Creating Informed Learners in the Classroom Facilitator Handbook

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Creating Informed Learners in the Classroom

Facilitator Handbook
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Introduction

Higher education has a responsibility to prepare graduates to traverse the challenges of today’s information environment. While many institutions offer information literacy programming, including courses, they typically do not address learning to use information that occurs as part of disciplinary learning and enculturation. Creating Informed Learners in the Classroom (CILC) was an educational development program implemented at three research universities (Purdue University, University of Arizona, and University of Nebraska, Lincoln) between September 1, 2019 to August 31, 2024. Originally titled Academic Librarian Curriculum Developers: Building Capacity to Integrate Information Literacy across the University, the project was partially funded by the Institute for Museum and Libraries Services (IMLS; RE-13-19-0021). The purpose of the partnership was to enable academic library professionals to become curriculum developers who partnered with classroom instructors to create student projects that teach learners to creatively and effectively engage with information in disciplinary contexts.

The Creating Informed Learners in the Classroom Handbook is intended to help academic librarians or administrators at other institutions develop a similar program. The Handbook describes the elements of the CILC project, which was guided by informed learning design, an educational design model for developing instruction in which learners can use information in creative and effective ways in disciplinary learning contexts (Maybee et al., 2019). Three chapters outline details of the weekly online sessions in which each of the classroom instructor and academic librarian teams used the informed learning design model to develop an information-focused student project. The student projects were later implemented in the instructors’ respective courses. Following the three chapters on the CILC sessions, the Handbook concludes with a chapter discussing elements of successful partnerships and offers tips that may inform the development of a program at other campuses.

Background

Academic librarians contribute to students meeting educational outcomes, such as critical thinking, problem solving, and effectively using information (Brown, & Malenfant, 2017). Increasingly, librarians have also risen to the challenge of enabling students to navigate mis- and disinformation (Revez, & Corujo, 2021). However, working directly with students in the classroom elicits problems of scalability and sustainability for
academic libraries. To impact student learning at scale, a number of academic libraries have begun to offer faculty development programs in which they train classroom instructors to teach students to use information in their disciplinary contexts.

Although not widespread, academic libraries have engaged in offering faculty development over the last two decades. The library at Trinity University in Texas, for example, worked each year with groups of faculty teaching different levels of the undergraduate curriculum (Millet et al., 2009). At Utah State University, librarians hosted assignment design workshops based on the National Institute of Learning Outcomes Assessment (NILOA) in which they worked with instructors to create coursework to teach students research skills (Wishkoski et al., 2019). Members of the CILC project team have been involved with faculty development programs at Purdue University in which academic libraries partnered with educational developers on campus. Together, they offer a large-scale course development program in which information literacy is one of the ideas to which instructors are introduced (Maybee, 2018). Academic library professionals’ efforts to integrate information literacy into course curricula has been correlated with higher course grades and student engagement (Flierl et al., 2018).

Members of the project team are all academic librarians who have been previously involved in faculty development. They came together informally to discuss information literacy challenges on their campuses. Recognizing that students learn to use information in their disciplines, members of the team discussed the potential of academic librarians working directly with classroom instructors to integrate information literacy into their disciplinary classrooms. Inspired by the informed learning model developed by Australian researcher Christine Bruce (2008), they were interested in students learning to use information in a context in which they are also gaining disciplinary knowledge.

Teaching learners to use information to learn within disciplinary courses required a new approach—one that draws from both academic librarians’ and instructors’ expertise. However, the group acknowledged that engaging in faculty development would also require academic librarians to develop new skills to more effectively work with disciplinary instructors to create coursework in which students learn to use information as part of disciplinary learning. The team began brainstorming the CILC program to enable academic librarians to work with instructors to meet the evolving educational, societal, and workplace-related information needs of students.
The Project

The CILC project aimed to develop academic librarians to effectively collaborate with disciplinary instructors. The goal of this collaboration was to integrate information literacy into disciplinary courses and assess the student outcomes of the co-designed student project. Informed learning design, the model guiding the design of the student project, is different from other models used to integrate information literacy into disciplinary courses. Rather than adding information literacy-focused learning activities that supplement a course, informed learning design (Maybee et al., 2019) leads to the development of holistic assignments and learning activities where students learn disciplinary content while simultaneously learning to use information.

Informed Learning Design

Informed learning design is an instructional design model that guided the work of the librarians and classroom instructor teams as they co-designed student projects as part of the CILC program. The design model is based on informed learning, a framework developed by Australian researcher Christine Bruce (2008) that emphasizes the relationship between using information and learning disciplinary content, such as theories, concepts, practice, and so forth. Informed learning design facilitates the creation of coursework that allows students to use information as they learn in disciplinary learning environments. This section provides a brief primer, but for more detailed information about informed learning design, please read the article introducing the model by Maybee and colleagues (2019).

