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To meet increased demand for library instruction, many academic research and instruction departments rely on pre- and paraprofessional librarians to teach classes. However, due to the general lack of teaching experience these staff members tend to possess at the time of their hire, they often have to receive extra training. This paper documents the process of creating a framework for developing instructors at the University of North Carolina's Undergraduate Library, entitled Information Literacy by Design (ILbD). Based on Wiggins and McTighe's Understanding by Design, this framework acts as supplemental training for new and developing instructors, equips them with a template for creating lesson plans, and provides a web-based outlet for them to share their work.

Headings:

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Understanding by Design.

INFORMATION LITERACY BY DESIGN: CREATING A TEACHING & TRAINING
TEMPLATE FOR DEVELOPING LIBRARY INSTRUCTORS.

by

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Introduction

Information literacy (IL), the ability to recognize an information need and locate, evaluate, and use resources to find it (Association of College & Research Libraries, 2000), is an understanding and ability that lies at the heart of academic library research and instruction departments and has increasingly become a strong consideration for college and university academics as well (Millet, Donald, & Wilson, 2009). Integrating research skills into introductory courses for first-years is a common way to build information literacy into the foundation of students' college careers. As academic libraries become more directly involved in education, however, the resulting increased demand for instruction often places pressure on libraries who are faced with the need to proportionally increase their teaching staff and subsequently train often inexperienced and underprepared library instructors.

Greater demand necessitates mitigating the workload required to teach what can reach up to hundreds of library instruction sessions per year (Ganster & Walsh, 2008). As one solution to an increased workload, some academic libraries hire additional staff or add instruction to existing staff members' work duties. These staff are not always professional librarians; very often they may be graduate library students (Palmer & Ford, 2000). Frequently these individuals have little or no formal teaching training or experience, exacerbated by the lack of courses on instruction in library school curricula. As a result, many library instruction departments hold workshops or trainings on planning and executing instruction sessions. Such undertakings can be costly, yet they are

better alternatives to “canned lessons” that rely on scripts and “point-and-click,” process-oriented instruction for scalability (Davies-Hoffman, Alvarez, Costello, & Emerson, 2013). The act of training student instructors to be true teachers addresses students’ direct learning needs better than a routinized, generic demonstration of the process of performing research (Klipfel, 2015). Time-intensive training, therefore, is crucial for effective teaching and cannot reasonably be done away with.

Because libraries can only devote a small amount of time to improving their instructors’ effectiveness, and good in-class instruction cannot be learned in a mere workshop or two, developing additional resources to help instructors guide themselves through effectively planning and executing lessons can be a worthwhile investment that benefits the students, instructors, and libraries of an institution. The Undergraduate Library (UL) at the University of North Carolina at Chapel Hill (UNC) is one library which employs pre- and paraprofessional librarians to supplement the instruction efforts provided by its full-time teaching librarians. Though the library has done a formidable job training its nonprofessional staff to be effective teachers in recent years, the instruction team is interested in pursuing ways to train developing instructors further through supplementary self-guided learning.

This paper documents the process of creating the answer to the UL’s desire for additional instruction training. The resulting product, entitled Information Literacy by Design (ILbD), is based on Wiggins and McTighe’s Understanding by Design (UbD) framework for teaching. The original framework, adaptable for any discipline and learning environment, provides guidance to help instructors create lessons that, through grounding in big ideas and purposeful design, effectively facilitate learning (McTighe &

Wiggins, 2006). By adapting UbD for information literacy instruction, the UL can put forth better instructors who can more successfully facilitate students' understanding of research principles in a more scalable and sustainable fashion. The adaptability of UbD makes it possible for other libraries to adopt the ILbD framework and customize it to their own instructional settings as well.

Institutional Setting

The primary outlet for the UL's information literacy instruction services is UNC's first-year college composition course. English 105: Composition and Rhetoric, hereon referred to as ENGL105, is the result of a recent overhaul of the university's first-year writing program to accommodate for an enhanced partnership with the library and place greater emphasis on research and information literacy development.. In an attempt to expose each UNC student to the library and its resources as well as provide a primer on conducting college-level research, every student is required to take the course and every class is required to participate in a library instruction session (Ashley, 2012). This strengthened relationship between the Department of English and Comparative Literature and the UL has resulted in greater collaboration between library instructors and ENGL105 teaching fellows, allowing UL instructors to customize their lessons to the syllabus and assignment sequence for each class they teach.

Training Instructors at the UL

As the number of library instruction sessions per semester has grown dramatically, however, without a proportionally increased budget the instruction team has had to come up with creative ways to meet demand. Depending more heavily on graduate

students to teach classes has helped lighten the load for full-time instruction librarians. As students of UNC's School of Information and Library Science, these library assistants have a familiarity with research but not necessarily with teaching, and many of them begin their employment at the UL having never taught a class before.

To prepare developing instructors for teaching, the UL puts on an "instruction bootcamp" workshop each fall semester and a shorter reprisal of the workshop in the spring. In these training sessions, the primary instruction librarian discusses basic learning theory, teaching toward the Association of College and Regional Libraries (ACRL) Standards, best practices for developing lesson plans, and some of their personal teaching tactics. The UL instruction team recognizes that the course cannot cover everything necessary to help their employees teach successfully, due to both time constraints and the fact that teaching is a creative process that can only be honed over time and practice. The team has hoped to develop an additional resource that can supplement training in an effective and scalable way, potentially increasing the teaching impact of the UL's limited training sessions and giving UL teaching staff a supplemental means through which to develop as instructors.

The Current State of Library Instruction Education

The UL is not unique in its struggle to locate and hire effective instructors or otherwise offer its employees ample opportunities to learn how to successfully provide instruction. Though over the past decade information literacy instruction has been viewed as an increasingly important, "value-added" service academic libraries provide (Simard, 2009), it has not been the focus of many library school programs, indicated by a scarcity

of instruction-related courses. Reviews of MLS programs in New York and the southeastern U.S. have concluded that most programs offer instruction courses only once a year, if at all (Chesnut, 2009; Davies-Hoffman et al., 2013). Yet the demand for new librarians who are equipped to act as instructors after graduation is high even as the supply of in-school pedagogical training is low. In a study of 79 hiring supervisors at various libraries, 87% of survey respondents indicated instruction as a “very important” component of their libraries (Hall, 2013 p.28). In order to be employable it would appear that library students are expected to pick up teaching skills somewhere during their program, though it is not always clear where.

As research education is increasingly made a priority in academic libraries, expectations for new librarians to be able to teach are high—but new librarians are often poorly prepared to excel as instructors (Brecher & Klipfel, 2014). Without sufficient prior training in “a basic grounding in the theory and psychology of how students learn,” instructors are “like archers without a target to aim at: destined to be less successful than if they had a clear appreciation of their goal” (Aristotle, as quoted in Brecher & Klipfel, 2014 p.44). In a profession that already suffers from an image problem, a general deficit of training in theory and pedagogy can further cement outsiders’ perspectives of librarians as non-educators. A recent literature review found that faculty members hold negative attitudes toward librarians as teachers: “when the librarians tried to initiate course-related instruction, it was often found that faculty was not convinced with the effort and did [not (sic)] accept them as a teaching partner” (Bhatti, 2009 p.7). It becomes difficult for libraries to achieve their goals of integrating information literacy into curricula when their staff are not taken seriously as teachers. This perception is not likely

to change quickly if library schools continue to graduate students who are ill-equipped to be effective teachers or if other interventions are not taken.

