Co-Teaching Relationships among Librarians and Other Information Professionals

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Abstract

This article uses the co-teaching experiences of workshop instructors at the University of Nevada, Reno Libraries as a basis for an in-depth exploration of the factors that lead to successful co-teaching arrangements among librarians and other information professionals. The experiences of these instructors demonstrate that co-teaching can provide numerous benefits: It can enhance the learning experience for students, it can provide a method for refining teaching skills, it can promote successful collaborations across departments, and it can bring innovative ideas into the classroom. Drawing on collaboration research from the Wilder Foundation, this study found that successful co-teaching relationships are characterized by factors related to environment, partnerships, process and structure, communication, purpose, resources, and external/long-term considerations. Within these seven areas, guidelines for successful co-teaching relationships have been formulated for use by librarians and other information professionals.

Author keywords: Co-teaching; Collaboration; Instruction; Libraries; Information professionals; Technology

Introduction

As new technologies effect rapid changes to the information landscape, libraries are evolving both in their approach to the delivery of information and in the services that they provide to users. The growing emphasis placed on information literacy skills in an ever-more-complex world of information is causing instructional duties to become increasingly important in the job duties of librarians.[1] In addition, users are showing greater interest in new technology tools for information discovery, access, and organization, and they are turning to librarians and other information professionals to help them learn to use these new tools.[2] In conjunction with the changes in the worlds of information and technology, higher education is evolving as well. Students are responding to new pedagogies that de-emphasize long lectures and the memorization of content and instead emphasize active learning, collaboration, creation, and analysis.[3] All of these factors are having an effect upon the ways that librarians teach information literacy skills, and they call for innovative approaches to

engaging students both in and out of the classroom.

While instruction is becoming increasingly important in the job duties of librarians, many librarians do not feel fully confident about or prepared to assume these new responsibilities, either from a lack of teaching experience or from an inattention to teacher training in their library school educations.[4] Librarians who want to improve their instructional skills have many avenues to pursue in the form of classes, workshops, webinars, conference programs, and the professional literature.[5] Librarians can also become stronger instructors by engaging in teaching practice, by working with more experienced instructors, and by reflecting upon the ways that their teaching can improve. Co-teaching is one very effective way in which librarians and other information professionals can improve their instructional skills and develop innovative teaching strategies. While much of the literature on academic librarians and co-teaching has emphasized the benefits of collaborations with faculty from other departments,[6] librarians may also

find it useful to cultivate co-teaching relationships with other librarians and information professionals. Not only can co-teaching provide a helpful means of teacher development, but it can also be an effective strategy for engaging today's students and teaching with new technologies.

This article uses the co-teaching experiences of workshop instructors at the University of Nevada, Reno (UNR) Libraries as a basis for an in-depth exploration of the factors that lead to successful co-teaching arrangements among librarians and other information professionals. UNR is a land grant institution with approximately 13,000 FTE. At UNR, the majority of the staff of the Libraries and Information Technology are housed together in the Mathewson-IGT Knowledge Center. Each fall and spring semester, the UNR Libraries holds a five-day teaching event called Knowledge Center à la Carte. This event concentrates approximately 20 one- to two-hour workshops into five afternoons and covers topics ranging from specialty research skills to media production skills. The workshops are primarily advertised to faculty, graduate students, and honors students, although they are open to walk-in by any student. The instructors are drawn from a variety of departments across Information Technology and the Libraries, including reference and technical services librarians, instructional designers, computing professionals, and media specialists. Most of the workshops are taught in hands-on computer classrooms, and a wide variety of teaching techniques and styles are employed. Many of the workshops are co-taught, often with instructors from more than one department or division.

The experiences of these workshop instructors provided an effective means of exploring co-teaching arrangements. In this study, fifteen workshop instructors were interviewed regarding their experiences with co-teaching. Through the collection and analysis of the interview data, this study sought, first, to identify some of the factors that influence co-teaching relationships, and second, to create some guidelines for successful co-teaching and collaborative instruction – guidelines which are applicable to a variety of institutions.

