INTRODUCTION

Instructional Design for librarians is not always covered in graduate programs, but it can be supported through professional development and dedicated self-reflection. Librarians teaching semester-long courses as the primary instructor have an opportunity to develop unique instructional design methods to engage students. There is a high transferability of concepts learned from semester-long courses to typical librarian instruction like one-shot sessions, embedded library instruction, and/or the creation of online learning objects.

At The University of Baltimore, librarians serve as primary instructors for INFO 110: Introduction to Information Literacy, a 3-credit, semester-long course for first-year undergraduate students. The University of Baltimore serves students representing diverse perspectives related to culture, socioeconomic status, age, and educational identity. INFO 110 is designed to occur at the beginning of our students’ academic journey at The University of Baltimore, which aligns with High-Impact Practices (HIPs). Gretel Stock (Dean of University College at University of Wisconsin-Stevens Point) advocates for librarians as full instructional partners, because we offer a breadth of knowledge that complements the depth of knowledge of subject-specific faculty. These qualities make us well-suited to meet the needs of students in INFO 110.

Using concepts related to the Association of College and Research Libraries (ACRL) Framework for Information Literacy for Higher Education, High-Impact Practices (HIPs), inclusive pedagogy related to Universal Design for Learning (UDL), and instructional design methods derived from user experience (UX) research, I developed an innovative instructional variation for our university’s Introduction to Information Literacy curriculum. This paper is a description of that work. Throughout this paper, I use Huey Lewis and the News songs to highlight sections. I include their hit song, “It’s Hip to Be Square,” in the title as an allusion to how High-Impact Practices (HIPs) and the ACRL Framework (frames can be square) relate to our instruction at The University of Baltimore. You will find a complete playlist of songs used throughout this paper in the reference list. Examples in this paper come from scholarly literature and my own experience; I hope they help guide the development of better library instruction for other librarians.

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Buzz Buzz Buzz: Student-Centered Instruction and Intersectional Pedagogy

Before becoming a librarian, I worked as a teaching assistant for a Montessori school in a classroom for children with Autism and I taught art outreach workshops to K-12 schoolchildren through the Indianapolis Art Center. These professional experiences helped me develop intersectional pedagogical practices that guide my library instruction sessions. Student-centered instruction is at the core of Montessori practice and is a central tenet in Universal Design for Learning (UDL). As I developed library instruction sessions, I began to search for theories related to the neuroscience of how we learn, relational instruction, and best practices for lesson planning. I was accepted into the 2013 cohort for the Teaching Track at ACRL Immersion and I collaborated closely with faculty in the College of Education during the first eight years of my library career. As a result, I have a strong foundation of theory and practice and I continue to seek out new theories to include in my pedagogy at The University of Baltimore.

The academic library world focused on the ACRL Framework for Information Literacy for Higher Education concepts (known as the Framework) since before their implementation in 2016. The switch to the Framework signaled a shift to reflective practice and a move from skill-building to learning outcomes. Char Booth’s book, “Reflective Teaching, Effective Learning,” was published in 2011 and advocated using cycles of self-reflection to improve library instruction. Several more recent studies focused on the effects of classroom presence, instructional areas as socio-cultural spaces, the effectiveness of shared research and collaboration, and scaffolded instruction. While some of these concepts were borrowed from other disciplines, they all focused on the importance of reflective, student-centered, iterative design for learning and instruction.

Finally Found a Home: Instructional Design at The University of Baltimore

The pedagogical foundation described above is part of what drew me to teaching at The University of Baltimore. During my first semester as an INFO 110 instructor, I designed my curriculum using a template from a library colleague as a guide. As part of our departmental assessment of student learning objectives, we were encouraged to gather artifacts. Artifacts are usually course assignments, worksheets, or other tangible evidence of student application of learning objectives. I chose to include reading reflections, in-class worksheets, an individual research paper, and a group presentation. The group presentation was intended to align with what Medwell and Wray saw as a connection between teaching research methods and positive learning outcomes, specifically that “conducting [shared] research was a significant learning event … and that through working together, [students] were able to analyze their development as researchers and their learning during the research process.” The class was taught in-person once a week during the Spring 2019 semester, so group work allowed students to develop closer connections to others in class.

