critical thinking, and time management. As Weigel states, if “… education is about anything, it is about cultivating the skill of critical thinking. This appropriately occupied first place in the hierarchy of desired educational outcomes” (Weigel 2005, 11).

There may be various stages to a research assignment. The first stage often includes providing students with a detailed description and spending time explaining the assignment in class. The second stage occurs when the librarian engages students in a learning experience focused on searching for resources. Bringing in librarians, in combination with the multi-staged assignments, has proven to help students considerably in the early stages of a research assignment involving library resources. In the third stage, the faculty member instructs the students on how to evaluate, synthesize, and analyze resources in the context of a literature review (Bloom 1956). In order to facilitate learning, there is a constructive feedback loop consistent with cognitive scaffolding (Collins, Brown, and Holum 1991). The literature review is graded and students are required to consider feedback. The literature review is part of the larger assignment and is re-submitted a second time at the end of the course with their research paper. This promotes more extensive learning, as students who did not have appropriate resources may return to the librarian for further help. The assignment also allows students to make changes in the literature, which is then re-graded, as noted above. The dynamic learning process of working with both the librarian and faculty member continues throughout the stages of the assignment. Students are strongly encouraged to meet with the librarian during the last two stages as well as to speak to the professor during and after class.

Elmborg writes about the six stages of the research process. We apply this by breaking down the assignment and staging students’ progress so that we can accomplish what Elmborg (2006, 194) refers to as the next stage of “critical literacy” and attain the desired outcomes.

A discussion of the practice of Dynamic Purposeful Learning

The faculty member and librarian must be jointly committed to advancing student learning and the acquisition of critical skills. Namely, the attainment of information literacy skills is primary to gaining subject specific and other general academic skills. Applied purposeful learning requires the faculty member and librarian to be conscientious. There must be a clear objective or it will not be successful.

Careful preparation for the library session by the faculty member is integral and cannot be over-emphasized. The faculty member has to contextualize the purpose of the session relative to the assignment and outcomes expected as a result of the library session, including ongoing contact with the librarian. Students must understand the relevance of this to their learning and to their assignment; otherwise the session is not as productive for everyone.

This is a multi-staged dynamic process starting with curriculum development where the librarian and faculty member bring entirely different perspectives to the development process. The faculty member creates the educational objectives and content while the librarian develops the information literacy component. The syllabus and the assignment include a session in the library with continuous contact between the faculty member and the librarian to reinforce skills.

We have added other aspects to this dynamic that we see as significant. Some of these are:

1. The library class must be mandatory and attendance will be taken. The faculty member should point out to students that they will not only learn new skills but also how to use the library more effectively for overall information literacy.
2. The faculty member must stress that the assignment will be very difficult to complete without the library session. Indeed, it is pointed out to students that “everyone” will learn something new even if they think they understand library information literacy.
3. The library class is not a filler session but an essential requirement.
4. Getting a good grade is dependent on attendance at the library session since they will be required to use the skills obtained during the class.
5. The class is an introduction to the library and the librarian, and as such, students begin their dual journey of learning from both the librarian and the faculty member at this stage. Students learn another essential component of research in a meaningful education experience.
6. The library session must provide content-specific examples to ensure relevance to the assignment.

To prepare for a successful session, we advise that the following steps must also be adhered to:

1. The faculty member explains the purpose of the assignment and its outcome, and the assignment is handed out accompanied with a checklist.
2. The literature review for the assignment is explained by the faculty member and connected to the visit to the library the following week. This preparatory stage of providing context to the library visit by the faculty member is key to students’ understanding of the importance of the library class.
3. Students are told by the faculty member before and during the class that they will be applying the learned skills to their own research topic connected to the assignment.

The dynamic between the librarian, student, and faculty member continues throughout the entire course. When the students begin to apply the new skills they have learned in the library session, they may encounter various challenges as part of the learning process and this is when the cycle of faculty, librarian and student interchanges evolve. Our learner-centred approach embeds, but does not simply focus on, a “how-to” instruction; instead, it focuses on a variety of learning styles that encourage team building, interactive activities, and higher order skills.