Informed learning design draws from a learning theory called the variation theory of learning developed by Ference Marton and his colleagues (Marton, & Tsui, 2004). Variation theory suggests that learning occurs when learners become aware of key aspects or features related to that which they are learning. The role of the instructor is to highlight (vary) what students need to be aware of to learn as intended. An instructor using informed learning wants the students to simultaneously become aware of both new ways of using information and disciplinary content (Bruce, 2008). Informed learning design provides a process for designing instruction grounded in the core idea that how students use information can inform what they are able to learn about disciplinary content. Reflective of the three components common in curriculum design models, informed learning design involves three stages (see Figure 1).
Figure 1: Stages of Informed Learning Design

Defining expectations involves the instructor identifying what they want their students to learn about disciplinary content and how the students need to learn to use information to understand that disciplinary content. Either through their own experience or by collecting student data, instructors must determine what the students already know and what are the key things they need to become aware of to learn as intended. Next, learning activities are identified that highlight how students need to use information to learn disciplinary content. In the final stage of the design process, an assessment plan is developed. Formative assessment may provide opportunities for giving feedback that highlights the things of which the students still need to become aware. At the conclusion of the student project, a summative or more comprehensive assessment is implemented that determines students’ awareness related to both using information and subject content.

Example Student Project

The example outlined here was the case studied by Clarence Maybee (2015) in his doctoral work that informed the development of informed learning design. In this example, an instructor wanted undergraduates to understand the current thinking about a language and gender issue, such as gender and humor discourse or gender-discriminatory language. To accomplish this the instructor had the students write a paper in which they reviewed scholarly articles that identified research that fostered new thinking about their selected language and gender issue. While the issue
was the disciplinary content, analyzing the research articles to determine how thinking about the issue evolved focused on using information.

The instructor had the students complete several learning activities, including making one class session a ‘workshop’ session in which the students read one another’s introductions and identified if the thesis statement (an expression of the current thinking about the selected language and gender issue) also explained how the topic evolved through research over time (analysis of research articles). Disciplinary content and using information are brought together so that in the end the language and gender issue was understood in a new way as a result of how the students engaged with information. The instructor looked for both of these aspects when evaluating the students’ work. The steps followed by this instructor are similar to those undertaken by the participants of the CILC program in creating the student projects.

**Project Activities**

The original plan for the CILC program was to hold two workshops at each of the three participating universities. The first was to be a half-day workshop with the participating academic librarians to prepare them for the work of co-designing student projects focused on students using information in a disciplinary learning environment. The second workshop was intended to be a day-long event in which the classroom instructors and academic librarians would work together to apply infomed learning design to create a student project. However, isolating due to the COVID 19 pandemic made it impossible to hold these in-person sessions. The project team spent several months revising the CILC project plan from two in-person meetings to five virtual sessions held weekly via Zoom between September and November of 2020.

*Recruitment of Academic Librarians and Instructors*

Members of the project team from the three institutions were responsible for conducting a call for participants on their campus. At each campus, an email message calling for participation in the project was sent out to librarians and another via campus list-servs, especially list-servs related to teaching. The emails outlined the goals and requirements of the program and also conveyed that librarians and classroom instructors would receive $1,000 after completion. Librarians received their $1,000 after completing a reflection about their experience in the program. Classroom instructors received the $1,000 after implementing the student project in a course and completing a post-implementation report. Members of the project team also contacted librarians they thought may be interested in participating and asked if they had any classroom
instructor contacts whom they would want to invite to partner with them in the CILC project.

A number of librarians and instructors applied to be part of the project; however, isolating due the pandemic put the project on hold. Once the project team decided that the project could move forward in a virtual format, the applicants were notified and all but a couple of them were still able to join the project. Some of the librarians and instructors joined with the intent of creating a student project together. Others joined individually and, following a discussion with their local project team member, were assigned a partner. In all, five teams from each campus joined the CILC program. One team at Purdue had two classroom instructors working with a librarian partner, which resulted in a total of 31 participants. A full list of participants is available on the CILC project website.

**Curriculum Developer Workshops**

Using a flipped model, the first Zoom session held in September 2020 was with the academic librarians, who had engaged with pre-work materials before attending. The purpose of this session was to prepare the librarians to collaborate with their classroom instructor partners by familiarizing them with informed learning design and introducing them to some strategies for collaborating with disciplinary instructors using the model. Before the session they were asked to read a primer on informed learning design and watch two related videos. Librarian participants were also encouraged to read to additional articles:


**Informed Learning Design Workshops**

In October and November 2020, informed learning design workshops were held over four Zoom sessions with all of the participants. Across the first three sessions, each librarian and classroom instructor team developed a student project to be implemented
in the instructor’s course. Described in detail in the following chapters, the first three sessions focused on the different aspects of the informed learning design process:

Week 1: Informed Learning Design and Identifying Learning Goals  
Week 2: Scaffolded Learning Activities  
Week 3: Developing Student Project Rubric + Reflection Exercise

In the fourth week, the participant teams gave presentations about their plans for the student project in which their students would learn to engage creatively and effectively with information in the instructors’ disciplinary courses.

Post-implementation Activities

Participants were required to implement the student project designed during the informed learning design workshops in one of the two academic terms that followed the sessions. At the conclusion of the semester in which the student project was implemented, the classroom instructors completed a post-implementation report. Classroom instructors were provided with a template that instructed them to map how students, in aggregate, performed on the project and then were asked to respond to a series of prompts about their perceptions of the success of the project and what they might change for the next iteration of the project. They were also asked to summarize what they learned from reading the student reflections about the project. Librarian participants were asked to answer reflection questions about their experience partnering to design the informed learning student project. The completed materials were used by the project team to evaluate the success of the project overall. The materials were also used as part of a research project. The findings from that research will be published separately.