Before beginning course work, I asked students to define and develop guidelines for our instruction in INFO 110. This relational instruction technique was borrowed from InterGroup Dialogue (IGD) practices and was designed to help students engage with the learning environment. In their work on critical inquiry, Garrison, Anderson, and Archer defined a collaborative community as “questioning but engaging, expressive but responsive, skeptical but respectful, and challenging but supportive.” This aligned with IGD, UDL, UX, and HIP concepts and demonstrated that the goal of good instruction focused first on student engagement. Spending time at the beginning of class to learn more about student interests increased student engagement and improved student learning outcomes. Students in INFO 110 shared their expectations for me, their personal interests, and their expectations for each other by building guidelines together.

The Center for Excellence in Learning, Teaching, and Technology (CELT) at The University of Baltimore led a faculty development group focused on High-Impact Practices (HIPs) and Professional Pathways alignment. I was invited to join in 2019 and asked to ensure that INFO 110 aligned with HIPs and with new university goals focused on career trajectories. Through collaboration with faculty from across the university and within
the library, training sessions, and required deliverables, I was able to design a new iteration of INFO 110 to beta-test in Fall 2019.

The Professional Pathways at The University of Baltimore include Communication and Design; Law, Justice, and Public Affairs; Business and Entrepreneurship; Cybersecurity, Gaming and Technology; and Psychology, Health, and Human Services. The HIPs that were encouraged by CELTT included Collaborative Assignments and Projects, Community-Based Learning, Learning Communities, and Common Intellectual Experiences. My redesigned syllabus included research focused on problems supplied by a community partner and created by a group of students from each of the Pathways. In order to encourage representation of knowledge through multiple modes of communication, students were asked to write a traditional research paper as a group and then present that research to the community partner. We used peer-review techniques in class to evaluate group research papers and invited our campus Career Center to judge the “dress rehearsal” for the final presentation. Students in the Fall 2019 section were encouraged to tie their understanding of research methods to future scholarly and vocational skills and to demonstrate their understanding of student learning outcomes through application.

Spring 2020 and Fall 2020 sections of INFO 110 followed a similar structure (with modifications based on student feedback) and focused their research on different community partners. COVID-19 moved my in-person class to a synchronous, online class during the Spring 2020 semester and university regulations kept my Fall 2020 instruction online and synchronous. Our campus regularly supports online education, so transitioning to Zoom for instruction sessions was well implemented. While my students in Spring 2020 faced some challenges to internet access, they were able to overcome them and to participate fully in INFO 110. Fall 2020 students were prepared to learn online and started the semester with the expectation that we could not meet in person. Garrison, Anderson, and Archer describe best-practices for online instruction in an asynchronous, text-based environment. They focus on the core concepts of cognitive presence, social presence, and teaching presence, and note that these concepts are important for effective instruction in any mode. We were able to maintain presence during COVID-19, to implement flexible instruction methods to accommodate change, and to improve learning outcomes with iterative design.

METHODOLOGY

Stuck with You: Using Prior Knowledge in INFO 110

The Association of College and Research Libraries (ACRL) Framework for Information Literacy for Higher Education is collectively known as the Framework. Although it was officially adopted in 2016, the concepts were in use prior to their official implementation, and they were designed to replace the widely-used checklist of standards. The Framework includes six threshold concepts that relate to information literacy instruction, including: Authority is Constructed and Contextual, Information Creation as a Process, Information Has Value, Research as Inquiry, Scholarship as a Conversation, and Searching as Strategic Exploration. Scholars in librarianship used the Framework to compare epistemologies, guide critical thinking, embed threshold concepts into instruction, introduce socio-cultural concepts, and map course materials to threshold concepts. At least one scholar outside of librarianship underscored the importance of Scholarship as a Conversation in their Honors research courses. Including the Framework in my instruction sessions reminded me to focus on the core ideas of information literacy instruction and helped students understand why we were covering specific material in class.