Also important is that our teaching is discipline-specific, and there are major benefits to this approach. It helps students learn to solve problems from a disciplinary perspective introducing them to thinking like a professional in a given field. Huba and Freed reinforce this when they state, “… an information literate biologist may need to hone a different set of skills than an information literate journalist. Then by focusing on problem-based learning and not on “how-to” instruction, students understand the principles behind information seeking and are not paralyzed when faced with a different operating system or when a vendor redesigns its search interface” (Huba and Freed 2000, 68–69). Huba and Freed further underscore this need when they state that “… addressing ill-defined problems help develop inquiry skills as students become researchers, seeking out and evaluating new information in their discipline, integrating it with what is known, organizing it for presentation, and having the opportunity to talk about it with others” (Huba and Freed 2000, 203).

**Recommended approaches to faculty librarian collaboration in DPL**

We use a three stage approach to collaboration and Active Learning:

1. Pre-meeting and assignment discussion.
2. Librarian seminar/presentation of the research process.
3. Post-follow up with students in the library and with the faculty member.

Each year the librarian and faculty member meet before the course begins in order to determine when the students will be given instruction by the librarian during an initial one-hour period. In these planning sessions, the assignment, requirements of the session, and any changes are discussed. During the first few lectures and tutorials the faculty member explains the assignment, going through the various parts of it as well as the requirements. The importance of the library class in terms of being able to complete their assignment consequently becomes apparent to the students through this carefully staged and incremental preparation by the faculty member.

When the faculty member defines the assignments and the librarian fits and moulds the resources into the research process so that the assignments can be carried out producing the best possible results, performance is improved. By having students do research by means of a literature review first, an applied example is given and the understanding of the nature and purpose pertaining to a type of literature becomes obvious to students.

Incrementalism has been important to our collaborative process. For example, the one hour class in the library expanded considerably to return individual visits by students as it was discovered that one session was simply not enough for students to understand the basis of research skills, how to search, which databases to use and so on. A single session did not allow the students to develop an in-depth understanding of the entire process leading to the final research paper.
Assessment of instruction and its effectiveness can be done by surveying students or using similar methods. We have found, however, that the best method by far is the judgment of the faculty member as it relates to the quality of the papers they receive each year. So far we have not tested this on a larger scale or put it under statistical scrutiny by others.

As previously mentioned, frequent and ongoing dialogue between the faculty member and the librarian is also essential. Each has to relate difficulties students are having, questions they might have, and student successes. It is such exchanges and interplay that help an assignment evolve to better help students learn and analyze, as well as for the librarian to be able to craft classes that directly transmit to students the skills they need to develop. While the class session might ultimately only infuse practical information, the ongoing process of the librarian helping students individually, and similarly the faculty member doing the same, instills in them a growing awareness of the process.

Continual communications during the research process is vital. The librarian phones the faculty member if and when unusual problems emerge or when there is a pattern of similar problems for a number of students. This allows the faculty member to adjust an assignment or change it as the research proceeds. Also, regular communication helps both faculty members and librarians when re-working the assignment for the next year.

The contact we have with each other is responsive to changing student needs and to changing information structures. Assignment design improves overall when various resources available to the student are discussed between the faculty member and the librarian. Where there is either no communication, or at best, a one-time class in the library without the collaborative approach, the students may flounder in the library and often cannot figure out what the assignment is really about. This happens year after year since critical aspects of traditional assignments do not change and cause confusion. The faculty member merely presumes that each new set of students is confused and often requires guidance. In an assignment where clarity is evolutionary and there is more communication over time, the students can start their projects sooner and move ahead with the research component with equal speed. Collaborative work guarantees that assignments that have no particular value to the attainment of research skills do not waste the time of all concerned. Anecdotally, we believe that faculty members who have a more collaborative style receive higher quality research papers and their students acquire research skills they can later use for graduate studies.

