2011

Optimizing Our Teaching: Hybrid Mode of Instruction

Tatiana Usova
University of Alberta

Optimizing Our Teaching: Hybrid Mode of Instruction

Tatiana Usova
Head Librarian, Bibliothèque Saint-Jean
University of Alberta
usova@ualberta.ca

Abstract

The digital revolution changes the way we teach and learn. This paper introduces the concept of a hybrid course structure. It aims to show the benefits of blended learning and describes the course design used by the Bibliothèque Saint-Jean, University of Alberta. It is hoped this approach will assist other academic librarians in their choice of instructional models by presenting a rationale for combining onsite and online instruction, and by providing recommendations for the development and implementation of a course.

Keywords

information literacy; library instruction; hybrid course; blended learning

Introduction

Does our teaching keep pace with the changing world? In response to the 21st century's shift from print to digital culture many academic institutions are asking this question. The increasing integration of digital technologies in curricula and pedagogy provides opportunities for educators to do things that were not possible before and to construct new models of instruction. This results in major changes in the ways we teach and learn. Parallel to this, there is a trend in the North American education system to promote greater independence and autonomy of students.

As academic institutions adapt to changing conditions, so do their libraries. As educators, academic librarians must think about developing in learners the skills that will help them easily adapt to the changing information environment of the 21st century and thrive in a complex, fast-paced society. Information and critical thinking skills are paramount to students' success in the future.

Technological advances inspire librarians to improve existing services and to create new ones. Outlined below are several reasons why we need to demonstrate that we are keeping pace with change and making a shift in the way we approach our services and instruction:

- **Changing nature of library resources**. The increasing quantity of digital resources creates a paradigm where more information is used outside the library than inside, and most of the access to that information is virtual.
- **Development of technology tools**. The Internet has enormous power to stimulate learning. Digital devices transform our teaching in a thrilling way by helping instruction librarians to make the learning process interactive and fun. There is therefore a pressing need for us to ride the “e-learning wave" and to explore pedagogical uses of podcasts, wikis, blogs, social collaborative spaces and other Web 2.0 tools.
- **Shift to online course delivery**. The transition in defining the learning environment means that librarians are moving into the delivery of courses via online methods and offering educational classes in real and virtual instances. For example, at Campus Saint-Jean (CSJ), part of the University of Alberta (U of A), 90% of courses have an online presence of various kinds, and 95% of U of A students take at least one online course; on average, they take from 2 to 6 e-classes.
- **Changes in student population**. Students entering universities today belong to the born-digital millennial generation. For them, being in the virtual world is like being at home. Texting, instant messaging and social networking have become second nature to them. E-learning is critical to new generations of students. In the PBS Frontline video *Digital Nation*, Steve Maher from Chatham High School, Virginia, concludes: “If you think about the media environment that an average American teen lives in, to walk into a classroom that does not have any of this media must be like walking into a desert." Dissatisfaction with the university experience is often linked to the learning environment. As educators we therefore need to retool our teaching practices to show we care about students’ interest and engagement. Putting at least some course content online matches millennial students’ preferences in acquiring knowledge, and demonstrates our relevance to this changing world.

Taken together, these changes in technology, the behaviours of post-secondary students, and desired learning outcomes inspire librarians to construct new models of teaching. For these reasons, the current U of A Libraries’ Strategic Plan articulates e-learning and distance education as a priority. In library instruction the Plan supports bridging the gap between traditional teaching and new opportunities brought by technologies.

Some Background to Bibliothèque Saint-Jean Instruction

The Bibliothèque Saint-Jean (BSJ) serves the research and educational needs of Campus Saint-Jean, a unique campus of the U of A that delivers programs in a wide range of disciplines in French. The Campus has approximately 650 full-time students and its programs include education, social and pure sciences, fine arts and languages, engineering, nursing and business administration. The BSJ librarians offer many one-shot workshops when requested by faculty members. One important exception is

FRANC 221, a French language course, in which BSJ librarians offer several sessions of library instruction and employ the hybrid model. Information literacy is an embedded component of this course.