Literature Review

Librarians as Teachers

As academic libraries evolve in response to changes in information delivery, and administrators strive to further integrate the library into the mission of the institution, librarians are taking on more instructional duties.[7] Analysis of academic librarian job ads from 1973 through 1998 showed that while technology grew to become a standard part of the job, instruction became a standard duty of most reference positions.[8] In addition, more recent studies show that the amount of time dedicated to teaching by academic librarians has continued to increase.[9] Yet pedagogical training for librarians is limited. Initially nearly absent, by the 1990s the majority of U.S. library schools included at least one elective course in library instruction; however, interviews with academic librarians have found that few either took those courses or felt they received the necessary training from them.[10] In addition, librarians interviewed were reluctant to identify themselves as teachers.[11] The problem is not limited to the United States. In a recent survey of librarians in the United Kingdom, Laura Bewick and Sheila Corrall report that although librarians spent considerable time in instructional activities and ranked "delivering teaching sessions" as the most important knowledge for subject specialists, the majority developed their pedagogical skills on the job or via trial and error.[12]

Collaboration

One method of strengthening the teaching skills and confidence of librarians is through collaborative instruction and co-teaching. Although co-teaching is a form of collaboration, collaboration and co-teaching are by no means synonymous. Collaboration has been defined in many ways across many disciplines; however, a basic definition is provided by the National Network for Collaboration in their report "Collaboration Framework – Addressing Community Capacity": "collaboration is a process of participation through which people, groups and organizations work together to achieve desired results."[13] Specifically, interdisciplinary collabora-

tion has been reviewed by several authors, in-   cluding

Table 1. Wilder Foundation Factors Influencing the Success of Collaborations

Category	Factors
Environment	History of collaboration in the community
	Collaborative group seen as legitimate leaders in the community
	Favorable political and social climate
Membership	Mutual respect, understanding, and trust
	Appropriate cross-section of members
	Members see collaboration as in their self-interest
	Ability to compromise
Process and Structure	Members share a stake in process and outcomes
	Multiple layers of participation
	Flexibility
	Clear roles and policy guidelines
	Adaptability
	Appropriate pace
Communication	Open and frequent communication
	Informal relationships and communication links
Purpose	Concrete, attainable goals and objectives
	Shared Vision
	Unique purpose
Factors related to Resources	Sufficient funds, staff, materials, and time
	Skilled leadership

Source: Mattessich, Murray-Close, and Monsey, *Collaboration – What Makes It Work.*

Montiel-Overall, Gajda, Berg-Weger and Schneider, and Bronstein.[14] The Arthur H. Wilder Foundation, a non-profit health and human services organization, reviewed the literature on collaboration theory and developed a list of 20 factors pivotal to the success of collaborations (Table 1).[15] These factors are divided into six categories: environment, membership, process, communication, purpose, and resources.

Drawing from the education literature, Patricia Montiel-Overall describes four models for collaboration in educational settings: coordination, cooperation, integrated instruction, and integrated curriculum.[16] In the coordination model, participants may communicate to improve use of shared resources or arrange schedules in concert to allow for combined events, resulting in increased opportunities for students.[17] The cooperation/partnership model is drawn from management literature and represents more commitment on the part of participants.[18] In this model participants collaborate under an agreed upon set of similar goals. In education this model most commonly refers to interagency or interdepartmental sharing of resources for the

benefit of students. The integrated instruction and integrated curriculum models most closely describe collaboration in the classroom. In these models participants work together to develop and teach specific courses or full curricula, developing a product not possible if individual participants worked independently.[19] Individual participants are generally deeply involved both in planning and co-teaching classes or developing an educational product, and participants take on equal responsibility for a successful outcome.

Co-Teaching

As a form of collaboration, co-teaching allows instructors with different skill sets, knowledge, and perspectives to optimize both the learning experience for students and the teaching experience for themselves.[20] Co-teaching is somewhat inconsistently defined in the literature[21] and may often be referred to as team teaching, although team teaching may also be used to define an arrangement whereby multiple instructors collaborate on class design but deliver instruction separately. According to Kenneth Tobin, co-

teaching can be defined as an experience that "involves two or more teachers who teach and learn together in an activity in which all co-teachers share the responsibility for the learning of students."[22] While some collaborative instruction involves one person teaching one topic followed by another teaching a different topic, co-teaching can be much more complex, involving an integrated approach to planning, teaching, and assessing a classroom experience.[23] With co-teaching, two or more teachers collectively assume primary, and often complementary, teaching roles; co-teachers take turns with and jointly deliver activities such as conducting lectures, leading discussions, offering individual help, and facilitating student activities.[24]