Sharing of Project Results

An outcome of the project was to share what we had learned with the academic library community. Held on July 12th and 13th of 2022, the project team organized the Creating Informed Learners in the Classroom Symposium in which participants shared about the student projects that they co-designed. While originally planned as an in-person event that would take place at Purdue University, the event was held online using Zoom due to isolating as a result of the COVID 19 pandemic. The founder of the informed learning model, Professor Christine Bruce gave the keynote address. Invited speakers included Lorna Dawes from the University of Nebraska, Lincoln, and Dr. Drew Whitworth from the University of Manchester. Videos of all the CILC symposium presentations are available on Purdue ePubs.
The project team has presented or conducted workshops about the CILC project at the following venues:

- Maybee, C., Fundator, R., and Saha, A. (2022, May). *Creating informed learners in the classroom* - a virtual event hosted by the Indiana State Library. [Video of the presentation](#) is available on the State Library website.
- Maybee, C. & Fundator, R. (2021, April). *But how do we do that online: Lessons learned from shifting information literacy design workshops online*. Information Literacy Summit [virtual conference].

Members of the project team are accepted to conduct a workshop based on the content of the CILC project at the European Conference on Information Literacy in Krakow, Poland in October, 2023.

**What to Expect from this Handbook**

The *CILC Handbook* is intended to inform those who may be interested in hosting similar events on their campuses. The *Handbook* provides an overview of the CILC project and goes into detail on the specific sessions that were held with academic librarians and classroom instructors. The sessions focused on enabling the project teams to apply informed learning design to create student projects in which students engaged creatively and effectively with information in a disciplinary learning environment.

Chapter 2 outlines the CILC session that focused on developing learning goals for the student project. Chapter 3 describes the session in which librarians and classroom instructor teams identified the learning activities in which the students would engage as they completed the student project. Chapter 4 outlines the session in which the teams created an assessment plan for the student project. Each chapter will include the handouts and templates that were used by participants during the CILC sessions. Chapter 5 discusses librarian and classroom instructor partnerships. The Handbook concludes with a page listing specific tips for conducting a similar project at another campus.
Informed Learning Design and Identifying Learning Goals

Defining Expectations for Learning

Informed learning design prioritizes the establishment of clear, focused goals that describe what students will become aware of as a result of a teaching intervention. Once the learning goal is firmly established, instructors can design learning activities and assessments that guide students towards achievement of the goal. Informed learning design is founded upon informed learning’s principle of simultaneity—that students need to be aware of specific ways in which they need to use information at the same time that they are learning disciplinary content or skills. The learning goals must include both the disciplinary content—the theories, ideas, facts—as well as the particular things people will do with the relevant information.

Typically, instructors have little trouble drawing students’ attention toward the disciplinary content they want students to learn about—be it Einstein’s theory of relativity, the War of 1812, the elements of Jazz, etc. Informed learning design uniquely aims to bring instructors’ awareness (and subsequently students’ awareness as a result of instruction) towards the activities students will carry out and how these actions may lead to changes in students’ understanding of the disciplinary matter.

Let’s take the following learning goal from a hypothetical professional pharmacy course as an example to unpack: “Students will be able to make evidence-based medical decisions for patients presenting with a range of symptoms.” This example includes both disciplinary content and information practices.

The symptoms, the underlying medical conditions, and the medical recommendations are firmly rooted in the disciplinary context of pharmacy. But, students’ ability to make informed medical decisions for particular patients—the heart of the learning goal—requires using information deftly and purposefully. Students must be able to identify salient information from a unique patient’s medical chart and bring that information together with proven treatment recommendations from established medical reports and standards. The act of making evidence-based medical decisions requires
many specific information practices (identification, analysis, evaluation, and synthesis) that are carried out with different kinds of disciplinary information (medical reports or standards and patient charts).

Without students being aware of the multi-faceted ways in which they need to interact with and bring together information, they will not be able to truly address the learning goal. The goal has both course-specific utility and is important to pharmacy students’ ability to operate in their future profession, which is fast-moving, and reliant on evolving information about conditions and treatment options. By writing learning goals that emphasize using information like professional pharmacists in the field, students are better prepared to learn the skills and approaches they will need to utilize now—as students—and in their future work.

In using informed learning design to create student projects, it may be helpful for instructors to think through all the parts that make up the learning goal (e.g. the steps, aspects they need to be aware of, and decisions that must be made). In spelling out all of these parts, instructors may find the need to rephrase their original learning goal to highlight what it is students will be doing and with what kinds of information. The example above could become:

“Students will synthesize information from patient charts and medical standards to make evidence-based medical recommendations for patients presenting with a range of symptoms.”

**Learning Goals in the CILC Curriculum**

The session held in the first week of the CILC program introduced the classroom instructor and librarian teams to the informed learning design model and had them
identify the learning goals for the student project. The objectives for the week were as follows:

By the end of week 1, participants will be able to do the following:

- describe informed learning and its application in their own teaching context
- identify a learning goal for the project
- and explain the information and content criteria for the project

Recognizing that much of the work would happen in dedicated team time, the CILC project team flipped the CILC curriculum to introduce the participants to the informed learning design model and examples of learning goals outside of the synchronous meeting time. The team spent a brief amount of time discussing the design model and answering questions before directing the teams to their private breakout rooms. In the breakout rooms, the classroom instructor and librarian teams began to consider and document precisely what they intended students to become aware of as a result of completing the student project. They also identified the ways in which students need to use information in specific ways to achieve the project goals.

The CILC team developed a worksheet to guide teams through this unpacking process (See Worksheet 1: Identifying Essential Project Criteria).