FRANC 221 is not a research course and therefore the rationale for providing library instruction in it may not be self-evident. The advantage for the BSJ is that it is a required course for all CSJ students, so we can reach almost every student on campus and begin building their Information Literacy (IL) competencies early in their academic career. As most students are in their first or second year of study, we have a unique opportunity to contribute to their academic success by introducing them to the research process at the beginning of their university path. For some of them it is their first encounter with research assignments that require the use of databases, so we are able to present library resources and services at the point of need. Being thus embedded in the mandatory language course, we acquaint students with materials that support and encourage their learning. Because the library instruction is aligned with the curriculum, and we always demonstrate this connection at the beginning of the course, students pay more attention to presented materials. To increase the resources covered, reinforce their comprehension, and provide variety in delivery modes, the BSJ has moved from a 100% face-to-face delivery format to a mixed learning environment in which about 40% of instruction is delivered using online elements. In total, two librarians teach five one-hour face-to-face sessions complemented by an online course: Biblio 100. As there are four to five sections of students taking FRANC 221 each academic term, the instruction sessions represent almost half the teaching load of the BSJ.

Explanation of the Hybrid Concept

Hybrid instruction is an innovative educational model, sometimes also called blended learning. It is defined as “the thoughtful integration of classroom face-to-face learning experiences with online learning experiences" (Garrison 96). This learning strategy combines live instruction with web-based delivery and allows instructors to make better use of classroom time, which is at an increasing premium these days.

More and more universities are adopting this format of course delivery. With increased instruction load and staff constraints, blended models continue to garner supporters. There is growing evidence of hybrid and online course effectiveness across different content and learner types. Means et al. argue: “The overall finding of the meta-analysis is that classes with online learning (whether taught completely online or blended) on average produce stronger student learning outcomes than do classes with solely face-to-face instruction" (18). When hybrid instruction is weighed against the traditional classroom model, “[t]he evidence is that students achieve as well, or better, on exams and are satisfied with the approach" (Garrison 100). A comparative study of three methods of instruction at the Oakland University library – live, blended and online – echoes the findings of other research: “The hybrid group showed the greatest improvement in performance, perhaps due to the combination of instructional methods, which likely appeal to diverse learning styles" (Kraemer et al. 339).

More and more instruction librarians use technology in creative ways to expand their classroom reach and to achieve better engagement with students. The hybrid model offers the advantages of online delivery without the entire loss of face-to-face contact because only some in-person meetings are replaced by virtual sessions. Face-to-face time is typically reduced by 50%, but this can vary from 10% to 90%. For the rest of the time, students work independently. The shift to online delivery strategies helps librarians support the learning styles of millennial students. By offering content in a familiar environment and in a variety of formats, hybrid approaches create multiple opportunities for students to learn and help to ensure greater learner interest in the presented material.

How Well Does Technology Serve Librarians' Instructional Goals?

Embracing new tools does not mean that librarians should throw out the old ones (especially those that enable us to achieve desired results), but we recognize that digital devices offer a richer and more appealing learning environment. At the same time, we acknowledge that some educators may be too quick to incorporate the latest popular technologies, which can become too distracting and can obstruct the learning process. While we need to be creative and experiment, our choices should be determined by established learning objectives. Effective learning occurs when we link teaching methods and appropriate uses of technology. It happens when we adhere to principles of responsible use of electronic tools and follow the philosophy of improving existing methods. In our instruction model at the BSJ we follow the standards of *The Seven Principles for Good Practice in Undergraduate Education* (Chickering and Gamson 3), which were developed more than 30 years ago and are still appropriate today. These principles state that effective teaching practice

- encourages student-faculty contact,
- develops cooperation among students,
- encourages active learning,
- gives prompt feedback,
- emphasizes time on task,
- communicates high expectations,
- respects diverse talents and ways of learning.