Co-teaching has been used in K-12 education to respond to student populations with diverse abilities, learning styles, and ethnic backgrounds.[25] In higher education, co-teaching has been used in a number of different disciplines, such as health care,[26] psychology,[27] management,[28] nursing,[29] and teacher education,[30] among others. Although co-teaching in higher education settings may take a number of different forms, it is generally believed to offer several benefits to students: It promotes multiple perspectives, allows for improved student feedback, models shared learning and collaboration skills, and helps to increase participation in the classroom through improved dialogue and intellectual stimulation.[31] Co-teaching can be an effective means for instructors to model professional collaborative relationships and the process of shared learning.[32] Co-teaching also has the potential to undermine the notion of the instructor as sole authority within the classroom by emphasizing the multiple perspectives that go into the construction of knowledge.[33]

While co-teaching offers a number of benefits to students, it also offers several advantages to instructors. Co-teaching has been used in K-12 education as a form of teacher training because it allows teachers to learn from one another through practice.[34] For instructors in higher education, many of whom do not receive training in successful pedagogical practices, co-teaching can provide a useful method of professional development through sharing experiences and insights, and through generating reflective conversations that can transform teaching practice.[35] Co-teaching provides instructors with feedback and different points of view, while also giving them the freedom to emphasize certain content areas or teaching practices that they feel are most important for students.[36] Co-teaching empowers instructors and enables them to explore more imaginative solutions to problems; it may result in increased instructor confidence, skill levels, motivation, professional satisfaction, personal support, and opportunities for personal growth and collaboration.[37] However, some persistent problems also accompany the co-teaching arrangement. Co-teaching can be time-consuming for instructors and potentially confusing for students.[38] It can be costly, needs administrative support, and requires that instructors schedule the necessary amount of planning time.[39]

Several factors are important for successful co-teaching, including communication, flexibility, collaborative problem solving, shared beliefs about teaching, an understanding of each teacher's responsibilities, and mutual support.[40] In addition, the success of co-teaching endeavors may be influenced by the instructors' compatibility, expertise, and gender, as well as the overall classroom environment.[41] In practice, co-teaching may take several forms, and co-teachers may play a variety of roles at different points in a lesson or throughout a course. In one type of co-teaching arrangement, one teacher provides the lead instruction role while another teacher(s) moves among students and provides individualized support.[42] In another arrangement, a co-teacher enhances the instruction provided by the other(s); for example, one teacher might deliver a presentation in front of the class while another augments it through illustration, elaboration, or demonstration.[43] In a third arrangement, co-teachers may comfortably alternate among a variety of roles, taking turns with activities such as conducting lectures, leading discussions, offering individual help, and facilitating student activities.[44] Mike S. Wenger and Martin J. Hornyak use three teaching motifs to describe the division of content and roles in a co-taught classroom: (1) sequential, in which teachers divide the content by topic and take turns presenting it; (2) distinctions, in which teachers address different approaches to the

content, such as theory and application; and (3) dialectic, in which teachers take different sides in a debate about a topic and use collaboration to move toward synthesis.[45] Regardless of the way that duties are divided among co-teachers, all participants should be equally responsible for planning, teaching, and assessing what occurs in the classroom.[46]

Co-Teaching among Librarians and Other Information Professionals

In regard to the use of co-teaching among librarians, numerous studies exist that describe successful co-teaching arrangements among academic librarians and teaching faculty from other departments.[47] Indeed, the model of the embedded librarian, which has received much recent attention in recent years, supports this idea of the librarian as a collaborator in a variety of co-teaching relationships, from course design to participation in online courses. In fact, collaboration lies at the very core of embedded librarianship through librarians' work with instruction, research, distance learning, and scholarly communications on a multitude of levels.[48] As opposed to co-teaching with faculty members from other departments, co-teaching among academic librarians can be used to inject new perspectives and teaching strategies into library instruction sessions, can create a livelier and less formal atmosphere in the classroom, can help new librarians gain confidence as teachers, and can help experienced librarians improve their pedagogy skills.[49]

With the advent of new technologies, some librarians have explored collaborative approaches to teaching and learning with information technology professionals. Although the different cultures that exist among librarians and information technologists[50] may serve as barriers to successful collaborations, several successful instructional projects have come about as a result of partnerships between these groups.[51] Many of these projects have had a significant impact on university curricula, such as the redesign of courses that result in better integration of information literacy skills and technology[52] and the better integration of library resources into online courses.[53]

Although these various projects demonstrate that successful collaborations between librarians and information technologists are occurring quite frequently, they do not illuminate the ways in which library pedagogy may be changing as a result of new technologies and do not elaborate on the benefits that may result from co-teaching arrangements among librarians and other information professionals. Through a study of the instructors involved in teaching the Knowledge Center à la Carte workshops at the UNR Libraries, this study sought to determine whether co-teaching is, in fact, an effective method of offering library and technology instruction. If co-teaching is an effective pedagogical strategy, then what are the factors that influence the co-teaching relationship and what are some guidelines for successful co-teaching and collaborative instruction?