**Step 1: State goals for learning**

The project team recognized that instructors needed to begin by stating their intentions for what students will learn in the course in their own words before they could attend to unpacking and analyzing what all goes into achieving that. Instructors started by stating those learning goals. The learning goals developed through informed learning design are similar to what are often referred to as learning outcomes or objectives, which may vary depending on the discipline.)
**Step 2: Unpack**

The next step was to help instructors unpack the learning goals in an effort to raise awareness of both the disciplinary content, the information sources, and the information practices that constitute the goal. This step of making implicit or tacit elements readily transparent to others can be challenging for some instructors. The processes and ways of thinking about completing tasks often become second-nature and hidden to experts in a field of study or profession (Riegler, 2020).

Librarians partnering with instructors play an invaluable role in this step. Their task is to function as a non-specialist, asking questions where logical leaps are being made by the instructor, requesting justification for what students know/do not know or have/have not experienced, and encouraging instructors to communicate their steps, knowledge, and decisions in terms that may be understood to people with varying degrees of expertise in the area.

**Step 3: Prioritize**

Once teams feel they have sufficiently unpacked the component parts of a learning goal, they can move onto the third step that asks teams to identify which parts are most important to achieving the goal. In doing this, instructors are able to spotlight the parts of the learning goal that students must be aware of in order to achieve the goal. The other steps or aspects will likely be taught and considered, but they are less important to students being able to achieve the learning goal. As part of this step, the project team encouraged the instructors and librarians to keep track of the parts they prioritized because they will likely become the assessment criteria that they use in the rubric for the project. The CILC project team made sure to communicate this point, so the classroom instructor and librarian teams could recognize the connection between the worksheets and the materials they would be developing for the student project.

**Step 4: Visualize priorities**

The CILC project team included an optional fourth step in this first worksheet. Adapted from Wiggins and McTighe’s Figure 3.3. Clarifying Content Priorities from Understanding by Design (2005, p. 71), this question on the worksheet was an attempt to have teams visualize the degree of importance of the various component parts that they unpacked earlier. The CILC team thought having instructors visually represent and therefore
deepen their understanding that some aspects of the learning goal are more important for students to be aware of than others would be a useful step in the process.

While completing this part of the worksheet was optional, the project team intended for this step to drive home the idea that instructors would need to discuss these prioritized criteria more frequently and communicate them more transparently to students because of their relative importance. However, teams reported not having enough time during the working time to complete this step. Members of the project team originally created this document to be printed out and for teams to complete it by hand. In the move to an online experience, we did not reconsider a different format or tool for visualizing the degree of importance of the different component parts. A digital document was not conducive to creating a visualization. In future iterations of this program, we will reconsider the format and technologies that best enable classroom instructor and librarian teams to carry out this important step and make it a requirement.

The following pages contain the handout used during the first CILC session on informed learning design and developing learning goals.
Identifying Essential Project Criteria Handout

1. Briefly state your learning goal(s) for the project:

   ______________________________________________________
   ______________________________________________________
   ______________________________________________________
   ____________________________

2. List all the components involved in your project learning goal(s).

   Consider how you—as an expert who has done this many times—would approach doing the project. What types of information would you use? How would you use information? What concepts or theories would you need to engage with?
3. Prioritize the components.

Place an asterisk * near the most essential components you listed above. Some of the essential components should relate to how students learn to use information within the project. The components marked with an asterisk * are the project criteria. Add them to the left most column in Handout #3, your Project Rubric.

4. Optional - It may be useful to visualize the components. To you so, you may print out this handout and use Figure 3.3 to place the prioritized components from #3 in the corresponding circles.
Figure 3.3. Clarifying Content Priorities. Adapted from *Understanding by Design* (p. 71), by Wiggins, G. and McTighe, J., 2005, Upper Saddle River, NJ: Pearson Education, Inc.
Scaffolding Learning Activities

Determining Informed Learning Activities

The first stage of informed learning design establishes learning goals that draw students’ attention to the particular ways in which they need to use information in the context of a course, student project, assignment, etc. The second stage is to determine a sequence of activities that will help students achieve that goal over time. This stage has the classroom instructor and librarian teams unpack the component parts of the activity sequence. Next, teams identify ways to communicate clearly about how the sequence provides opportunities for students to practice using information in the particular ways that will enable them to successfully achieve the intended learning goal identified in stage one. This unpacking and sequencing process asks instructors to utilize the criteria identified, described, and prioritized in worksheet 1 of the CILC curriculum to develop concrete activities.

This stage of informed learning design is premised on three main ideas:

- Alignment
- Scaffolding
- Transparency

Alignment

Alignment refers to the parity between established goals, the actions people take to arrive at those goals, and how one will know that the goals have been achieved. Informed learning design, like other educational design models, emphasizes firmly establishing the “what” of learning (i.e. the disciplinary content). All activities that people then engage with (i.e. the “how”) in order to be able to successfully understand the disciplinary content must align and match. In the case of informed learning design, the what of learning must draw out the particular ways in which students engage with information. Alignment between the learning goals—which are multifaceted because they are information rich—and the sequence of activities must account for the disciplinary-content elements of the goals and the different ways in which students need to become aware of and accustomed to using information. Let’s take another look at the pharmacy example.
“Students will synthesize information from patient charts and medical standards to make evidence-based medical recommendations for patients presenting with a range of symptoms.”