Another pedagogical tool that I brought with me to The University of Baltimore is UDL (Universal Design for Learning). UDL is derived from the practice of Universal Design, which came from the inclusion of Americans with Disabilities Act (ADA) design principles into architecture. Although we did not explicitly use UDL in my special education classrooms, Universal Design was applied to education in order to develop instructional methods that reach all students and include children with different needs. Librarians, including myself, have shared research on UDL for library instruction at past conferences and in library literature. Hilary Snow applied Universal Design for Learning and High-Impact Practices to Asian studies and art history courses in the Honors College at a large, public, university to improve feedback and develop community. I have practiced Universal Design for Learning since participating in a faculty professional development cohort in 2014.
UDL rejects the notion that there is an average student and encourages instructors to uncover the differences within their classrooms to help students learn in a way that works best for them. Including this concept at the university level reminds me to allow students to share their strengths and opportunities for improvement with me instead of expecting certain students to conform to stereotypical behaviors associated with their identities. UDL and the Framework complement each other, and HIPs add specific practices that fit within the practice of Universal Design.

The Framework and UDL were already part of my instructional practice when I began teaching INFO 110, so I continued to use them to reinforce concepts and develop lessons that reach all students. One of the ways that I applied the Framework included embedding concepts within my presentation slides. When we discussed citations, first we reviewed the threshold concept Information Has Value and I mentioned that “Experts understand their rights and responsibilities when participating in a community of scholarship” and that “learners … value the skills, time, and effort needed to produce knowledge.” Allowing time to introduce the reason behind citations meant that students understood why citations were important, and repeating this throughout the semester reinforced the concept for students.

Applying Universal Design for Learning became an integral part of my practice. Some of the ways I incorporated UDL in INFO 110 include activating prior learning, offering flexibility with assignments, representing information in multiple ways, and repetition of concepts to enhance conceptual application. While students in INFO 110 must demonstrate the application of our student learning objectives through specific assignments, I designed those assignments to allow them to practice application before submitting their final projects. Scaffolding instruction is a UDL practice. In INFO 110, students learn about lateral reading while we discuss how to find and identify sources on the library website. Practicing lateral reading before submitting their final project allows me to see where students need additional instruction, to include that instruction in class, and to connect with the student through individual feedback. This is one example of how UDL helps students reach their potential.

**HIP to be Square: University Pathways and High-Impact Practices**

HIPs have been shown to increase student engagement (including students from under-represented populations), enhance learning experiences, and encourage student retention, so The University of Baltimore chose to use them to improve instruction on campus. George Kuh introduced High-Impact Practices (HIPs) in 2006 as part of the National Survey of Student Engagement (NSSE) annual report and in 2007 in the Association of American Colleges and Universities (AAC&U) report. The ten HIPs included initially were: First-Year Seminars and Experiences; Common Intellectual Experiences; Learning Communities; Writing- and Inquiry-Intensive Courses; Collaborative Assignments and Projects; Undergraduate Research; Diversity/ Study Away/ Global Learning; Service Learning/ Community-Based Learning; Internships and Field Experiences; and Capstone Courses and Projects. The ePortfolio was added after the original HIPs were published. Although institutions spend 60% more on HIPs-enhanced courses, they reduce the cost of graduating a student by 11% and improve the chance that the student will graduate.