Methods

The fifteen participants in this study represented all instructors in the KC à la Carte workshops that had co-taught with another instructor, with the exception of the authors themselves and one instructor who was on extended leave. The instructors were interviewed, and all were asked the same set of questions, which are listed in the Appendix. Because the study authors were also co-instructors in some workshops, they were aware of some of the issues facing instructors in the workshop series and were able to ask follow-up questions whenever appropriate. All interviews lasted between 30 and 60 minutes, and were recorded and transcribed. Transcriptions were analyzed by the authors for common themes, which are elucidated below.

To validate the data gained from the interviews, an open-ended question about teaching methodology was added to the student evaluation that was distributed after the final workshop series held in September/October of 2010. The question asked students, "How did the teaching methodology (e.g., hands-on, lecture, demos, multiple instructors) affect the quality of the workshop?"

The results that are discussed below were extrapolated from the instructor interviews and student surveys. Whenever relevant, direct

quotes from the interviews have been included in the reporting of the results.

Results

Teaching Experience and Training

The fifteen workshop instructors who were interviewed for this study consisted of nine librarians, three instructional designers, and three technology/media specialists who worked in the library's learning commons area. The instructional designers possessed graduate degrees either in education or computer science, while the technology/media specialists did not possess graduate degrees. Of the librarians, three worked in the public services division of the library, two worked in access services, one in technical services, one in Special Collections, one in a branch science library, and one in the learning commons.

Of the nine librarians, only one had training as an educator (with a bachelor's degree in secondary education). Of the remaining eight, only two had taken a course in instruction as a requirement for the library science degree. Two others had some instructional training, and four had received no instructional training whatsoever. Thus, most librarians participating in the workshops had little training in instruction.

In terms of teaching experience, the instructional designers were the most experienced, with each possessing several years (or decades) of full-time teaching experience. Of the librarians, only two had worked previously as a full-time classroom teacher and/or taught semester-long courses. Most librarians' instruction experiences consisted of teaching one-shot library class sessions. Some newer librarians had relatively little or almost no teaching experience. In terms of co-teaching experience, the three instructional designers and two of the librarians had considerable experience with co-teaching. Other instructors had either no or minimal experience with co-teaching prior to participating in the workshop series.

Division of Teaching Duties

Workshop instructors used several different strategies when dividing the teaching duties.

The most common method was to split the content into segments, with each instructor responsible for presenting the content in the area with which he or she felt most comfortable. Once the first presentation was completed, the first instructor would hand off the front-of-room presentation duties to the next instructor. This presentation could move back-and-forth between instructors several times, such as during a "Graduate Student Research Toolbox" workshop in which two instructors took turns covering multiple topics related to the workshop theme.

Another common method was to have one or more instructors be responsible for presenting the content in the front of the classroom, while another instructor moved around the room and provided one-on-one assistance to participants as needed. Instructors found this technique to be especially useful in workshops requiring hands-on activities or the use of technology. While some instructors only provided one-on-one assistance, others would trade off this task; for example, the first instructor presented content while the second walked around and provided one-on-one assistance, and then the two would switch roles for the second part of the workshop. In some cases, one or more presentations of content would be followed by activities in which all instructors walked around providing feedback and individual assistance. For a "Designing Effective Poster Presentations" workshop, one co-instructor gave a presentation on design, which was followed by a small group design activity, during which the co-instructors jointly walked around the room giving feedback. The workshop concluded with a second presentation on design tools which was given by the other instructor.

Several co-instructors interjected comments into each other's presentations so as to provide examples, clarify content, raise other viewpoints, or add points that had been overlooked. Some more seasoned instructors used this technique as a means of helping their less-experienced co-instructors to slow down by asking them to "run that by us again" or "explain it a bit more." Other workshops, however, consisted of mostly even presentation blocks that were uninterrupted by the co-instructor(s).

For workshops that included discussion portions, several instructors deliberately used dialogue among instructors as a way to model what they hoped their students would do in the workshop. For example, in a workshop on poster design, instructors would converse with each other about good and bad design techniques as a way to get students more involved in the discussion. This technique allowed the instructors to demonstrate to students that multiple perspectives are involved in approaching a particular issue.