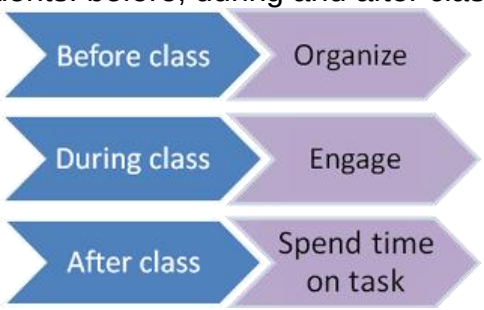
Blended or hybrid learning is effective because it aligns well with these established pedagogical principles. It adheres to these time-tested learning essentials and enhances them with technological tools.

Our hybrid model illustrates how incorporated principles of good practice can create an effective learner-centred educational environment. We reconstruct existing pedagogy to deliver the same content through different means. This mode of instruction helps accelerate the learning process, allows for prompt feedback and respects diverse learning styles.

The CSJ learning community is diverse by any measure, whether it is language, values, learning styles or information skills. In a blended environment of library instruction, students with various personalities and learning styles are able to succeed – especially hesitant and shy participants who may be overshadowed by more outspoken classmates. In addition, our face-to-face instructional components employ active learning strategies as we seek to foster enjoyment of learning while also preparing students for effective academic pursuits.

Hybrid Course Design: Nuts and Bolts

Our implementation of the hybrid model was based on the strategies developed by Ike Shibley, associate professor of Chemistry at Penn State-Berks, the author of “10 Ways to Improve Blended Learning Course Design." He defines three points at which instructors can engage students: before, during and after class.



Implementation at the BSJ followed his principles:

1. **Start with learning goals.** It is important from the very beginning to identify the desired results. What do we want our teaching to achieve? What exactly will we teach our students? How will we know that we have succeeded? At the BSJ we work on achieving all five Information Literacy Competency Standards developed by the Association of College and Research Libraries in 2000. We use them as a framework for both articulating and assessing our learning outcomes.

It is important to note that our hybrid strategy is a collaborative effort with the academic faculty because librarians are more integrated into the course FRANC 221 than in the case of one-shot sessions. This suggests it is essential for us to build a great working relationship with faculty. Consequently, the planning of library modules is carried out collaboratively with course instructors, and we maintain collegial relationships that help us understand both the user context and the course curriculum.

In that vein, we made changes a year ago to library instruction content in order to more effectively meet identified faculty needs for increased quality in the reference sources that students typically use to complete their assignments. With our collaboration, the faculty adjusted the curriculum requirements and insisted that students use certain resources in their projects, such as peer-reviewed articles from scientific journals. Now students are required to write an article based on the analysis of scientific literature and

to provide a bibliography of consulted sources. This makes the library instruction more relevant to them. We regularly work with the faculty to select appropriate information resources for introduction in the class. This partnership has enriched students' experience as learners.

2. **Create ways for students to learn before class.** Because a considerable amount of learning can be accomplished before class, one of our objectives is to encourage students to think and prepare ahead of time. With online tools we are able to engage them and to maximize the efficiency of our face-to-face interactions. To facilitate increased learning, some work is assigned prior to class so that learners start to familiarize themselves with the topics at hand through self-directed learning. Instructional and learning experiences are carefully planned. For FRANC 221 we developed a course webpage that provides "one-stop shopping" for students. It comprises a course plan with learning goals, topics, and assignment due dates, as well as a list of class materials, tutorials, activities and links.

Building a systematic course structure is an important factor in determining how well students are able to learn. In our hybrid learning model, after the first face-to-face session, students are expected to complete the online mini-course Biblio 100 which is built on the Moodle platform. This mini-course has 4 sections comprised of several 2-3 minute tutorials and a small number of online readings. The web-based tutorials, developed with the help of Adobe Captivate, are used to instruct undergraduates on the principles of online catalogue searching, finding reserve materials, evaluating sources and understanding the physical layout of the library. Each section is accompanied by a quiz that measures student understanding of the materials. Students are expected to view the online content and complete quizzes before the second librarian-led class.