HIPs have been included in scholarship focused on Academic Libraries, Higher Education, and Public Libraries. In higher education, several examples stand out. Biber notes that HIPs (Service Learning, Field Experiences, Collaborative Assignments and Projects) were used to support the creation and staffing of a Wolf Wellness Lab (WWL) and meditation room at the University of West Georgia. Coble, Mason, Overholser, and Gwaltney utilized HIPs (Common Intellectual Experiences, Learning Communities, and Service Learning/ Community-Based Learning) to enhance learning for an Ed.D. cohort during a site-visit to Montgomery, Alabama to discuss anti-racist pedagogy. Another teacher-preparation program for undergraduate students identified six HIPs (Learning Communities, Writing- and Inquiry-Intensive Courses, Collaborative Assignments and Projects, Diversity/ Global Learning, Service Learning/ Community-Based Learning, and Internships and Field Experiences) that aligned with their applied learning outcomes. Education undergraduate students at the University of Pittsburg-Bradford were asked to design, review, re-write, and present one STEM-based children’s book to students in local classrooms and at the public library (Service Learning/ Community-Based Learning, Collaborative Assignments and Projects, and Field Experiences).
Library literature about HIPs includes two papers that focus on the inclusion of HIPs in for-credit courses taught by librarians. Adams and Wiley at Iowa Wesleyan University used assessment practices to support the inclusion of information fluency (IF) as a HIP and to create an online, credit-bearing, stand-alone information literacy course that aligned with university needs. At Oakland University, Hess and Greer applied the ADDIE model to integrate HIPs into a four-credit information literacy course. Thirteen other papers included the use of HIPs in research and building design, training peer mentors or student workers, campus engagement, or study abroad, and looked at HIPs in the context of libraries from the dean’s perspective, or history instruction. Clearly, HIPs are being used in library settings and librarians have an opportunity to broaden the discussion of library instruction and HIPs inclusion with more scholarship.

Including HIPs in my iteration of INFO 110 started with a focus on Community-Based Learning and Collaborative Assignments and Projects. As I assessed my HIPs-aligned course in Fall 2019, I began to see how all sections of INFO 110 include several HIPs: Common Intellectual Experiences, Writing- and Inquiry-Intensive Courses, and Undergraduate Research. I am investigating the inclusion of ePortfolios in asynchronous, online instruction for INFO 110 to encourage students to share their research with each other, to encourage better production and editing practices, and to allow easier access to multiple means of representation for research products. Community-Based Learning in INFO 110 allowed students to connect with existing campus partners in a way that encouraged deeper thought about their connections to Baltimore City, to develop research and presentation skills that they could use in future careers, and to tie individual areas of interest to real-world applications. Working as a group allowed students to share the workload, identify strengths in group members, and produce more in-depth research.

**Workin’ For a Livin’: Ongoing, Self-Reflective, Iterative Revision of INFO 110**

UX (User Experience) tenets are aligned with the iterative instructional ideas of Char Booth, have been discussed in library scholarship, and provide another example of design that can be applied to instruction, service, and library practice. One of the major practitioners and thought leaders in UX is Don Norman. His identification of “Norman Doors” is a good illustration of how design impacts usability. Norman Doors include design features that obfuscate their use, their directionality, or their purpose. For example, our library was redesigned recently. The door to my office is made of clear glass on pivot hinges (hinges that sit at the top and bottom of the door instead of between the door and the frame), has a full-length bar that runs from the top to the bottom of the door on the outside, and a door-wide bar that runs from side-to-side on the inside. Students can see me inside my office, but they think the door is locked because the long bar signals “pull” instead of “push.” Norman Doors often require signs or instructions to aid usage. I have written “Push” on my office door to help alleviate confusion.

User Experience is also part of our Information and Interaction Design program at The University of Baltimore. I entered the Doctor of Science program in the Fall of 2019 and have learned about the neurological, psychological, and social aspects that affect user experience, user research methods, and project management skills. Jarret and Gaffney focus on how form design impacts cognitive load and usage, which applies to instructional design and lesson planning. Johnson and Ware delve into the complexities of the human visual system, neuroprocessing, and our psychological predisposition to reject unknown information. Medina and Wolf focus on how our brains process information and language, especially learning how to read. A recent publication by Schmidt and Etches goes into detail about how UX can be applied to libraries. Overall, I have learned that design affects student learning outcomes in subtle and pervasive ways.