Some instructors preferred to share the teaching responsibilities equally and avoided having one instructor appear as the "lead" instructor in the classroom. Others, however, did establish one instructor as the lead. This situation was paralleled in planning sessions for the workshops. While some instructors shared the planning responsibilities evenly, other sessions had one instructor who took charge of the planning. In some cases, more experienced instructors took charge of planning a session with a less experienced instructor, while in other cases, one partner enjoyed organizing and making arrangements more than the other.

Co-instructors chose to divide the content among themselves by using a number of different strategies. Some co-instructors divided the content by topic or skills, with each teaching the content or skill with which he or she felt most comfortable. Some instructors divided the material by complexity, with one instructor beginning the workshop with simple demonstrations or a general introduction, followed by a second instructor who would provide more advanced demonstrations or more complex material. One set of instructors divided the content according to theory and practice. Finally, some instructors assumed greater responsibility for organizing the lesson, while their co-instructors did more prep work for the session by setting up files for use in the workshop or creating handouts.

In dividing instructional duties, some instructors sought to take on those tasks or areas with which they felt more comfortable, while in other cases, instructors deliberately divided tasks in order to promote student engagement. Regard-less, the instructors in these workshops instinctively divided teaching roles, tasks, and content in ways that are consistent with many of the models seen in the co-teaching literature.[54]

Use of Teaching Technology

The workshops took place in a variety of classrooms, each equipped with a differing level and configuration of technology. Workshops were assigned to rooms based on software needs and instructor preference. Most of the workshops employed some hands-on aspects. While some instructors relied heavily on PowerPoint presentations and carefully pre-planned examples, others worked entirely in an all-hands-on mode. One workshop rejected traditional classroom technology in favor of paper, crayons, and candy bars. Instructors' impressions of the impact of technology on teaching related directly to the topic of the workshop. Workshops designed to familiarize students with particular software or equipment were necessarily tied to having that technology available. Several instructors commented that having a co-instructor was desirable or even necessary when teaching a fully hands-on workshop, so that at least one instructor would be available to wander at the back of the room and help students who fall behind.

Benefits of Co-Teaching

One of the most frequently cited benefits of co-teaching was the opportunity to leverage the different skills of the co-instructors. Instructors who are experts in different subject areas or who worked in different departments frequently combined their skills and knowledge to create a unique workshop topic or approach. A benefit of this kind of collaboration was that co-instructors inevitably learned new skills that they could apply in future situations.

Another frequent collaboration that occurred among instructors involved one instructor who was a more experienced teacher working with an instructor who was a less experienced teacher. Similarly, more experienced instructors often partnered with those who had more practical experience and less teaching experience in a certain subject area; for example, one instructor commented, "He has all that practical experi-

ence but he didn't have any teaching experience. He wasn't feeling comfortable on his own. I wasn't feeling comfortable with the technical side." Both instructors benefitted from the collaboration and grew more comfortable teaching on their topic. Working together, they felt better prepared to answer a variety of questions from students. When instructors of varying levels of teaching experience co-taught together, they cited improved teaching and presentation skills as another benefit of the co-teaching relationship, a finding that is consistent with the literature about the professional growth benefits that come with co-teaching.[55] New instructors were able to learn on the job from more experienced teachers who offered feedback to them before, during, and after the session.

In classes involving technology or hands-on activities, co-teaching helped instructors teach people who were working at vastly different skill levels. While one instructor was conducting the lesson at the front of the classroom, the other instructor was able to give individual attention to those who were falling behind. Some instructors considered co-teaching to be essential for classes involving technology, as co-teaching helped to prevent interruptions that would disrupt the flow of the class. One instructor, however, observed that each co-instructor has to know the workshop content very well for this arrangement to succeed.

Several instructors felt that co-teaching created more energy in the classroom, partly through the dynamic exchange that occurred between instructors and partly because the instructors' different teaching styles served to mix things up or "add a bit of flavor," as one instructor observed. Co-teaching provided a change of pace that students seemed to like, and the dialogue that occurred between instructors often helped to initiate discussion among students. One more introverted instructor appreciated the energy injected into the session by his more extroverted partner, commenting that "It was tremendously beneficial to have him ricocheting around the room and generating the excitement." Another pair of co-instructors invited a third technology specialist to "pop in" to their session to give a demonstration. Not only did this help to change the pace of the workshop, but the technology

specialist, who had an energetic personality, helped to "liven up the crowd."