The virtual landscape of Biblio 100 is designed to incorporate diverse learning styles. Students work by themselves, at their own pace and at their convenience, without time constraints or pressure from more gifted peers. When working on online quizzes they have time to think before completing the answers. Results are delivered immediately. The prompt feedback helps to accelerate the learning process.

3. **Create ways for students to learn in class.** Face-to-face meetings reinforce learning. We build on the knowledge acquired by students through pre-class assignments with active and engaging exercises in class based on the objective of applying knowledge rather than memorizing concepts and strategies.

Our first face-to-face meeting is a general introductory session laying out the course plan and familiarizing students with online elements. Librarians make students aware of what will be covered in each class and what we expect from them. We look together at the course page and review the learning goals, assignments and due dates. Since the faculty offer only in-class instruction, at our first meeting we provide basic technology training to ensure that students can access Biblio 100 and have the knowledge to succeed in the online portion of the course. Librarians then demonstrate how to search the catalog and give students a brief tour of the library's physical collections. Subsequent sessions are targeted at the purposeful use of resources, introducing students to the basics of research and leading them to gradually develop IL skills and an understanding of information.

In the course, students are given meaningful assignments that match their needs and literacy levels. They execute a search and retrieve information related to specific curriculum assignments, and then analyze and evaluate retrieved content. Our goal is to create an active classroom through the design of challenging tasks and active learning activities, which include database search exercises, group presentations of relevant websites and preparation of bibliographies.

A review of established learning theories reveals that effective learning is based on the following building blocks:

Motivation is a critical factor in effective learning. The more students are engaged and focused on the topic at hand, the more they will learn. Our perception is that students

remember exciting stuff, so it is crucial to help students retain information in engaging ways.

While we have a brief PowerPoint presentation at the beginning of sessions two and five, taking into account that a few students do not come prepared and could therefore be left behind, this part is relatively brief. We move quickly to interactive activities in which students can participate directly. We are mindful that classroom dynamics and outcomes change with individual participation and involvement. For example, sometimes we play a Jeopardy game for reviewing class material – a great way to maintain students' enthusiasm and excitement. The game is fun and being engaged in a competition, students do not even realize that they are learning. Another interactive tool that fits well with an interactive approach is Poll Everywhere. We use this free audience response system to quickly check what students learned at home or in class and to reinforce a more active learning environment.

In the face-to-face class we provide learning-by-doing opportunities rather than allowing students to simply sit and watch. Trying things out encourages students to find the appropriate search strategies and apply them in the future. For example, after presenting a subject guide with relevant databases, we ask students to find materials on the topic at hand and then share their experience. At home they might turn to Google, but library instruction is geared to introducing online databases and specialized materials that serve their discipline. Instead of devoting class time to presenting database search strategies we let students explore on their own with the instructor's role framed as one of learning support. Sessions are held in the library instructional lab with a computer for each student. Every learner has all the necessary tools to be autonomous and perform individual searches. Sometimes we ask students to work in groups of two, which we have observed increases their engagement in the learning process.

Time on task is an important factor in keeping students focused. Therefore, after the work is completed, selected individuals or groups are asked to present their findings, and peers are encouraged to give suggestions on improving the search strategies and refining the results. Students are invited to brainstorm responses to questions such as: What sources were found? Which of them are primary sources? What are the author's credentials? What is the difference between the search results when library tools are used compared to Google? These questions encourage students to think about the information they have retrieved and to evaluate their sources. Students learn the skills of analysis by being encouraged to critically compare and evaluate the results of their work.

4. **Create ways for students to learn after class.** This principle implies reflection and analysis of achieved results and outcomes. Accordingly, our hybrid model includes weekly assessments. Students usually spend time on an after-class task that has an online component, and they are given an assignment that requires a database search or the completion of an online quiz. Library handouts and online tip sheets help students

complete tasks successfully. These types of tasks encourage reflection and meaningful interaction with the presented material.

5. **Use multiple forms of communication**. In a hybrid course, as mentioned, we rely on both online and in-class communication. Computer-mediated communication has to date been limited to email, which we use to answer students' questions on assignments and course materials, as well as to correspond with the faculty. Some educators prefer to use chat, blogs, wikis and forums, and it is recognized that any and all communication media can be appropriate if they are thoughtfully aligned with pedagogical and curricular objectives. For us, email has so far served our communication needs well.