In some instances, as at the UL, it can fall upon a student's place of employment to help them develop the teaching skills they are expected to have upon graduation (Chesnut, 2009). Like Brecher & Klipfel (2014), the library assistants at the UL are provided with a foundation for instruction, but as mentioned previously the funding and time needed to put training programs on may be prohibitive for other library instruction departments attempting to prepare their staff to teach. A framework that can supplement training and help developing instructors walk themselves through designing a well-planned lesson can maximize the efficiency of instruction training, capitalizing on the time instruction librarians might spend preparing an employee to teach and providing new and developing instructors with a basic theoretical grounding for creating effective lessons.

Understanding by Design

A model and theoretical basis for this sort of framework can be found in Wiggins and McTighe's instructional design schema entitled Understanding by Design (UbD). UbD is an approach to curriculum and instruction that hones in on teaching for the sole purpose of students' understanding, as opposed to knowledge or memorization. To prompt teaching that most effectively facilitates understanding, the UbD Template provides guidelines for lesson planning, incorporating principles of backward design, "big ideas," transfer, authenticity, and "uncoverage." Rather than a prescriptive program or educational philosophy, UbD is flexible and offers many points of entry for instructors

to design or redesign their lessons regardless of what they're teaching or who they're teaching to (McTighe & Wiggins, 2006).

UbD on its own is made up of quite a few major tenets and ideas. In order to truly understand the UbD approach as a whole, it is useful to be well-versed in its major ideas:

Backward Design. As posited in Understanding by Design, backward design answers the questions of, “how will we ever know whether our designs are appropriate or arbitrary? How will we distinguish merely interesting learning from *effective* learning?” (McTighe & Wiggins, 2006 p.14). UbD encourages teachers to teach appropriate lessons and facilitate effective learning by refraining from the more conventional “content-focused” method of lesson design, wherein a teacher creates lessons while focused on their own teaching, placing learning outcomes as secondary considerations. Instead, the authors claim, teachers should think about the desired learning outcomes first. Following that primary consideration, teachers may then consider how to determine evidence of learning and then finally come up with an actionable plan for teaching toward desired outcomes. This planning process enables the teacher to produce lessons that, through a “results-focused” orientation, better facilitate learning (McTighe & Wiggins, 2006).

Teaching for Understanding: “Big Ideas” and Transfer. As its name may suggest, understanding is the primary goal of UbD (McTighe, n.d.). Learning is closely tied to the concept of understanding in the UbD model, with understanding being the evidence and end result of learning. Learning and understanding both hinge on “mak[ing] meaning of ‘big ideas’” and the concept of transfer (McTighe, n.d. p.1).

“Big ideas” are “important and enduring” and “transferable beyond the scope of a particular unit” (McTighe & Wiggins, 2006 p.338). “Big ideas” help students make

connections within the small details of a lesson as well as tether their learning to the larger scope.

For instance, the concept of credibility is a “big idea” students must understand for the purposes of information literacy (Association of College and Research Libraries, 2015). Without understanding the importance of information validity, common practices such as determining the year a piece was published or establishing the credentials of its author are meaningless, rote activities that students will soon forget to do after the lesson is over. However, a lesson which emphasizes the “big idea” of credibility will help students understand why the year of an article’s publication and an author’s credentials can be important for deciding whether to trust its claims. Furthermore, students who understand credibility are better equipped to engage in the even bigger-idea practice of critical thinking.

Transfer is also an essential component for understanding. In the context of UbD, transfer “refers to the ultimate desired accomplishment”: what students are able to *do* with their learning on their own after the lesson is over (McTighe, n.d. p.2). Transfer is the true demonstration of understanding, as it denotes a student’s thought processes have gone beyond memorization and “inert ideas” to apply learned ideas to new situations (Whitehead, from McTighe & Wiggins, 2006). “Big ideas” are in fact linked to transfer, as learning through understanding “big ideas” “is more likely to promote transfer than simply memorizing information from a text or a lecture” (Wiggins & McTighe, 2011 p.5). Teachers should provide their students with ample opportunities throughout a lesson to engage in transfer in order for students to both actively engage in and solidify the concepts being learned.

Authentic Assessment. Transfer activities, however, should be authentic—that is, they should “simulate or replicate important real-world challenges” (McTighe & Wiggins, 2006 p.337). Psychologist Carl Rogers has written a good deal about the importance of authenticity in the classroom; he theorizes that learning should have “a quality of personal involvement”. Without it, learners engage in “insignificant learning,” which “is likely to be forgotten quickly” (from Klipfel, 2015). To truly solidify their learning, students should be able to transfer what they have learned in the classroom to situations that directly apply to their lives and personal or academic interests. Wiggins and McTighe (2006) assert that authentic assessment is important because it requires a student to rely on true understanding and think through complex problems rather than rote memorization of isolated knowledge or skill. The authors relate authentic assessment to the application and synthesis facets of Bloom’s taxonomy: “a type of divergent thinking [in which] it is unlikely that the right solution to a problem can be set in advance” (as cited in McTighe & Wiggins, 2006). Authentic assessment requires students to think through their learning as a whole to come up with their own unique, authentic solutions to authentic problems. It encourages students to learn for learning’s sake rather than for the purpose of passing an exam, to transfer their understandings of big ideas into components of their long-term understandings of the world (Wiggins, 2011).

“Uncoverage.” Taken as a whole, UbD is an approach that encourages what Wiggins and McTighe call “uncoverage.” Through “uncoverage”, teachers focus not on attempting to provide students with all of the possible facts about a subject, but on helping students reach the essential understandings which they can use to further infer and construct their own knowledge. Understanding requires considering the significance

of a fact, for which mere coverage does not accommodate. The fallacy many teachers buy into is that “If teachers discuss it, learners get it; the more we discuss, the more they get” (McTighe & Wiggins, 2006 p.229). However, coverage, Wiggins and McTighe assert, “leaves students with no sense of the whole” (p.45) by casting a wide but superficial net. The more facts a learner is introduced to, the more blurry their conception often gets. Through engaging in “uncoverage” teachers are much more effective: they have to cover less information, and their students learn more. “Uncoverage” is the best and perhaps only way to facilitate learning, as it empowers the learner to actively take part in their learning while they fill in the gaps and make essential connections on their own. The work of education theorist John Dewey supports “uncoverage”; his belief was that direct instruction on its own is not what results in learning: “No thought, no idea can possibly be conveyed as an idea from one person to another. When it is told, it is, to the one to whom it is told, another given fact, not an idea” (from Wiggins & McTighe, 2006 p.229). Rather, facts become ideas through the learner acting on them.

Putting It All Together. UbD’s core principles culminate into one general UbD Template that guides teachers through planning lessons based on UbD’s “principles of sound curriculum” (Wiggins & McTighe, 2011 p.13). The template is structured primarily through the principle of backward design. It begins with Stage 1: Clarifying Desired Results, in which teachers consider learning outcomes based on Transfer, Meaning (“vital and connective ideas”), and Acquisition (procuring key declarative and procedural knowledge”) (pp.13-21). In Stage 2: Determining Needed Evidence, teachers consider what evidence can be gathered to assess the extent to which students have engaged in Transfer, Meaning, and Acquisition. In Stage 3: Developing the Learning

Plan, teachers “plan for the most appropriate learning experiences and needed instruction” as they align with desired learning outcomes (p.25). While the template is written from the perspective of the teacher, rather than the learner, Stage 3 is the teacher’s opportunity to transform learning outcomes—often beyond the comprehension of students—into actionable, effective learning that is “intelligible to the learner” (McTighe & Wiggins, 2006 p.59).