Technological changes have also helped over the years. For example, early on we used a PowerPoint session that students could access on-line in order to help them with finding journal articles. In this way, they could pay better attention during the library session because they know that there is a backup available if they forget any points. Today we are using Web based information resource guides and MP3 accessible tutorials that students can use from any computer to identify databases, use reference tools, and any other information relevant to their assignment.

Conclusion

Although our collaboration evolved and was refined over a period of years, certain basics become obvious as requirements in successful collaboration of any sort. Some of these are:

1. The librarian working behind the scenes and in the classroom with the faculty member must be an influential contributor to student learning.
2. The librarian must not be a “babysitter” or substitute to relieve the teaching load for faculty as the sole reason for having a library class.
3. The faculty member must send the syllabus, assignment or related material to the librarian. Later they should meet to discuss purposes and outcomes of the assignment. Often the librarian can be useful in redesigning curriculum goals, syllabi, and assignments to help students.
4. University research skills cannot be taught in isolation and must be integrated into every stage of the student learning experience so this can become relevant to students’ learning outcomes. The outcomes should be tangible and transferable.
5. The idea of a research skills assignment is to learn many different ways of doing research.

One important aspect is information literacy. “Many professors are seeking ways to enrich their students’ learning. There are limitations to textbook instruction and what a professor can personally con-
vey in a classroom. An alternative is to bring students to the informational resources available in the library” (Farmer and Mech 1992, 47). The research paper assignment helps students realize the vast resources available and increases their understanding of a topic. In other words, it helps them become more information literate.

The collaborative process begins with the faculty member and librarian working together both inside and outside of the classroom and continues in terms of both working with students formally and informally during and after class. The faculty member spends time with students, helping them define their topics and the basis of the research they are about to conduct. The librarian deals with the students on a one to one basis helping them find appropriate research materials that meet those required needs. This ongoing and collaborative procedure which has been used over the years has proven to be most beneficial according to the literature as well. As Pa- nitz (1999, 5) states, “The cooperative learning tradi- tion tends to use quantitative methods which look at achievement … The collaborative tradition takes a more qualitative approach, analyzing student talk in response to a piece of literature or a primary source in history.”

One of the major advantages of doing collaborative work is that over time faculty members begin to see qualitative improvement in the work of their students. A faculty colleague once wrote to another colleague while we were in the process of developing our collaborative efforts saying, ‘comparing my past experiences when I did not collaborate with a librarian, I found that students had many problems finding appropriate academic articles. Many students struggled to learn how to find articles using the library database. There was an immediate improvement in the quality of their assignments when I began collaborating with the librarian. In both the mid-term and final student evaluation, students always commented on how important the collaborative session was for completing the assignment. They knew that they could ask questions of both the librarian and myself, and would make appointments with both of us well before the assignment was due in order to get the help they needed so they could complete the assignment successfully.’

It should be noted that students often do not see the advantages of the skills they have acquired until after graduation when they are called upon at work to do some research.

Collaborative teaching is an evolutionary process. Collaborative work on assignments is never finished and it constantly needs to change and grow with the requirements of the assignment and student’s needs. Assignments also have to reflect any new tools and technologies available. Both the faculty member and the librarian must be prepared to change, shift and generally learn from experiences over time. As Lamp- pert (2005, 14) notes “… research on the assessment of outcome-focused instruction in Psychology supports the contention that collaboration between discipline and library faculty results in positive measurable learning outcomes for students.”

Future research in the area of collaborative teaching could focus on developing and refining the model of DPL. Doing further research on how DPL could be applied by a team teaching a First Year Experience critical skills course would also be useful. It would also be helpful to do formative and sum- mative questionnaires with the students in order to receive feedback beyond the standard teaching evaluations. Receiving student feedback would help create a more student-centred approach that could be used to help them with their critical skills development. In addition, using the teaching evaluations in conjunction with a questionnaire may aid in the development of DLP and possibly encourage more faculty members to work closely with various critical skills specialists, such as librarians, in order to boost their student’s learning. It may also help students become more engaged in the overall learning process.

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