As I learned new concepts related to User Experience, I began to apply them to my design of learning modules, slides, and worksheets. I experimented with a visualization of our shared goals during the Fall 2019 semester and continued to include related images on slides that denote subjects or sections. After learning that humans are more motivated when we know what is left on our task lists, I started including slides and reminders that detailed which assignments were left in the semester. I used positive framing of feedback, which aligns with UDL, to encourage changes to assignments and papers. As a visual learner, I have often relied on images to convey meaning. UX encourages us to use those images with intention so that they do not distract from our instruction. In Fall 2020, I included information from a user research study on voting behavior in Baltimore...
City in our instruction sessions for INFO 110. I look forward to including additional UX practices in my course design as I learn about them and to continuing to modify my practice based on feedback from students.

OUTCOMES

Perfect World: Community Partnerships Improve Research

Over the course of three semesters, our INFO 110 students have worked with Moveable Feast, Pride Center of Maryland, and the League of Women Voters to identify issues and produce research products with solutions focused on community needs. Kuh’s Community-Based Learning practice focuses on these strategies and relates scholarship to good citizenship, work practice, and life skills. Our community partner visited our classrooms to engage with students in the Fall 2019 and Spring 2020 semesters; we interacted virtually with the League of Women Voters site in Fall 2020.

Another level of community engagement involved the continued participation of our Career Center in INFO 110. In Fall 2019, the Career Center visited class to judge student presentations before they presented to Movable Feast. After the presentation sessions, the Career Center returned to share information on interview preparation, including presentation skills and dressing for success. The Career Center returned for the final presentations and gave feedback about student improvement between the first and second presentation. This partnership allowed students to develop familiarity with essential campus resources, to link classroom concepts to life skills, and to hear feedback from well-regarded professionals. Based on survey results from students in the Fall 2019 section, I invited other campus partners to introduce themselves and their services to the Spring 2020 class. The Writing Center shared information about review sessions and the Baltimore Neighborhood Initiatives Alliance (BNIA) shared suggestions for researching the LGBTQIA+ community. Student papers improved even more when a review session with the Writing Center was included twice during the semester and required as part of the course assignments. Maintaining the community-partner model in the future depends on the availability of willing community organizations and my ability to tie research to their core missions.

Best of Me: New Focus Led to Better Instruction

At the end of each semester, students complete a course evaluation and a survey about our classroom. The course evaluations are administered by the university and include standard Likert scale assessment of the instructor and student understanding of material. Except for Spring 2020 (the semester that COVID-19 first impacted our instruction), scores for instruction and understanding rose steadily. The survey includes anonymous information about student preparation for class, what students liked, what they would change, and what guidance they would give to future students in INFO 110. Students suggested more meetings with the Writing Center in Spring 2020, so I included two mandatory sessions in Fall 2020. Students asked for more time with the community partner in Fall 2019, so the Pride Center of Maryland was invited to class before we started research in Spring 2020.

In addition to student feedback, CELTT encouraged participation in a faculty cohort called Promoting Online Excellence (POE) Lite during the Summer 2020 session, which led to a deeper alignment of learning objectives with HIPs, assignments, and student engagement. I began using the Remind app in Fall 2020 to encourage better communication with students outside of office hours. Students could reach me with questions about assignments at their point of need, which decreased frustration, improved relationships, and produced better assignments.

I also created options for students to improve their final grade each semester, including an optional final exam focused on source evaluation, a COVID-19 bonus, and increasing the total number of points to 120 (with a grade range from 0-100) to allow room for learning from mistakes and missed assignments. Intentional design encourages students and instructors to remain responsive to each other's needs. UDL and UX guide lesson planning so that all learning styles are engaged, while HIPs and the Framework provide best practices. Student-centered instruction has allowed me to change the content and style of my curriculum based on guidelines determined at the beginning of each semester and using weekly student feedback.
AREAS FOR IMPROVEMENT

Trouble in Paradise: Controversial Subject Matter

Two of our community partners built their missions around issues facing the LGBTQIA+ community: Moveable Feast began as an AIDS food support group and the Pride Center of Maryland grew out of the gay and lesbian community in Baltimore. Students seemed to engage with concepts and content in class, but one student course evaluation mentioned discomfort discussing the LGBTQIA+ community. Despite this discomfort, students completed their research assignments using credible sources. In the future, I plan to check in with students individually at the beginning of the semester to address any concerns.