Sample unit plans for various disciplines based on the UbD template can be found interspersed throughout McTighe & Wiggins’s works, and educators frequently share their UbD-based work with other teachers online. These sample units give those who are new to using UbD guidance on how they can best utilize the complex, multi-faceted UbD Template. The template itself and samples of units based on the template can be found in varying levels of complexity and detail both online and in many of Wiggins and McTighe’s works on Understanding by Design. UbD is a general planning tool that isn’t constrained to specific disciplines, so it can work for any teacher. Its core principles and structured template make UbD a great fit for planning information literacy instruction.

Understanding by Design and Information Literacy Instruction

For new and developing library instructors, UbD is worth learning about. Many of UbD’s core principles, along with its template, nicely complement common practices of information literacy instruction. Additionally, UbD’s emphasis on “big ideas” works well with the ACRL’s 2015 “Framework for Information Literacy for Higher Education”, a new conception of the association’s previous set of standards for information literacy. Teaching through UbD, both developing and experienced library instructors can lead

their classes with confidence in their ability to make a difference in their students' understandings of research and information literacy.

Many of the major tenets of UbD work well for facilitating information literacy. Backward design, for instance, can ensure that every aspect of an instruction session truly guides students toward lasting understandings of crucial research concepts. Authenticity promotes customizing content and assessment so that students learn about and work with information literacy concepts as they directly apply to their interests and their assignment. In creating assessment and activities that are authentic, library instructors can keep students engaged and willing to learn. Instructors can also get a better grasp of students' learning by having them apply the processes and understandings that have been covered in class in a generic way to their own research. These opportunities for transfer prompt students to demonstrate exactly what they've gotten out of a lesson and give them a chance to practice new ideas and determine what they do not yet understand. All of these core ideas come together in the UbD Template, which is flexible enough to be used by teachers in any discipline. Library instructors who utilize UbD can improve their teaching effectiveness, and developing instructors who have not yet taught extensively can get a solid foundation for how to best facilitate learning by following the template.

“Big Ideas” and Threshold Concepts. One way UbD is especially well-suited for librarians, beyond the effective teaching it encourages, is its application to the 2015 ACRL Framework for Information Literacy for Higher Education. The Framework, which denotes the understandings that information literate individuals possess, is a newly reworked version of its standards from 2000. It is characterized by threshold concepts, which are “those ideas in any discipline that are passageways or portals to enlarged

understanding or ways of thinking and practicing within that discipline” (Association of College and Research Libraries, 2015). One may call grasping a threshold concept an “aha moment;” reaching a threshold of such an important concept enables a learner to think and perform in fundamentally different ways than they had before their understanding. To the consternation of many practicing instruction librarians, the 2015 Framework is much more conceptual and less actionable on its own than the 2000 Standards. For instance, while the ACRL Standards states that the “information literate student accesses needed information effectively and efficiently” (Association of College & Research Libraries, 2000), one concept of the 2015 Framework is that “Searching for information is often nonlinear and iterative, requiring the evaluation of a range of information sources and the mental flexibility to pursue alternate avenues as new understanding develops” (Association of College and Research Libraries, 2015). The Framework is more interested in “enabl[ing] a person’s deep thoughtful process of learning” (Kuhlthau, 2013 p.93) than listing out the specific abilities that an information literate student should supposedly possess.

The Framework’s departure from specificity has been met with some confusion and concern by librarians who are not yet sure how to develop lessons that comply with the ACRL’s new expectations. UbD fits in well with an unspecific Framework by encouraging teachers to engage in “uncoverage” rather than attempting to check off every item in the ACRL’s list of standards. “Uncoverage” can be accomplished by instructors who focus on the “big ideas” or essential understandings of information literacy. Librarians can treat the threshold concepts as the “big ideas” and use a version of the UbD Template to determine the teaching that is necessary to get students to those

understandings. (For an example of this notion in practice, see Pagowsky, 2014). By using a UbD-based framework to focus on the frames through which information literacy can be viewed, instructors can maximize a short amount of time allotted within a one-shot session. New instructors learning how to teach with a UbD-based planning template will be given the advantage of beginning their professional careers with a practical understanding of one way to utilize the ACRL's abstract Framework. They will be prepared not only to effectively educate students, but to lead the profession into the future.

Understanding by Design and Undergraduate Library Instructor Training

Because UbD is so flexible and well-suited for information literacy instruction, especially for new teachers, it seemed like a logical choice to use at the Undergraduate Library. Its core principles complement the UL's current instruction training, through which developing instructors are encouraged to help students understand the "whys" of information literacy along with the "hows." UbD is similar to many of the concepts taught in UL instruction trainings; using it as an additional training mechanism provides a structure through which those concepts can be used. Overall, a UbD-like template can lower the barrier to entry for new and developing instructors at the UL. It provides a structure for lesson planning, and learning about UbD can help developing instructors learn about principles of successful instruction. A template that walks an instructor through planning a lesson in a purposeful way makes the process of planning and teaching a lesson much more achievable for those who may be intimidated by the idea of teaching. Additionally, sample templates from actual lesson plans can show information literacy instruction in action, helping instructors understand what an information literacy

class actually looks like and how one might be planned. These sample plans can give trainee instructors an entrée into the thoughts and decisions of effective, experienced library instructors. They can then be drawn from for information as well as inspiration.

UbD can be an essential tool for helping new instructors teach effectively. As a result their students will have stronger and longer-lasting understandings of information literacy, equipping them to engage in the lifelong learning that libraries often want for their students. The following section outlines the process of creating Information Literacy by Design, a framework designed specifically for instructors at the UL that is based off of the template and principles of UbD.

Methods

This project was completed in the spring semester of 2015. This section documents the processes of planning and carrying out the execution of Information Literacy by Design in its entirety.

How Will It Be Used?

To shape what the finished product would look like, it was necessary to consider how the ILbD Template is to be used. ILbD is designed to be a tool that can benefit both library instructors and the instruction librarians who train them to teach effectively.

Used as intended by developing library instructors, ILbD makes up both a training document to supplement the learning and pedagogical theory given in in-person instruction trainings at the UL and a teaching template to help structure and guide lesson planning and instruction. To understand the principles and utility of ILbD, it was determined that instructors need to be somehow guided through the major tenets of the ILbD Template first. Following the introduction to the structure and principles of ILbD, instructors should be able to see how the template can work in authentic information literacy classes.

Once trainees grasp both the theoretical and practical aspects of ILbD, they can then put the ILbD Template to use to plan their own instruction sessions for ENGL105 classes. The creation of a website would allow the different components of ILbD to be enhanced through discoverability and sharing. Developing instructors can access this website and guide themselves through the process of learning about and utilizing ILbD at their own pace, on their own time. Instructors would be encouraged to upload their own

ILbD-based lesson plans to the site, allowing ILbD to be a continual source of inspiration and peer-centric learning.