The instructors also believed that co-teaching allowed students to learn different perspectives about an issue, the importance of which has repeatedly been stressed in the co-teaching literature.[56] Instructors felt that they potentially reached different types of students by having instructors from different backgrounds working together in the same classroom. For example, one instructor provided an educational approach to a topic while another provided a technological perspective. One instructor felt that through co-teaching students were able to see that there were multiple experts that they could go to for assistance on a topic. However, another instructor expressed the opposite opinion: Because teaching is a way of establishing a relationship with participants in the workshops, she wanted to establish one expert as the go-to person for help in a subject area, and she found that co-teaching could interfere with this.

Finally, several other benefits of co-teaching were mentioned, including the ability to receive constructive feedback from the co-instructor,[57] assistance with dividing up longer sessions, assistance with brainstorming and strategizing about the workshop content, assistance with alleviating the intensity of teaching multiple sessions in a short time period, and establishing relationships with other instructors that could lead to future projects.

Co-Teaching – What Worked and What Did Not

Overall, most instructors thought that co-teaching was a good choice for their workshop topic. However, some observed that whether or not co-teaching was the best choice depended upon the workshop topic and the number of students in the class. One instructor believed that in certain cases, co-teaching could result in things becoming "messy" when only a limited amount of time was available to accomplish a certain task. Another thought that co-teaching worked well, but that the same sessions could work equally well if they were taught by a single instructor.

When discussing features or practices that facilitated a good co-teaching relationship, many instructors mentioned personalities that worked well together. Many thought that trust between co-instructors was essential. Several thought that a general familiarity with each other and comfort level were critical to the success of their efforts. For example, many felt comfortable and flexible enough to interject observations into their co-instructor's presentations or adjust their presentations to what their co-instructors had discussed. However, some observed that this kind of interaction would not have been possible if either they did not already have a comfortable working relationship with each other or one of the co-instructors had a teaching style that was not compatible with this kind of interruption.

One instructor felt that general agreement about the overall principles and approach to the topic was essential for a successful collaboration. However, several instructors agreed that having co-instructors with different backgrounds, experiences, and perspectives was helpful. "You don't have to have a total melding of minds," commented one instructor.

Similarly, some instructors thought that as multiple instructors were added to the collaboration, they ran the risk of delivering a disjointed message to students, and too much back-and-forth among instructors could potentially be distracting. While several instructors were happy with collaborations involving two or three instructors, those that tried collaborations among four people felt that this number was too confusing for students.

Finally, several co-instructors believed that feeling pressure to divide the content equally was a mistake. "It's not really about taking the whole amount of time and dividing it by the number of instructors you have," said one, while another observed that "You don't have to divide the front of the classroom time necessarily." Instead, instructors believed that the most successful collaborations played to each person's strengths and maximized stylistic teaching differences so as to create interest in students.

Survey of Students

A total of 63 survey responses were received to the post-workshop survey that was sent out in Fall of 2010, out of which 48 people responded to the question about the effectiveness of the teaching methodology. While many students commented about the general effectiveness of the combined teaching methods, nine specifically addressed the effectiveness of having multiple instructors in the classroom. Of the nine comments received from workshop participants, eight were positive, describing how having multiple instructors achieved the following: (1) helped provide individual assistance to students, (2) added more information to the session, (3) helped to establish a good pace for the session, (4) helped to keep the students' attention, (5) helped to "mix things up" by adding variety to the session, (6) provided additional subject expertise, and (7) helped to keep struggling students from falling behind ("multiple instructors was the only thing that kept me from getting lost"). Of the nine comments received, one was partly negative, stating that having multiple instructors was good but also "sort of distracting." The mostly positive responses of these students are consistent with previously cited studies which found that co-taught classes provided students with beneficial experiences that promoted learning and engagement in a number of ways.[58]

Discussion and Conclusion

Drawing from the instructor interviews, the literature of collaboration and co-teaching, and the overall Knowledge Center à la Carte experience, the authors have developed some guidelines for creating and facilitating positive co-teaching arrangements that can be used by librarians and other information professionals (Table 2). The Wilder Foundation's categories of factors influencing the success of collaborations provided a framework that was adapted and expanded to apply specifically to co-teaching relationships. The Wilder's "Membership" category was changed to "Partnerships," and a seventh category of "External/Long-Term" was added with the recognition that some of the institutional benefits of co-teaching extend beyond the scope of the immediate collaborative project. These guidelines are discussed below.