For all three sections of INFO 110, many of our students were in Pathways with majors that seemed to be unrelated to our research. Through intentional discussion and reflection papers, I was able to help them begin to build connections between our research and their future careers. Working with the Career Center helped make those connections more explicit. Last semester many students were approaching the election with incomplete understanding of voting policies and procedures. Learning about voting in Maryland during the election season resulted in a deeper student commitment to participating as an informed voter. Although students were hesitant to produce research at the beginning of these barrier events, we were able to find ways to move forward after focusing, communicating, and strategizing. Building the class together is a great way to increase engagement and allows me to change course as needed.

Change of Heart: Group Dynamics are Variable

The one area that seems to cause frustration for any class is group work. Intra-group dynamics were sometimes difficult. Creating balanced groups with students from each pathway, different levels of academic experience, and a variety of majors took a lot of planning. Despite my best efforts, some groups were not successful. In our 5-person Spring 2020 section of INFO 110, what began as two groups of three students, changed to one group of five when one student dropped the class. Sometimes there was an uneven distribution of research and writing or a clear gap in the quality of work between sections in papers or presentations. I developed a weekly rating and check-in system for the Fall 2019 section, but it proved to be too onerous. In Spring 2020, I asked students to evaluate their fellow group members at three points throughout the semester and to provide specific feedback about group members. Scores from these student evaluations added to the student's final grade. Shifting to individual assignments with collaborative research groups and peer-evaluation in Fall 2020 eliminated intra-group conflicts. I may assign group work in the future with an option to evaluate group members and to change groups at specific times during the semester.

Back in Time: Longitudinal Studies Needed to Measure Retention

Another area for future analysis involves longitudinal testing. The University of Baltimore has tested student skills in the past and found that INFO 110 improved information literacy ability. I see students as they begin to develop skills in INFO 110 and sometimes in other classes later in their career. I would like to see how these students fare after graduation as they enter the workforce and participate in civic life. My theory is that many of the INFO 110 skills and knowledge points will still prove to be relevant and that HIPs will be part of the solution to student retention.

CONCLUSION

Don’t Fight It: Integrated Approaches Increase Touchpoints

Including UX, UDL, HIPs and the Framework in my instruction is just the beginning. Continuing to join and participate in communities of practice at the campus, local, regional, and national level will allow me to learn from others and improve instruction for students in INFO 110. I find connections between many theories, so it is easy for me to include new ideas into my instruction. When I find myself resisting a new idea, I reflect on how I can shift from a fixed mindset to a growth mindset.24 I encourage other librarians to look for ways to include all
or part of different learning theories in their library instruction and to share their success and failure with other library professionals.

**Heart and Soul: Students Respond to Empathetic Instruction**

When faced with a difficult situation, remember that students respond best to empathetic instruction. College students should be welcomed into the discourse community of higher education by encouraging engagement with professors, discussing new ideas with peers and scholars, and feeling at home in a space of inquiry. Some of the best inspiration for better instruction came from opening communication, listening to student feedback, establishing fair guidelines, and discussing changes to course content with students. As noted throughout this paper, scholarship in education and psychology supports relational pedagogy. Good librarians know about relational transactions because of our service to patrons and our campus community, which makes us well-suited for learning more about our students, instruction methods, and classroom development. Including High-Impact Practices can be an excellent way to prepare your classroom for better instruction and using the Framework as a guide ensures that information literacy concepts are included explicitly in each session.

**NOTES**

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