The ILbD Template and website will add an additional educational component to instruction training at the UL. The instruction librarians can integrate the ILbD Template into their training, if time permits, but they can also introduce new instructors to the ILbD site and provide them with time outside of instruction training sessions to learn about ILbD by themselves. The instruction librarians will also promote ILbD as a learning object. Having a common frame of reference about instruction through ILbD can spur further conversation in trainings; trainers and trainees may discuss questions and ideas that arise from making use of the ILbD site.

What Does It Look Like?

ILbD consists of three similar but separate types of documents: the ILbD Template, the Annotated ILbD Template, and the Training Template. The first is the ILbD Template. This template is most similar to the UbD Template; instructors can use it as a framework to structure lessons through backward design. The remaining two documents help instructors better understand the purpose and principles behind ILbD. They are structured exactly like the ILbD Template, but they consist of additional components that new users can peruse to get acquainted to using it for lesson planning. One of the documents is the Annotated ILbD Template, which provides information about how to use the template on the body of the template itself through textual annotation. The other type of document is the Training Template, which is a sample lesson plan based on actual classes taught by experienced UL instructors. Training

Templates, of which there are three, are accompanied by textual annotation as well that provides guidance to new instructors at possible points of confusion about each lesson.

The components of the ILbD project are all compiled in a UNC-specific Wordpress site, located at ulinstructors.web.unc.edu.

ILbD Template. The content of the ILbD Template is essentially a series of questions that build off of each other. As an adaptation of UbD, it keeps the three original stages along with an additional Pre-Planning stage. The stages themselves progress linearly in the template, and each stage is comprised of different facets which include questions for the instructor to answer regarding their lesson. Figure 1 outlines the stages and facets of the template. To see the ILbD Template in its full form, see Appendix A.

Figure 1. Information Literacy by Design: Lesson Planning Template Outline

- Pre-planning
 - Assignment Considerations
 - *What is the assignment?*
 - Goals
 - *What are the major goals of the upcoming feeder(s)?*
 - Learning Needs
 - *Where are students in their unit?*
 - *What, if any, understanding of the research process do students already possess?*
- Stage 1: Desired Results
 - Established Goals
 - *What course- and/or assignment-related goal(s) will this lesson address?*
 - *What ACRL-endorsed concepts of information literacy will students need to reach goals?*
 - Meaning and Transfer
 - Students will understand that...
 - *What do you want students to understand about research?*
 - Students will be able to independently apply their understanding to...
 - *What kinds of long-term understandings, beyond this assignment, are desired?*
 - Acquisition
 - Students will know...
 - *What facts and basic concepts should students know and be able to recall?*
 - Students will develop skills in...

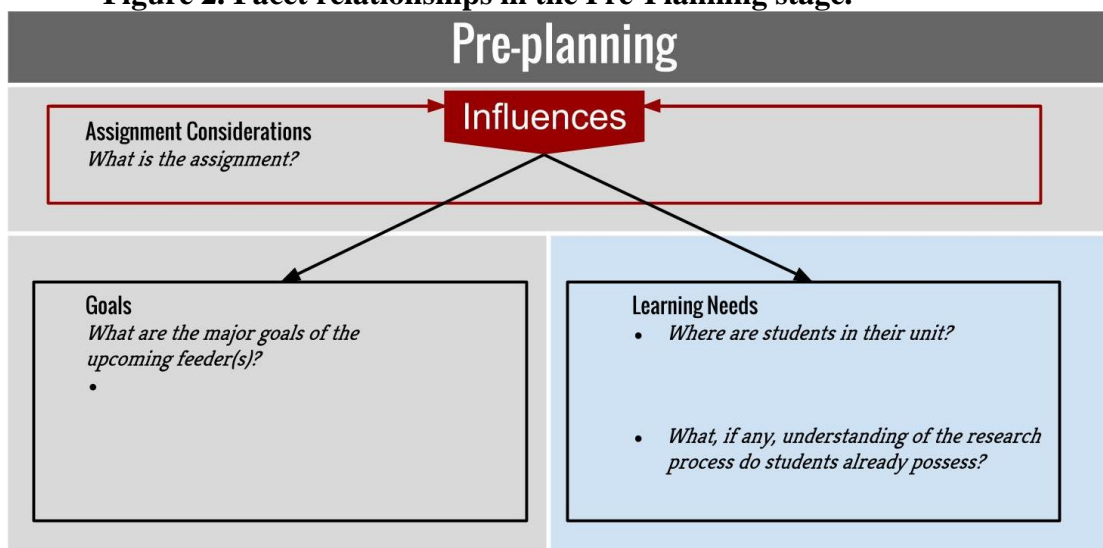
- *What discrete skills and processes should students be able to use?*
- Stage 2: Evidence
 - Performance Tasks
 - Students will show that they really understand/have achieved session goals by...
 - *How will students demonstrate their process of acquiring understanding, skills, and knowledge through authentic performance?*
- Stage 3: Learning Plan
 - Pre-Assessment
 - *What pre-assessments will you use to check students' prior knowledge, skill levels, and potential misconceptions?*
 - Learning Events
 - Student success at meaning, transfer, and acquisition depends on...
 - *What learning events can ensure meaning, transfer, and acquisition? How will these events facilitate desired results?*
 - Progress Monitoring
 - *What are potential rough spots for misunderstanding?*
 - *How will students get feedback on their performance?*

The ILbD Template mimics the structure of the original UbD Template as well.

While literature indicating why the facets are configured this way in UbD has not yet been located by the researcher, in the ILbD adaptation the structure of the template are set up intentionally. The associations between the facets of each stage are denoted through their spatial relationships, and the overall structure is meant to guide the instructor through the planning process chronologically. Figure 2 demonstrates the spatial setup of the Pre-planning stage and the relationships between its facets.

Each of the remaining stages are set up in a similar format. Instructors can progress through each stage, answering each facet, and because of the backward design of the template, by the time they have arrived at the actual action items of the lesson they will have already given significant consideration to the purpose and goals of the lesson as well as how to assess students' progress toward attaining those goals.

Figure 2. Facet relationships in the Pre-Planning stage.



What Were the Objectives?

To make the ILbD concept both useful and user-friendly, the ILbD Template and online environment were created with a number of end goals in mind. It was determined that the project should make training scalable, it should lower the barrier to entry for new and developing instructors, it should help instructors develop effective lesson plans and execute them, and it should keep the principles of UbD intact. All of these goals played into the overall design and content of ILbD with the intention of maximizing the effectiveness and minimizing the effort needed to utilize it as a tool for both teaching and learning.

Create a Scalable Training Component. Scalability of training, as mentioned, is a challenge for many academic libraries as they struggle to find time to develop the skills of new instructors while meeting increased demand for library instruction sessions. ILbD is meant to answer to this challenge. It is designed to be self-explanatory and self-guided so that instruction librarians in charge of training new instructors have less pressure on

them to cover every possible aspect of instruction. Rather, they can provide their trainees with the basics, giving them a foundation for teaching and then steering them toward the ILbD site for more. The site can then fill in some of the gaps. Ideally, ILbD won't be the only form of instruction training that new and developing library instructors receive, but it includes enough quality content to act as an impactful supplement to existing training efforts.