Table 2. Guidelines for Successful Co-Teaching Arrangements

Wilder Foundation Category	Guidelines for Co-Teaching
Environment	Understand the work conditions and priorities of other instructors.
	Provide administrative support and/or encouragement.
Partnerships	Pursue teaching collaborations with those of different skill sets, experiences, educational backgrounds, personalities, and perspectives.
	Consider the benefits to the institution of collaboration across departmental lines.
	Cultivate trust and demonstrate respect for each other's teaching styles and preferences.
Process and Structure	Share equal responsibility for the success of the instruction.
	Establish a division of duties that works for all co-instructors and maximizes the benefits for students.
	Choose the number of co-instructors with consideration for factors such as class length, number of students, role of technology, and room environment.
Communication	Spend time in joint brainstorming to uncover new opportunities for instructional topics.
	Engage in joint reflections upon the successes and failures of the collaboration for the purpose of improving both the teaching and learning experience.
Purpose	Establish common goals for the instruction.
Resources	Schedule appropriate amounts of planning time.
	Provide appropriate technological and logistical support for co-teachers.
External/Long-Term Considerations	Pair instructors from different departments that would benefit from greater knowledge of the other's departmental activities.
	Develop relationships that can translate into future collaborative projects.
	Approach co-teaching as an opportunity for professional development and growth.

Environment

- *Understand the work conditions and priorities of other instructors.* Co-instructors should understand the levels of administrative support and/or pressure under which their collaborators work. Because co-instructors often work in different departments, they may have varying scheduling commitments, expectations from supervisors, or other work stressors to which they must respond. Co-instructors should be sensitive to each other's working conditions and take them into account when planning to co-teach. In addition, instructors should consider and respect the departmental priorities of their co-teachers, as they may differ from those of their own departments.
- *Provide administrative support and/or encouragement.* Support, often on an administrative level, may be needed to ini-

tiate co-teaching relationships, especially in environments in which co-teaching has not been previously employed. In some cases, instructors may need to be encouraged to look for partnerships on their own, while in other cases, administrators might find it useful to suggest partnerships that could be beneficial. It can also be useful to create opportunities for instructors from different departments to interact together, which may lead to the development of partnerships.

Partnerships

- *Pursue teaching collaborations with those of different skill sets, experiences, educational backgrounds, personalities, and perspectives.* Students not only benefit from having co-teachers that bring a diversity of skills, experiences, and perspectives to the classroom, but they also enjoy the

variety and energy that co-instruction provides. In addition, differences among co-instructors can lead to the development of innovative instruction topics and approaches that capture students' attention and keep them engaged.

- *Consider the benefits to the institution of collaboration across departmental lines.* Collaboration across departmental lines can lead to numerous other opportunities that benefit the co-instructors, departments, students, and the institution as a whole. Building bridges between departments inevitably is more time-consuming and calls for more attention to be paid to building healthy relationships, but it can also provide long-term benefits.

- *Cultivate trust and demonstrate respect for each other's teaching styles and preferences.* Mutual trust and respect is essential for success in the collaborative classroom. Instructors may not appreciate every choice that their collaborators make, but they need to respect each other's choices and be willing to compromise for the relationship to be a success. If trust and respect do not exist among potential collaborators, then co-teaching is not a good choice for them.

Process and Structure

- *Share equal responsibility for the success of the instruction.* While teaching duties may be divided in different and sometimes unequal ways, all collaborators should be equally invested in the success of the instruction.

- *Establish a division of duties that works for all co-instructors and maximizes the benefits for students.* The co-teaching relationship should play to each instructor's strengths. There are numerous options for dividing teaching duties, such as presenting, providing individual assistance, having a dialogue, interjecting, demonstrating, etc. Co-instructors should consider the different options available to them in dividing the instruction, and they should experiment with their own ideas as well. Co-

instructors should consider how the division of teaching tasks will affect the overall learning experience for students.

- *Choose the number of co-instructors with consideration for factors such as class length, number of students, role of technology, and room environment.* Too many co-instructors can be distracting, and the transition between instructors may take too much time away from a short teaching session.

Communication

- *Spend time in joint brainstorming to uncover new opportunities for instructional topics.* An instructor from one department may have opportunities to observe student information needs or skill deficits that are not readily apparent to instructors from another department. In addition, instructors may have ideas that move from fantasy to feasible when matched to the existing knowledge of a potential co-instructor.