The learning goal requires students to bring together bits of information from disparate kinds of sources and relate them to established medical decisions. In doing this, students have to be aware of what a patient chart is, how it is structured, what kind of information is contained within it (and what is not there), what its function is, etc. The same goes for medical standards, which are dense and organized very differently than other information sources students in this context will use.

In order to fully align the parts of the learning goal, a classroom instructor and librarian team will need to map out the individual activities within a sequence and determine how the component parts of the outcome (see step 2 from worksheet 1) present themselves in the activity. If those parts that make up the goal are not already in the sequence of activities, changes will need to be made to ensure students have ample practice. Alignment also requires teams to consider that the sequence of activities is asking students to practice doing things that collectively enable them to attain a new awareness that aligns with the learning goal. If a team is working on redesigning an existing student project, they may notice that there is misalignment between the goal that they considered in the first stage of the curriculum and this stage.

**Scaffolding**

Scaffolding refers to a classroom instructor and librarian team’s plan for their sequence of activities and how it builds in complexity in a way that enables all students to be successful. Scaffolding requires teams to consider purposeful changes to what students are doing in each activity (and how that may be new or more complex than the activities they have engaged in before), and what opportunities for feedback are woven into the sequence to enable students to adjust their thinking and processes to be successful in the student project. It also requires identifying what other kinds of supports may be needed so students develop deeper awareness of the ways in which they need to use information and more sophisticated information practices over the course of the sequence.
In the pharmacy example, this may look like a series of activities where students have to synthesize information from patient charts and standards in small steps and in increasingly complex cases over time. In an early activity, students may simply have to identify critical information within the patient chart; they may have an activity where they identify which medical standards they need to reference to make a drug recommendation (and where they will go to find information pertinent to the case). Over time, students may focus on how they bring together pieces of information from these different sources for different kinds of cases. The cases will likely increase in complexity, and other relevant variables—such as the amount of guidance the instructor will provide, the amount of time students have to complete the task—may change, as well.

**Transparency**

Transparency refers to the ways in which a classroom instructor and librarian team will communicate clearly about the expectations, ways to go about carrying out the activities, and opportunities for support within the sequence. Transparency is useful at the time the assignment is introduced and along the way. Being transparent about learning goals helps the students become aware of the ways in which they need to use information in different ways in the context of the student project and what they are expected to learn about disciplinary content. It makes the students aware of the most important things they need to focus on in order to learn in the way the instructor intends. Transparency helps students understand how the activities will prepare them to successfully achieve the final assignment deliverable.
Pedagogy Tip

Transparency is a powerful strategy to support inclusion and equity for learners. People learn best when they understand what is expected of them, how they may go about learning through carrying out different activities, and what ways students can look outside of themselves (e.g. to other students, to the instructor, to outside resources and/or campus services) to aid in their work (TILT Higher Ed, n.d.). Transparency is powerful because it requires recognition that there are concepts (theories, practices, etc.) within disciplines and professions that are challenging yet important to learn. These things may have become second-nature and hidden to instructors who are experts in their fields, which may create challenges for instructors teaching students who are newer to a discipline and do not have the same awareness of all the decision points and steps that relate to a learning goal.

In the context of the pharmacy example, transparency can make it clear for students what exactly it means to synthesize or bring together bits of information from different sources in order to make decisions, and how students can do this. Students, especially those who are acclimating to a new discipline, can benefit from clear guidance about what this process looks like and why it is important. When recommending drugs, experienced pharmacists are accustomed to quick, evidence-based decision-making. Instructors can model this process within a sequence of activities and emphasize to students helpful decision points and strategies to support students’ success in the course.

Learning Activities in the CILC Curriculum

In week two of the CILC program, the classroom instructor and librarian teams translate their learning goals for the student project into carefully sequenced activities that will enable students to be aware of both the disciplinary and information related components of the student projects and the final project deliverables. The CILC objectives for the week were as follows:

By the end of week 2, participants will be able to

- identify scaffolded activities that introduce and help students become aware of the information and content components of the project,
• explain how they will provide feedback on student learning for those components.

In this stage of the CILC curriculum, classroom instructor and librarian teams spent much of their time working together on a second worksheet (see worksheet at the end of this chapter) that built upon the ideas from the first module on learning goals. Before this was possible, teams engaged before the weekly synchronous meeting with one of two possible examples of what a sequence of scaffolded activities could look like. Teams explored examples from two distinct disciplines—project management and writing in gender and women’s studies—so teams could identify similarities and differences between the examples and their own disciplines.

Instructors were reminded that the sequence of activities that students carry out in preparation for the more summative student project should be determined by the learning goals and the particular criteria they have started to add to a project rubric (see example below). Each activity in the sequence may be more disciplinary or information focused, but as a whole, the sequence of activities reveals how students must use information in particular ways in order to successfully build towards achieving the student project. The examples described what students will do in each activity, as well as annotations describing how the activities integrate the different criteria that will go into the rubric. The idea behind this was to ensure that classroom instructor and librarian teams consider examples that incorporate the three principles above: alignment, scaffolding, and transparency. Instructors were asked to prepare for the session by recalling the activities and materials related to the project to prepare them for the team work in synchronous meeting time.

During the weekly synchronous meeting, the group discussed their points of confusion about scaffolding activities before working in teams in breakout rooms on the activities associated with their assignment.