Design for Ease of Use. Another important consideration when creating ILbD was to make the template as easy to use and understand as possible. As the template's target audience is new instructors who are likely to be already loaded down with a large amount of new information and who may be intimidated by the idea of teaching, it seemed possible that ILbD could be ignored or overlooked if it were made to be overly complex. To lower the barrier to entry for developing instructors and ensure it would actually be utilized, one tactic that was used in ILbD's design was to make it extremely transparent and explanatory. Helping instructors understand why a practice espoused by ILbD is an effective teaching method is meant to encourage confidence in the template, prompting instructors to feel that to use it is to become a better teacher. Being transparent also shows instructors that each consideration the template asks them to think about has a purpose.

To make the template easier to use for instructors learning a large amount of information in a small amount of time, it was important to think about how the design might decrease cognitive load. According to cognitive load theory, the amount of effort required of working memory at a given moment is a concern when learning something new (Sweller, 1988). Therefore, in order to make ILbD concepts stick in instructors'

memory, the design of the template and website needs to limit any extraneous distractions. Overall, the medium for delivery should be as simple and immediately usable as possible. Instructors won't be interested in ILbD if it takes too much effort at the outset to determine how to even use it.

Another necessary goal was to ensure that the form was actually usable. The ILbD Template needed to be calibrated and tested to see how it would hold up in an authentic scenario. If the template only works in theory but is not an intuitive or helpful tool, then it essentially serves no purpose.

Supplement Existing Training. One of the most essential purposes of ILbD is to help instructors develop effective, meaningful lesson plans and provide them with ideas for their execution. In order to accomplish this goal, the framework is to expose new instructors to learning theory that can inform their teaching practices and provide them with a strong foundation through which they can facilitate learning. The template should also help with training instructors to give worthwhile lessons by providing a structure through which they can plan lessons based off of UbD, an established, effective instance of instructional design. The structure of the template also gives developing instructors a common framework through which they can view teaching and learning. This can improve communication among instructors as well as between instructors and the instruction librarians during trainings, as all involved are able to be on the same page regarding their conceptualizations of instruction and lesson planning.

Keep the Essential Component of UbD Intact. Finally, as ILbD is an adaptation of UbD, it was deemed important to keep the major principles of UbD intact. UbD was originally created as a framework for creating units of lessons rather than individual

lessons themselves (McTighe & Wiggins, 2006 p.8). As library instruction for ENGL105 classes is typically undertaken in one class, the UbD lesson planning template needed to be pared down to its most essential elements to allow for it to work on a single-class basis. However, UbD is an accepted and respected framework for teaching in the education community, and it made little sense to make drastic changes to its template or rewrite its core principles. Backward design, the emphasis on understanding and transfer, “uncoverage,” and promoting authentic performance were all elements from the original framework that seemed necessary for structuring the new ILbD framework.

How Was the Content Created?

UbD Adaptation. To create the template from which all of the other ILbD components are based, the UbD Template was adapted to comply with information literacy instruction. ILbD was adapted from “The UbD Template, Version 2.0” from The Understanding by Design Guide to Creating High-Quality Units (Wiggins & McTighe, 2011). The original template can be found in Appendix B.

The template was simplified as much as possible. Essentially, any considerations from the original framework which seemed redundant or irrelevant for planning on a lesson-by-lesson basis were removed. This resulted in eliminating some of the most abstract, high-level considerations from UbD. Primarily those which emerge through students’ repeated, regular exposure to content in a unit as opposed to the “one-shot” format of individual library sessions were cut out. For instance, in Stage 1 UbD asks teachers to consider “essential questions.” These questions are central to a subject and promote inquiry and further probing of a subject throughout the course of a unit

(McTighe & Wiggins, 2006 p.342). While essential questions are useful for guiding students' thinking and questioning throughout a unit, there simply isn't enough time in a single lesson to allow for them to be posed and sufficiently explored within a single lesson. Therefore the highly theoretical Essential Questions section was removed in the adaptation.

As the original UbD template is generic so as to guide planning within any discipline, it was further adapted to include language and concepts specific to library instruction. For instance, rather than merely asking, "What specifically do you want students to understand?", (Wiggins & McTighe, 2011 p.16), the ILbD template asks, "What specifically do you want students to understand about research?". Additionally, the template was changed to relate further to teaching for ENGL105 classes specifically. Because sessions led for ENGL105 classes are typically taught for a specific assignment, a Pre-Planning stage was constructed, which asks the instructor to consider the specifics and especially the goals of that assignment and how those factors will impact the overall lesson. A space was also added in the ILbD Template for instructors to consider how their lessons fit in with the 2000 ACRL Information Literacy Competency Standards.

Test Template. This design phase involved calibrating the ILbD Template to actual lessons, and it resulted in the creation of three examples of ILbD in action. Three test cases of authentic lessons taught by three experienced instructors were used to test out the template. The goal was to map the authentic lessons to the ILbD Template as closely to the instructors' intentions as possible, so as to emulate what the sample templates would have looked like if the instructors had filled them out themselves. As a

result, the original adaptation was modified to more accurately depict the essential questions that instructors answer throughout the process of designing lessons.

To accurately map an instructor's lesson to the template without having access to their every inner thought, a fair amount of information had to be gathered. The researcher first observed the lesson itself, taking notes on each aspect of the session including major lecture concepts, questions asked by both the instructor and the class, and activities the class engaged in. To try to understand the instructors' thought processes while they created their lessons, she interviewed each one individually after their class. The interviews were conducted in a semi-structured format based on methodology described in Applications of Social Research Methods to Questions in Information and Library Science (Wildemuth, 2009), which provided direction to the conversation while allowing flexibility should some questions need to be expanded upon or omitted (see Appendix C for an outline of the interview questions). The planned questions essentially went through the major aspects of ILbD; instructors' answers allowed the instructor to make more robust, nuanced, and informed responses to each question posed within the template. Combined with observations and any lesson plans the instructors created, the templates were filled out with a fair degree of accuracy as to the instructors' own intentions.

Template Annotation. Both the ILbD Template and the sample Training Templates were given annotations to make them easier to understand by developing instructors and to ground them in learning theory. The researcher approached the templates as if encountering them for the first time and marked any place where a new instructor might struggle or have a question. This involved looking out for considerations instructors may not be sure how to answer without additional clarification. For instance,

in the Pre-planning stage the template asks instructors to consider, “What kinds of long-term understandings, beyond this assignment, are desired?” (See Appendix D for a limited example of annotations for Pre-planning and Stage 1). New instructors may not understand what is meant by “long-term understandings;” therefore an accompanying comment expands upon the question, prompting the instructor to

Think about how you might teach your lesson to reach beyond the assignment. What else might these understandings apply to? Keeping transferrable understanding in mind can help you create lessons that don't keep students' thinking restricted to the task at hand.

Furthermore, a majority of the annotations guide instructors through components of ILbD as they relate to principles of learning. To name just one example, a comment in Stage 3 explains how pre-assessment is necessary for determining where students are in their understanding before a lesson begins so the instructor can teach toward where students need the most help rather than being either too challenging or too didactic.

Annotating the sample training templates, it was important to be as transparent as possible to help new instructors fully understand why certain decisions were made by the instructors in planning their lessons and how the different components of the lesson related to one another. Because the students didn't attend the class, the researcher attempted to ensure that any insight she received through interview or observation regarding the lesson and the planning process was addressed in one way or another, whether through the body of the template or external commentary. Some comments also clarify mechanics and common occurrences of library instruction specifically at the UL. For example, ENGL105 teachers often request that library instructors cover more material than can be reasonably done in one instruction session; one comment on the

ILbD Template notes this tendency and encourages instructors to focus mostly on those goals that are most fundamental to helping students succeed with their assignment.