- *Engage in joint reflections upon the successes and failures of the collaboration for the purpose of improving both the teaching and learning experience.* It is often difficult to assess one's own teaching. Co-teaching provides a great opportunity for feedback from an experienced colleague. Even with the best of teaching experiences, a joint debriefing can uncover ideas for improvement and lead to experimentation with new pedagogical techniques.

Purpose

- *Establish common goals for the instruction.* Instructors should discuss common principles that underlie the instruction, as well as appropriate methods and approach. Co-instructors can best support each other's teaching when they fully understand their collaborator's process and share instructional goals.

Resources

- *Schedule appropriate amounts of planning time.* Although co-teaching does not necessarily require more planning time, it does require that a certain amount of planning time be arranged well in advance to account for the various schedules of the participants.
- *Provide appropriate technological and logistical support for co-teachers.* Staging successful workshops or classes involves a myriad of tasks that can distract from the business of teaching. These can include scheduling of rooms, marketing of classes, enrolling students, sending reminders, providing funds if needed, preparing technologies, or sending out student evaluations. Providing support to attend to these details makes it possible for co-instructors to focus on the teaching and not on the logistics.

External/Long-Term Considerations

- *Pair instructors from different departments that would benefit from greater knowledge of the other's departmental activities.* The process of developing and teaching a class provides an opportunity to exchange information on each department's services, skills, and overall goals – information that can foster interdepartmental understanding beyond the class at hand and uncover joint concerns and challenges.
- *Develop relationships that can translate into future collaborative projects.* A successful co-teaching experience can lead to multiple opportunities for later collaboration, both within the classroom and in other areas. Collaborators that have developed trust in each other's processes and goals are more likely to feel comfortable joining forces for future cross-departmental projects.
- *Approach co-teaching as an opportunity for professional development and growth.* Co-teaching provides learning opportunities for new teachers, especially when

paired with an experienced instructor. Those with limited teaching experience can gain increased skills, feedback, and confidence through the co-teaching experience. However, co-teaching is not merely of benefit to new teachers; clearly, all co-teachers may learn new skills and knowledge as a result of the collaboration.

Interviews with co-instructors brought forth numerous benefits of co-teaching and provided a foundation for the development of these co-teaching guidelines for librarians and other information professionals. However, this study is mostly limited to elucidating the instructor's perspective; a better understanding of the student perspective would provide considerable value. Further studies of co-teaching with librarians should analyze student responses to co-instruction, measure how different types of co-teaching affect student learning, and assess the impact of technology on pedagogical strategies and co-teaching arrangements.

It is essential that librarians and other information professionals continue to experiment with creative and unique approaches to teaching since they are increasingly called upon to teach a range of information and technology skills in a variety of settings. The experiences of the instructors in this study demonstrate that co-teaching provides numerous benefits: It enhances the learning experience for students, it provides a method for refining teaching skills, it promotes successful collaborations across departments, and it brings innovative ideas into the classroom.

Appendix. Interview Questions for Instructors

Background
1. What is your educational background? In what areas are your degree and experience?
2. Have you taught before and in what capacity? Do you have any training as an educator?
3. Do you have any experience with co-teaching? Have you co-taught classes or workshops before?

Teaching the Workshops
4. In workshops that involved co-teaching, how did you divide the teaching duties? What was your role?
5. How integrated was the content from co-instructors? Did you take turns teaching? Or did you go back-and-forth throughout? Please explain.
6. Did one person take the lead – either with organizing the workshop, teaching the workshop, or both? How did that work for you?
7. What is the Impact of technology on the way you chose to teach your workshop(s), the need for collaboration, or the choice of collaborators?
8. Did teaching your workshop involve collaborating across departmental lines? If so, then how did that work out for you?
9. In your view, was co-teaching the most effective choice for your workshop?
10. How did the teaching methodology (e.g., hands-on, lecture, demos, multiple instructors) affect the quality of the workshop?
11. If applicable, was the hands-on component effective in helping your students learn the skills being taught?

Teaching and Your Position
12. Is participation in Knowledge Center à la Carte in line with the mission of your position?
13. How does it fit into the mission of the institution (IT/Libraries), in your opinion?
14. Are you rewarded by your department for your participation?
15. Are there barriers/possible downsides to participating?
16. Do you see any personal or professional long-term impacts of the program? Did you learn new skills as a result of your teaching?

Support for Teaching
17. Are you getting the support you need?
18. What additional resources would be helpful, would enhance the program, or allow you to create new workshops?
19. After the first two workshop events we held a brainstorming session for instructors. Was this helpful?
20. Where do you envision this workshop series going in the future?

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