**Step 1: Identify activities in the sequence**

The first step in the worksheet guided instructors to write down specific activities that students would carry out in the context of the student project on a timeline. Common examples of activities would be drafts of deliverables, guided workshops focusing on a particular element of the project, peer feedback opportunities, etc.). For each activity, teams were encouraged to explain precisely what the activity is and what students
would be asked to do in each activity. Talking through the individual activities and seeing how they build upon one another in the timeline format was intended to help teams identify gaps, overlap, areas that were more likely to be challenging, and points where clarity was needed.

**Step 2: Align activities with the criteria**

Aligning goals, activities, and assessment is a common principle of all educational design work. The teams were next asked to specifically point to the project criteria (that would go into the project rubric) for each of the activities. In pointing to and justifying which criteria map to each activity, teams were highlighting what was most important for students to focus on and become more aware of in relation to the learning goals. They could ensure that the sequence of activities effectively prepares students to be able to achieve the intended learning goals of the project.

**Step 3: Provide a high-degree of transparency (optional)**

Teams were encouraged to focus on a specific activity within the sequence and discuss the more detailed aspects of the activity. Teams were particularly encouraged to consider how they would communicate transparently with their students about the activity and how it fits within the sequence. The CILC project team asked teams to do this work as practice for the amount of thought and attention that they would need to provide to each activity within the sequence in their outside work later that week. However, the project team found that most teams skipped over this optional step.

**Step 4: Arrange frequent feedback opportunities**

Teams were finally asked to identify where in the sequence of activities students would have opportunities for feedback from the instructor, one another, or outside campus services. This step was included to ensure that teams were considering the appropriate amount of feedback for the sequence as a whole given the potential areas that students may struggle with or need additional support with that they discussed in step 1. Teams may revise or add new feedback points based on the conversation they had working through worksheet two.

The following pages contain the handout used in the second CILC session on developing and scaffolding learning activities.
Scaffolding Your Activities Handout

1. Place relevant activities for your project (e.g. drafts, workshops, contributing deliverables) on the timeline below. For each activity, list the project criteria you identified in handout #1 that students will have to engage with to complete the activity. Individual criterion will likely appear in several of the activities.

2. OPTIONAL: Select one activity from above and describe in greater detail what you would have students do in the activity and why. Consider how this activity breaks down (or brings together) the criteria. How will you communicate these ideas and processes to students to prepare them for the project?
3. Where in the above sequence of activities will you provide feedback to students about how they are using information and aware of the subject content in the ways you expect (and stated in your learning goal)?

Think back to the criteria you identified (related to using information and subject content). Are there any places in this sequence that are missing opportunities for students to receive feedback on a particular criteria that could help prepare them to carry out the final project?
Developing Student Project Rubric and Reflection Exercise

Developing Informed Learning Assessments

The third stage of informed learning design is to develop assessment methods that reveal changes in student learning, including how students used and were aware of using information in the context of the student project. The assessment stage builds upon the previous two stages of informed learning design to measure student achievement of the intended learning goals defined in stage one and practiced in the sequence of scaffolded activities in stage two. Classroom instructor and librarian teams work together in this stage to clarify and communicate how they will measure student learning through assignment prompts and rubrics. Additionally, teams are guided through the process of developing prompts for reflection that encourage students to consider changes in their awareness of information and disciplinary content goals as a result of completing the student project.

The assessment stage of informed learning design features several principles:

- Develop transparent assessment methods to draw students’ attention to what is most important
- Measure both information use and disciplinary goals
- Encourage reflection to elicit a better understanding of what students experienced and learned from completing the student projects

**Develop transparent assessment materials that draw students’ attention to what matters most**

Typically, student projects require students to become aware of many things in order to successfully complete the project. Although there may be a multitude of skills and practices they likely have to draw upon to produce their work, there is typically an order of importance for what instructors intend students to learn. In the context of informed learning design, the areas of priority that an instructor identifies at the start of designing or redesigning a student project are reflected in the learning goals. These
goals may be broken into steps and parts as they are unpacked and practiced in stage two of informed learning (the activities).

An assessment for the hypothetical pharmacy course could require students to annotate instructor-supplied patient charts. Annotations should include highlighting salient information and notes that reference evidence-based treatment recommendations and standards from medical reports and other medical/pharmaceutical literature. While introducing the assignment, an instructor could collaboratively model the activity in class, co-identifying with students what information in a patient’s chart is most important for that particular case and how to find relevant standards and drug recommendations using disciplinary sources and tools. Students could use class time to collaboratively search for and annotate the patient chart with drug recommendations and citations, followed by an instructor-guided debrief conversation that highlights components of annotations that are in line with and contrary to professional best practices. A rubric for this assessment could emphasize the ability to identify relevant details in patient charts and to find and include relevant and evidence-based treatments and standards.

In the context of the assessment stage of informed learning design it is important to develop assessment materials that focus students’ attention—and therefore their calculated efforts—on the most important elements of the student project. This focus should be in-line with what the instructor indicated students will learn through the project. While a seemingly simple idea, assessment materials, such as prompts and rubrics, may unintentionally signal that all of the items included in them are of equal importance if they are not designed with transparency in mind. The project team observed this mistake in extremely expansive rubrics that make it challenging for students to know what to focus on because the rubric treats all component parts as equally contributing to the final product. However, the basic premise of a rubric is to communicate clearly what it is an instructor will be looking for as they review students’ submitted work. When designing a rubric, it is wise to review and reflect on the decisions made in previous stages (learning goals and scaffolded activities) to ensure that the assessment and rubric is communicating the same areas of priority.