Content Platforms. All iterations of the ILbD Template—the general template, the annotated template, and the sample training templates—were written and annotated in Google Docs. The templates and any corresponding annotations were also created in a more permanent PDF form. Finally, an online environment was created, where the template, sample lessons, and any additional information about ILbD can be found. The site, which can be found at ulinstructors.web.unc.edu, includes pages where individuals can view and download the template with or without annotations, view sample lessons, and learn about Understanding by Design. An affordance of hosting ILbD on a Wordpress instance owned by UNC is the ability to add any UNC user as an additional author. This feature permits UL instructors to not only receive information about ILbD, but to upload their own lesson plans and be content creators themselves.

How Were the Objectives Met?

Once ILbD was completed, it was evaluated for how well and in what ways the objectives stated during its planning phase were met.

Create a Scalable Training Component. Scalability of ILbD was enhanced primarily through the platforms the templates are hosted on. Various media options were explored to determine the best solution for creating permanent, sustainable training documentation that could be easily shared. To this end, Google Docs was chosen as the host for the ILbD Templates. Google Docs has a simple design similar to Microsoft Word, but unlike Word is free for everyone to use. The application is also web-based,

precluding the need for the template to be downloaded onto an instructor's computer and enabling quick and easy sharing. A Google Doc can be copied into a Google user's personal account, so as soon as an instructor is ready to use the template to start teaching, he or she is free to do so.

Creating ILbD as a primarily text-based document enhanced scalability of both the templates and their accompanying guiding annotations. The comments capability of Google Docs allowed the researcher to add annotations that ILbD users can read through to understand how to use the template for their instruction without the need for an instruction trainer. As training via the ILbD template is based on text, the utility of ILbD as a training tool can last for a long time. Text-based training is flexible, as Google Docs allows for adjustments to be made as needed and automatically re-populates its documents wherever they are on the web to reflect changes. The sustainable utility of Google Docs ensures that learning about instruction through ILbD can be achieved on a large scale with minimal upkeep.

The Wordpress-based web platform also helped the project reach scalability. One option for hosting ILbD as a whole was through Sakai, UNC's course management platform. If that route had been taken, each instructor who was interested in using ILbD would have had to be added manually by an administrator of the Sakai page. This option would have made ILbD much more exclusive, and it would have placed an additional burden on the UL instruction librarians to permit trainees to access the page. Hosting the project on UNC's instance of Wordpress ensured that it could be shared publicly and viewed by anyone without restriction.

Design for Ease of Use. The concern with adding a self-guided training tool to the UL's current repertoire of instruction training was that developing instructors would ignore it because it was too difficult to understand. To encourage instructors to use it and take it seriously, efforts were primarily made to lower the amount of mental energy it took to use and learn about ILbD. Considerations gleaned from cognitive load theory were taken to reduce extraneous taxation to working memory. This extra taxation impedes the already limited capacity of working memory, which in turn inhibits learning (van Merriënboer, G, & Sweller, 2005). It appeared that the most likely potential form of extraneous taxation was the "split attention effect" between the modes of viewing the ILbD Template and learning about it at the same time. Learners encounter the split attention effect when they must continuously switch their attention between multiple, separated modes of related information (van Merriënboer et al., 2005), which reduces the amount of mental energy they can commit to remembering and learning about something new.

It was therefore important to consider the mode through which instructors would get information about the ILbD Templates. Creating a video or audio file to accompany the template seemed likely to increase this particular form of cognitive load and make it more difficult for instructors to learn. The template itself is necessarily text-based and made up of a specific structure; it doesn't easily translate into video or audio. Were guidance about the template to be provided through audio or video, it would be difficult or impossible to integrate information about the template itself into that same format. Therefore it seemed most logical to provide information about how to use the template on

the body of the template itself through textual annotation rather than require users to split their attention across different modes of information.

Supplement Existing Training. In developing ILbD, strengthening the possible impact of existing instruction training at the UL was accomplished by providing developing instructors with learning theory concepts and giving different teaching styles a voice through the Training Templates.

Important concepts of learning theory were introduced through annotations on the Annotated ILbD Template and the sample Training Templates. Through these templates instructors have the opportunity to learn about principles such as the importance of learning outcomes, transfer, and formative assessment. By providing insight into what makes an effective instruction practice as well as why it is effective, the template gives instructors the chance to supplement their practical knowledge with theoretical understandings. In short, instructors who use the template and read the guiding text can begin to form a well-rounded understanding of teaching and learning. Through being introduced to these new concepts, some of which may not be covered in in-person UL training, instructors get a deeper understanding of the complex process of learning, which can in turn inspire stronger understandings of those concepts that are talked about in UL trainings.

To further enhance the educational impact of ILbD, the sample Training Templates were based off of three unique teaching styles. It seemed important to show how ILbD might work in an authentic classroom, but the researcher was concerned that creating the Training Templates off of her own lessons would promote only one approach to teaching information literacy. As the purpose of ILbD is not to be restrictive, showing

developing instructors only one way to teach seemed to be counterproductive to the project's real purpose of inspiring new instructors and showing them the possibilities of instruction. Therefore UL training can be supplemented through ILbD by exposing developing instructors to not one teaching voice, but three. The variation of teaching styles will continue to grow as UL instructors add their own lesson plans to the site. Allowing UL instructors to create and upload their content to a shared public space will additionally encourage social learning, thought by many leading psychologists to be a crucial aspect of the learning process (Bandura, 1971).

Keep the Essential Components of UbD Intact. The final goal of the adaptation was to preserve the integrity of the UbD template while making it usable for new instructors planning one-shot information literacy lessons. To this end the basic three-stage structure of the template was left untouched to ensure that lesson planning went backwards from Stage 1—Desired Results to Stage 2—Evidence to Stage 3—Learning Plan. Furthermore, the most essential principles that inform the UbD Template were also used to inform ILbD. Concepts of “big ideas,” transfer, authentic assessment, and backward design are all mentioned either in the body of the ILbD Template or in the supplementary annotations. The main message of UbD remains evident; through ILbD it is merely streamlined and placed in the context of teaching for information literacy.

Future Efforts and Conclusion

The project has just been completed and is ready to be piloted with UL instructors in the Fall 2015 semester. By then I, the researcher, will no longer work at the UL and won't be around to introduce ILbD, encourage its use, or see how instructors respond to it. It is possible that the template will go unused and unnoticed without my encouragement for instructors to use it. However, I feel that it will serve as a useful tool for the UL after I am gone. There is nothing like this template or any other reusable training tool for instructors in use currently at the UL, nor does anything like ILbD exist in the library literature as of yet. Throughout the entire project I worked alongside the UL's Undergraduate Experience Librarian, the instruction librarian primarily in charge of training library instructors to teach and whose idea it was to create a template like ILbD in the first place. The fact that there is buy-in from the one librarian most heavily tasked with getting new instructors up to speed in terms of teaching is an encouraging sign for the future of the project. For legacy's sake I also attempted to create as much guiding documentation about ILbD as I could, making use of the template as clear as I possibly could. I believe that with these factors combined, it is likely that instruction at the UL will be influenced by the ILbD framework well into the future.