6. **Encourage collaboration.** The opportunity to collaborate with peers motivates students. Group work and peer-to-peer interactions are at the core of the hybrid model. Students work together on presentations of assigned websites and on preparation of bibliographies. In the process they share experiences, exchange ideas and support each other's efforts. In a collaborative learning environment such as this, they have access to a greater knowledge base than when they work individually. This is one of the benefits of group activities.

However, it should be recognized that some students become frustrated when they are paired with others, and it is important that instructors realize there is a teaching moment in such situations: these students can be encouraged to acquire the soft skills of working in a team environment.

7. **Utilize online resources**. Like most instructional models, we require that students access knowledge in a variety of forms, both print and digital. However, considering millennial students' proficiency with online tools, as previously mentioned, we give priority to virtual resources rather than to print content, and, accordingly, teaching materials include research databases, websites, blogs, online videos, and so on.

8. **Utilize both low- and high-stakes grading.** A blended course benefits from multiple assessment measures, and there is a wide array of choices for helping us achieve our objectives. Low-stakes grading includes online quizzes that test students' understanding of material and offer formative feedback. The multiple choice answers to the quizzes rotate, so we are not concerned with possible cheating. Poll Everywhere helps to check learners' progress in class. Later, there is a written assignment that provides solid evidence of the students' understanding of materials which is graded by the academic faculty. The results are presented to students at the last face-to-face meeting.

The hybrid model is not only about the assessment of students' progress and knowledge, but it is also an evaluation of instructors' work. Student feedback is part of the student-teacher collaboration. We collect and review informal qualitative data via classroom observation, email comments and face-to-face conversation. At the end of

the course, as part of quality assurance, we offer students the opportunity to fill in an online survey which is created with the help of Wassail, an open-source software product developed at the Augustana Library, U of A. The advantage of Wassail is that it allows data storage and comparison of different groups and years. The survey covers areas of learner satisfaction, teaching approaches and lessons learned. These various sources of feedback, whether positive or negative, help us to grow, to improve, and to shape our sessions. For example, a year ago we adjusted the library instruction content to better meet learners' needs. We dropped a module on Refworks and added some interactive exercises to in-class instruction.

We also encourage academic faculty to provide informal feedback about our teaching methods and learning activities. Each year we hold meetings with the faculty to conduct a program assessment, reflect on practices and determine the best balance between online and face-to-face components in this blended learning environment.

9. **Seek assistance from professionals**. It is important to note that the process of creating a hybrid course can be time consuming and labour intensive. Responsibilities for content creation, delivery, assessment design, grading, etc., require a heavy time commitment; there are always issues of resources and prioritizing. The best strategy is to seek assistance from professional colleagues. At the BSJ, we work with information technology staff to upload the course content to the Moodle course management system. We also team up with course instructors and, sometimes, fellow librarians to design assignments. All of these efforts yield positive results.

10. **Stay organized**. With so many elements in the course, effective structure and timely communication are vital to success.

Conclusion

Our experience to date suggests that the hybrid course model represents a powerful approach to instruction. Anecdotal evidence suggests that students' results support a blended learning strategy. We believe it is an excellent fit for library instruction, especially in times of diminishing resources (i.e., staff and classroom time). The combination of online and face-to-face elements results in positive feedback from students, particularly with respect to autonomy and the flexibility of online study, as well as the dynamics and the collaborative nature of the class work. Feedback from the academic faculty also supports our approach to course structure.

In our experience, technology has helped to "expand the classroom" and to extend the traditional model of instruction to enhance teaching and learning effectiveness. We are confident that almost any course can benefit from a blended design. There are multiple ways to implement the hybrid model, depending on contextual requirements and personal preferences.