The connections between the assessment and the activities that prepared them to accomplish the assessment must be made clear to the students in both the student project prompt and rubric. This will make assessment of student work easier and more fair for all involved. Prioritizing alignment as they have developed the student project
will enable instructors to know precisely what to look for in student work. It will also allow them to recognize if the activities and goals align with what they will be assessing. Assessments will be more equitable for students because students will be guided in how to direct their efforts while completing the student project if they know what instructors will be looking for; additionally, the tacit values or criteria will not be as likely to be used by instructors during the assessment process. Students can also recognize that they have had practice with what they will be assessed on.

Providing examples of student work is an additional way in which instructors can bring transparency into their projects to support students. Positive and negative examples of student work can help focus and direct students’ efforts before they begin their projects and continue to serve as a touchstone as they progress. Students can compare their process and deliverables to work that has been exemplary or to preemptively avoid common mistakes that students have made in the past. If it is the first time using informed learning design, it may be challenging to use actual student work for the first offering of the student project. In this case, the instructor can anticipate common challenges and strategies for overcoming them, generate their own positive and negative examples, or provide examples from a similar assignment. Instructors can design activities that fall within their sequence of scaffolded activities that introduce these positive and negative examples to students and provide opportunities to discuss them with students, in addition to appending them to an assignment prompt and rubric.

**Pedagogy Tip**

Informed learning does not endorse a particular type of rubric. Rubrics can assume different forms (e.g. analytical, holistic, single-point) and they have respective affordances and limitations [TeachOnline@UW, n.d.]. Instructors should explore the various options, strengths, and weaknesses of each in order to develop the best option for their assignment. Instructors may consider using a checklist for more incidental requirements, in order to distinguish the difference between them and the project criteria, which directly map to the learning goals.

**Measure Both Information and Disciplinary Goals**

Informed learning design is an educational design model that draws out the particular ways in which students need to use information in a context in order to learn disciplinary content. The model treats information practices as a fundamental part of
learning. Using the informed learning design model, classroom instructor and librarian teams develop holistic student projects where students learn disciplinary content while simultaneously learning to use information.

The assessment stage of informed learning design urges instructors to make sure that they are developing assessment materials—such as rubrics and assignment prompts—that continue to reflect the critically important role the information focused goals have in students successfully completing their projects. Related to the principle of transparency described above, teams working through the informed learning design model are encouraged to pause and reflect in this stage to ensure that the rubric criteria—which is what students focus on when working on their projects—spotlight one or more information specific criteria. It is not necessary or even desirable that students can tell the difference between what is a disciplinary content-focused criterion and an information-focused goal; however, students should be able to recognize the particular ways in which they need to use information in the context of the course and the specific project. Students are likely to approach a project informed by the instructor’s priorities; when instructors prioritize information literacy through goals, information rich activities, and explicit assessment criteria, student efforts will reflect the same priorities.

For the pharmacy course, the annotation assessment provides students opportunity to engage with and use information while learning disciplinary content. Ability to 1) identify salient information, such as symptoms, underlying medical conditions, etc., from a patient’s medical chart and 2) to make evidence-based pharmaceutical recommendations relevant to that information are learning goals rooted in the pharmacy discipline. Both goals, however, require engagement with and effective use of different kinds of information sources, including the patient’s chart and dense medical/pharmaceutical literature. Making evidence-based medical decisions requires specific information practices, including identification, analysis, evaluation, and synthesis of these different kinds of sources.

**Use Reflection to Find Out What Students Learned: A Deeper Dive into Variation Theory**

Informed learning draws upon variation theory, a theory of learning that suggests that people need to become aware of various aspects and features of a phenomenon as they learn (Marton, & Tsui, 2004). It is the role of the instructor to identify those criteria (aspects and features) and purposefully design instructional opportunities for learners
to experience and become aware of them (Marton, & Tsui, 2004). According to variation theory, an instructor’s intentions about what students should learn is called the *intended object of learning*. The intentions for learning are often what becomes the learning goals of a course, assignment, or project. Instructors translate these intentions into course materials and instruction; this is often called the *enacted object of learning*, which is what students encounter in the learning environment through structured activities and exercises. However, the intended and enacted objects of learning do not account for what students as individuals experience as they learn and what they take with them after completing coursework.

Variation theory posits that what students actually learn from instruction is called the *lived object of learning*. In order to be able to assess the efficacy of student projects developed using informed learning design, instructors will want to hear directly from students about what they believe they learned. Effectively designed assessments and rubrics will provide some useful information about what students learned in relation to the intended goals of the project. Bruce and Hughes (2010) argue that a fundamental aspect of learning to be information literate is becoming aware of what one has learned, which can be achieved through reflective exercises. By encouraging learners to describe in some type of narrative form what it is they learned and how it may transfer to other experiences, instructors can gather rich information about what resonates with students, as well as areas in which students experienced the intended learning differently than expected.

Knowing what it is that students experienced from completing the projects enables instructors to identify opportunities for improvement in future iterations of a student project. Improvements may range from strategies for better engaging learners to identifying points of confusion or particularly challenging aspects of the project that the instructor did not anticipate. Informed learning design intends to bring the intended, enacted, and lived objects of learning in alignment with one another as closely as possible. This is accomplished through carefully established learning goals, strategic activities, clearly communicated expectations for how students will be assessed, and opportunities for learners to describe in their own words what they learned from the student projects.