I believe this project is important for the sole reason that nothing like ILbD existed for library instructors before its creation. Perhaps because instruction in academic libraries beyond highly routinized bibliographic instruction is relatively new, seemingly little attention has been paid to the subject. The concept of librarians as educators still hovers around the periphery of the general conversation among librarians in academia.

With ILbD I hope to encourage librarians who are involved in instruction to bring teaching to the forefront. Little has been said about improving the praxis of instruction in recent years—but there needs to be more. If librarians are going to be accepted as true teachers and contributors to the education of the students on their campuses, the change has to first happen within the field. Practicing library instructors need to converse with each other about their teaching methods and evaluate whether their practices of teaching are based on valid theories of learning. Institutions of higher learning for librarians-to-be need to include more coursework about effective instruction.

The new direction of the ACRL's Framework for Information Literacy for Higher Education is encouraging as a more thoughtful, less proscriptive conceptualization of information literacy. It illustrates the fact that, like learning, information literacy does not happen the same way for every learner. The Framework takes a step in the right direction by prompting academic librarians to re-evaluate their teaching in light of the "big ideas" of information literacy, but there is much more to be said and done about library instruction. By creating ILbD, I hope to offer a tool that can be used by anyone interested in developing their identities and practices as teachers, whether they are new library instructors or they have been teaching research classes for decades. I would encourage any library instructors interested in using lesson planning templates to experiment with ILbD. I believe that by using a tool that enables effective lesson planning while simultaneously explaining what makes a lesson effective, library instructors everywhere can become capable, respected teachers and greatly improve their capacity to facilitate the learning and information literacy of their students.

With that being said, I find it important to note that ILbD is one way for instructors to learn about effective instruction theories and practices, but it is by no means the only one. This is the one tool I have personally developed to be used by library instructors, but other tools are on the horizon or waiting to be created that may answer the needs of the profession better than ILbD. I wish for ILbD to inspire library instructors to learn and think about effectively facilitating learning, but I also hope that it will inspire further exploration into the creation of tools librarians can use for the sake of creating better lessons and becoming better teachers.

References

- Ashley. (2012, March 28). UNC Admissions Blog: Interview with Professor Jane Danielewicz about ENG 105. Retrieved from <http://unc-admissions.blogspot.com/2012/03/interview-with-professor-jane.html>
- Association of College and Research Libraries. (2015, February 2). Framework for Information Literacy for Higher Education. Retrieved April 1, 2015, from <http://www.ala.org/acrl/standards/ilframework>
- Association of College & Research Libraries. (2000, January 18). Information Literacy Competency Standards for Higher Education. Retrieved October 29, 2014, from <http://www.ala.org/acrl/standards/informationliteracycompetency>
- Bandura, A. (1971). *Social Learning Theory*. General Learning Corporation.
- Bhatti, R. (2009). Teacher-Librarian Collaboration in University Libraries: A Selective Review. *Pakistan Library & Information Science Journal*, 40(2), 3–12.
- Brecher, D., & Klipfel, K. M. (2014). Education training for instruction librarians: A shared perspective. *Communications in Information Literacy*, 8(1), 43–49.
- Chesnut, M. T. (2009). Night Vision Goggles or Rose Colored Glasses: A Unique Perspective on Training the Library Graduate Assistant in Instruction. *Southeastern Librarian*, 57(1), 3–11.
- Davies-Hoffman, K., Alvarez, B., Costello, M., & Emerson, D. (2013). Keeping pace with information literacy instruction for the real world: When will MLS programs

wake up and smell the LILACs? *Communications in Information Literacy*, 7(1), 9–23.

Ganster, L. A., & Walsh, T. R. (2008). Enhancing Library Instruction to Undergraduates: Incorporating Online Tutorials into the Curriculum. *College & Undergraduate Libraries*, 15(3), 314–333. <http://doi.org/10.1080/10691310802258232>

Hall, R. A. (2013). Beyond the Job Ad: Employers and Library Instruction. *College & Research Libraries*, 74(1), 24–38. <http://doi.org/10.5860/crl-236>

Klipfel, K. M., kklipfel@csuchico.edu. (2015). Authenticity and Learning: Implications for Reference Librarianship and Information Literacy Instruction. *College & Research Libraries*, 76(1), 19–30. <http://doi.org/10.5860/crl.76.1.19>

Kuhlthau, C. C. (2013). Rethinking the 2000 Acrl Standards. *Communications in Information Literacy*, 7(2), 92–97.

McTighe, J. (n.d.). UbD in a Nutshell. Retrieved October 29, 2014, from <http://jaymctighe.com/wordpress/wp-content/uploads/2011/04/UbD-in-a-Nutshell.pdf>

McTighe, J., & Wiggins, G. (2006). *Understanding by Design 2nd ed.* (2nd ed.). Upper Saddle River, NJ: Pearson Education.

Millet, M. S., Donald, J., & Wilson, D. W. (2009). Information Literacy Across the Curriculum: Expanding Horizons. *College & Undergraduate Libraries*, 16(2-3), 180–193. <http://doi.org/10.1080/10691310902976451>

Pagowsky, N. (2014, December 9). #acrlilrevisions Next Steps. Retrieved from <http://pumpedlibrarian.blogspot.com/2014/12/acrlilrevisions-next-steps.html>

- Palmer, C. S., & Ford, C. (2000). Integrating the learning library into the undergraduate curriculum: extending staff resources for library instruction. *At the University of California at Irvine*, 17(2/3), 167–175. [http://doi.org/10.1016/S0734-3310\(00\)00041-0](http://doi.org/10.1016/S0734-3310(00)00041-0)
- Simard, S. (2009). An information literacy program built for relevance and purpose. *Reference Services Review*, 37(4), 386–394. <http://doi.org/http://dx.doi.org.libproxy.lib.unc.edu/10.1108/00907320911006994>
- Sweller, J. (1988). Cognitive Load During Problem Solving: Effects on Learning. *Cognitive Science*, 12(2), 257–285. http://doi.org/10.1207/s15516709cog1202_4
- Van Merriënboer, J. J., G., & Sweller, J. (2005). Cognitive Load Theory and Complex Learning: Recent Developments and Future Directions. *Educational Psychology Review*, 17(2), 147–177. <http://doi.org/http://dx.doi.org.libproxy.lib.unc.edu/10.1007/s10648-005-3951-0>
- Wiggins, G. (2011). Moving to modern assessments. *Phi Delta Kappan*, 92(7), 63.
- Wiggins, G., & McTighe, J. (2011). *The Understanding by Design Guide to Creating High-Quality Units* (1 edition). Alexandria, Va: Heinle ELT.
- Wildemuth, B. M. (2009). *Applications of Social Research Methods to Questions in Information and Library Science*. Westport, Conn: Libraries Unlimited.