The challenge is always to find the optimum mix of online and in-person instruction. At the BSJ, we continue to work on finding the right balance. Similar to many others who are pursuing innovative teaching and learning strategies, we are only at the beginning of understanding what the teacher should be doing online. For example, it has become apparent that the assessment component of our work should be moved online to complement online instruction. Classroom assessment has shown that not all students view tutorials before starting work on quizzes, so the presentation of new material through online tutorials does not always bring positive learning results. While the current course management software allows us to see who accesses tutorials and when, there is no mechanism to determine whether students worked through them actively and systematically.

Nonetheless, our experience is growing, and we continue to experiment. Pursuing innovation is a rewarding experience. We use technologies and a variety of teaching techniques to advance the effectiveness as well as the efficiency of our library instruction. We hope that our experience will inspire others to try new approaches and create online modules that catch learners' interest and help them progressively develop the information literacy skills leading to professional and personal success in the 21st century.

Works Cited

Association of College and Research Libraries. "Information Literacy Competency Standards for Higher Education." *ACRL*, 18 Jan, 2000. Web. 10 June 2011.

Brendle-Moczuk, Daniel. " Encouraging Students' Lifelong Learning Through Graded Information Literacy Assignments." *Reference Services Review* 34.4 (2006): 498-508. *Library, Information Science & Technology Abstracts*. Web. 11 June 2011.

Chickering, Arthur, and Zelda Gamson. "Seven Principals of Good Practice in Undergraduate Education." *AAHE Bulletin* 39.7 (1987): 3-7. Print.

"Digital nation: Life on the virtual frontier." *Frontline.* PBS. 2 Feb. 2010. Web. 19 June 2011. <http://www.pbs.org/wgbh/pages/frontline/digitalnation/view/>

Doering, Aaron, and George Veletsianos. "Hybrid Online Education: Identifying Integration Models Using Adventure Learning." *Journal of Research on Technology in Education* 41.1 (2008): 23-41. *ERIC*. Web. 9 July 2011.

Garrison, Randy, and Heather Kanuka. "Blended Learning: Uncovering its Transformative Potential in Higher Education" *The Internet and Higher Education* 7.2 (2004): 95-105. *Elsevier Science Direct*. Web. 1 Aug. 2011.

Kraemer, Elizabeth, et. al. “The Librarian, the Machine, or a Little of Both: A Comparative Study of Three Information Literacy Pedagogies at Oakland University." *College & Research Libraries* 68.4 (2007): 330-342. *Library, Information Science & Technology Abstracts*. Web. 15 Sept. 2011.

Martyn, Margie. “The Hybrid online model: Good practice." *Educause Quarterly* 26.1 (2003): 18-23. *ERIC*. Web. 13 June 2011.

Means, Barbara, et al. “Evaluation of Evidence-Based Practices in Online Learning: A Meta-Analysis and Review of Online Learning Studies." *Report, US Department of Education*. July 2009. *Library, Information Science & Technology Abstracts*. Web. 8 June 2011.

Reznowski, Gabriella. “The Librarian's Role in Motivating Language Learners: Tales from an Eastern Washington College Town." *Reference Services Review* 36.4 (2008): 414-423. *Library, Information Science & Technology Abstracts*. Web. 15 July 2011.

Shibley, Ike. “10 Ways to Improve Blended Learning Course Design". *Magna Online Seminar.* Magna Publications. 3 Nov. 2009.Web. 11 Mar. 2010. <http://www.magnapubs.com/catalog/blended-learning-course-design/>

Simard, Stephanie. “An Information Literacy Program Built for Relevance and Purpose." *Reference Services Review* 37.4 (2009): 386-394. *Library, Information Science & Technology Abstracts*. Web. 19 June 2011.

Walker, Billie E. “This is Jeopardy! An Exciting Approach to Learning in Library Instruction." *Reference Services Review* 36.4 (2008): 381-388. *Library, Information Science & Technology Abstracts*. Web. 10 July 2011.

Young, Jeffrey R. “Hybrid" Teaching Seeks To End the Divide Between Traditional and Online Instruction." *Chronicle of Higher Education* 48.28 (2002): A33-A34. *ERIC*. Web. 9 May 2011.