Appendices

Appendix A: Information Literacy by Design Template

Information Literacy by Design: Lesson Planning Template

Pre-planning	
Assignment Considerations <i>What is the assignment?</i>	
Goals <i>What are the major goals of the upcoming feeder(s)?</i> <ul style="list-style-type: none"> ● 	Learning Needs <ul style="list-style-type: none"> ● <i>Where are students in their unit?</i> ● <i>What, if any, understanding of the research process do students already possess?</i>
Stage 1: Desired Results	
ESTABLISHED GOALS <i>What course- and/or assignment-related goal(s) will this lesson address?</i> <ul style="list-style-type: none"> ● <i>(Optional) What ACRL-endorsed concepts of information literacy will students need to reach goals?</i> <ul style="list-style-type: none"> ● 	MEANING AND TRANSFER <div> Students will understand that... <i>What do you want students to understand about research?</i> <ul style="list-style-type: none"> ● </div> <div> Students will be able to independently apply their understanding to... <i>What kinds of long-term understandings, beyond this assignment, are desired?</i> <ul style="list-style-type: none"> ● </div>
	ACQUISITION <div> Students will know... <i>What facts and basic concepts should students know and be able to recall?</i> <ul style="list-style-type: none"> ● </div> <div> Students will develop skills in... <i>What discrete skills and processes should students be able to use?</i> <ul style="list-style-type: none"> ● </div>

Stage 2: Evidence

Performance Tasks

Students will show that they really understand/have achieved session goals by...

How will students demonstrate their process of acquiring understanding, skills, and knowledge through authentic performance?

-

Stage 3: Learning Plan

Pre-Assessment

What pre-assessments will you use to check students' prior knowledge, skill levels, and potential misconceptions?

-

Learning Events

Student success at meaning, transfer, and acquisition depends on...

What learning events can ensure meaning, transfer, and acquisition?

How will these events facilitate desired results?

-

Progress Monitoring

What are potential rough spots for misunderstanding?

-

How will students get feedback on their performance?

Appendix B: The UbD Template, Version 2.0

Wiggins, G., & McTighe, J. (2011). *The Understanding by Design Guide to Creating High-Quality Units* (1st edition). Alexandria, Va: Heinle ELT.

Figure B.1

The UbD Template, Version 2.0

Stage 1—Desired Results		
Established Goals What content standards and program- or mission-related goal(s) will this unit address? What habits of mind and cross-disciplinary goal(s)—for example, 21st century skills, core competencies—will this unit address?	Transfer	
	<i>Students will be able to independently use their learning to ...</i> What kinds of long-term independent accomplishments are desired?	
	Meaning	
	UNDERSTANDINGS <i>Students will understand that ...</i> What specifically do you want students to understand? What inferences should they make?	ESSENTIAL QUESTIONS <i>Students will keep considering ...</i> What thought-provoking questions will foster inquiry, meaning-making, and transfer?
	Acquisition	
	<i>Students will know ...</i> What facts and basic concepts should students know and be able to recall?	<i>Students will be skilled at ...</i> What discrete skills and processes should students be able to use?

The Understanding by Design Guide to Creating High-Quality Units
Module B: The UbD Template

Figure B.1

The UbD Template, Version 2.0 *(continued)*

Stage 2—Evidence		
Code	Evaluative Criteria	
Are all desired results being appropriately assessed?	What criteria will be used in each assessment to evaluate attainment of the desired results?	<p>PERFORMANCE TASK(S): <i>Students will show that they really understand by evidence of ...</i></p> <p>How will students demonstrate their understanding (meaning-making and transfer) through complex performance?</p>
	Regardless of the format of the assessment, what qualities are most important?	<p>OTHER EVIDENCE: <i>Students will show they have achieved Stage 1 goals by ...</i></p> <p>What other evidence will you collect to determine whether Stage 1 goals were achieved?</p>

Figure B.1

The UbD Template, Version 2.0 *(continued)*

Stage 3—Learning Plan		
Code	What pre-assessments will you use to check student's prior knowledge, skill levels, and potential misconceptions? <div>Pre-Assessment</div>	
What's the goal for (or type of) each learning event?	<div>Learning Events</div> <p><i>Student success at transfer, meaning, and acquisition depends upon ...</i></p> <ul style="list-style-type: none"> • Are all three types of goals (acquisition, meaning, and transfer) addressed in the learning plan? • Does the learning plan reflect principles of learning and best practices? • Is there tight alignment with Stages 1 and 2? • Is the plan likely to be engaging and effective for all students? 	<div>Progress Monitoring</div> <ul style="list-style-type: none"> • How will you monitor students' progress toward acquisition, meaning, and transfer, during lesson events? • What are potential rough spots and student misunderstandings? • How will students get the feedback they need?

Appendix C: ILbD Sample Training Template Interview Questions

- How did you start planning this lesson? Walk me through the process.
- Was there a big-picture idea you hoped to convey to your students?
- What were the key skills and knowledge you wanted students to get out of your lesson?
 - What did you do to accomplish each objective?
- Why did you choose to use the activities you used?
- What, generally, did you talk with students about during individual consultations?
- How do you think the class went?
 - How do you know?
 - What method(s) did you use to measure?

Appendix D: Annotated Information Literacy by Design Template

Information Literacy by Design: Lesson Planning Template

Pre-planning	
Assignment Considerations <i>What is the assignment?</i>	
Goals <i>What are the major goals of the upcoming feeder(s)?</i> <ul style="list-style-type: none"> 	Learning Needs <ul style="list-style-type: none"> Where are students in their unit? What, if any, understanding of the research process do students already possess?

Stage 1: Desired Results	
ESTABLISHED GOALS	MEANING AND TRANSFER
<i>What course- and/or assignment-related goal(s) will this lesson address?</i> <ul style="list-style-type: none"> (Optional) <i>What ACRL-endorsed concepts of information literacy will students need to reach goals?</i> <ul style="list-style-type: none"> 	<div> Students will understand that... <i>What do you want students to understand about research?</i> <ul style="list-style-type: none"> </div> <div> Students will be able to independently apply their understanding to... <i>What kinds of long-term understandings, beyond this assignment, are desired?</i> <ul style="list-style-type: none"> </div>
ACQUISITION	
Students will know... <i>What facts and basic concepts should students know and be able to recall?</i> <ul style="list-style-type: none"> 	Students will develop skills in... <i>What discrete skills and processes should students be able to use?</i> <ul style="list-style-type: none">

Liz McGlynn
12:17 PM Today [Resolve](#)

Before you jump into planning, you want to make sure you have all of the logistical info down. There's nothing worse than getting halfway through planning a lesson and realizing you got your dates wrong and you've been planning to teach for a Feeder 1 assignment that students will have already turned in before coming into your class.

Liz McGlynn
12:18 PM Today [Resolve](#)

Most of the info for this section can be obtained from the assignment sequence received from the instructor. However, you may need to do some extra investigating by emailing the instructor for extra info or looking at their syllabus.

Liz McGlynn
12:18 PM Today [Resolve](#)

Why start planning by thinking about desired results first? If your lesson plan considers what students should have achieved by the end of your lesson, you can plan backwards to ensure that every part of your lesson has a purpose and that by the end of the lesson you'll have accomplished all of the things you wanted to. This approach to planning is called backwards design.

This is opposed to the somewhat haphazard way lessons may be set up without considering results first: In the traditional, "non-backwards" approach to lesson design, a teacher may plan a bunch of lectures or activities with only a general sense of what their lessons are supposed to accomplish. Without being backed up by a solid plan, these lessons are sort of like a teacher throwing a bunch of things at a wall and hoping some of them stick.

[Show less](#)

(Note: This is a brief example of just two annotations on the ILbD Template. For the full annotations, see <http://ul instructors.web.unc.edu/ilbd-template/>.)