For the hypothetical pharmacy course, a second component of the annotation assignment could include a brief written piece akin to a summary note a pharmacist would provide a physician, with instructor-provided prompts that ask students to
summarize their recommendations and articulate their rationale and process for making an informed recommendation. A rubric for this component could include students’ ability to articulate how they incorporated evidence into a treatment recommendation. An exercise like this prompts metacognition, encouraging students to reflect upon how their engagement with information influenced their ability to effectively complete the task. An in-class or asynchronous class discussion about what students feel they might do differently (or not) as practicing pharmacists further emphasizes what students learned from the assessment and what new knowledge and skills they can take forward into their professional practice.

Assessments in the CILC Curriculum

In week three of the CILC curriculum, librarian and classroom instructor teams focused their attention on how they would assess student learning as a result of completing the design of the student projects. The CILC objectives for the week were as follows:

By the end of week 3, participants will be able to

- describe how they will evaluate students’ understanding and awareness of the information and content criteria using the provided student project rubric template and post-project student reflection handout.

In this stage of CILC, classroom instructor and librarian teams focused on the practical element of designing assessment methods to clearly communicate with students about the project and how they would be assessed on their learning in the project. In preparation for the group meeting, teams were asked to read a brief handout outlining a project rubric template that was developed to help teams begin their individual rubrics. The handout particularly emphasized the idea of transparency and provided some discrete tips for creating an analytical rubric (as one of several rubric options they could choose for their project). Teams also examined a rubric for one of the example student projects used in week 2, so classroom instructor and librarian teams were familiar with the course and could track the scaffolded activities to the assessment rubric. Finally, teams were instructed to read a brief handout about developing post-project student reflections, which was a required element of teams’ involvement in the CILC project.
Students’ awareness of their own learning is a fundamental aspect of informed learning (Bruce & Hughes, 2010). The CILC team developed a series of reflection questions that instructors could adapt and assign to their students to reflect on and communicate about changes to their learning as a result of completing the student project. The handout briefly outlined the benefits of reflection and how to write effective reflection questions that ask students to explain the notable elements of their work on the student project, as well as why or how their work on the project is meaningful, relevant, or applicable for other aspects of their (future) lives. Instructors were encouraged to consider how they may rewrite the questions for their own post-project student reflections.

Classroom instructor and librarian teams spent the majority of the synchronous meeting time in break out rooms to begin to develop their rubric and compose their reflection questions for after students completed the project.

**Step 1: Clarify misunderstandings and uncertainties**

The group began the session together by individually considering their own muddiest point—the thing they are most uncertain of as a result of their work designing a student project in CILC. The group unpacked these ideas together briefly before discussing the pre-work and what they would be working on together in the breakout rooms.

**Step 2: Describe the student project rubric and reflection assignment**

With the large group, the CILC design team reemphasized two central goals of the assessment stage of informed learning design:

- Determine *how* to evaluate students’ understanding of the information and disciplinary-content goals using their project rubric.
- Compose reflection questions that will give insight into the students’ understanding of what they have learned in completing the student project.

The CILC team answered questions that came up as a result of completing the pre-work about developing clear rubrics and briefly discussed suggestions for writing effective reflection prompts.
Step 3: Rubric development

The classroom instructor and librarian teams spent considerable time together to develop the project rubric. The teams reported that these working periods were extremely useful in their design work; teams generally did not have enough time to discuss all of the decisions they needed to make. Writing the descriptors of what it would look like for students to meet, exceed, or have room for improvement on a particular criteria, for example, is time consuming work. The CILC team strongly encourages those seeking to implement an informed learning design workshop to provide as much working time as possible, so teams can make the most of their synchronous time together.

Step 4: Reporting out

Before going into the breakout rooms in step 3, teams were told that they would briefly report on any insights, questions, challenges, etc., to the larger group. To save time, only a few teams were asked to volunteer to share out about their experiences developing the rubric. Teams were able to recognize similarities and differences between the teams sharing out, benefitting all teams’ ongoing progress on their rubric development outside of the synchronous meeting.

Step 5: Reflection question development

Next, the classroom instructor and librarian teams went back into breakout rooms to discuss the reflection questions they would ask students after completing the projects. Some teams made adjustments to questions 2 and 3 to ask students to reflect upon a particular kind of application of what they learned through completing the project.

Step 6: Prepare for design presentations

The final week of the CILC program was dedicated to teams finalizing their goals, activities, and assessment materials and sharing their implementation plan with other teams. The third week’s synchronous meeting ended with a brief description of the presentations and how teams could prepare for sharing their redesign decisions with other teams. The entire fourth synchronous session was dedicated to short presentations and feedback from others.
Within the 4-week CILC program, classroom instructor and librarian teams created information-rich student projects that had students become more aware of particular ways they needed to use information in disciplinary or profession-specific contexts. Teams leveraged the three stages of informed learning design to: 1) establish clear learning goals that emphasized how students need to use information to learn disciplinary content, 2) create a sequence of learning activities that provide ample opportunity to practice using information in purposeful ways, and 3) develop transparent assessments that draw students’ attention to the efforts they need to make and what they learned as a result of the student projects. Teams learned about informed learning design principles and explored examples through asynchronous pre-work. Synchronous group meeting time alternated between team working time to establish strong partnerships focused on practical design work and large group discussions to unpack and clarify important ideas.

The following pages contain the handouts used in the third CILC session on developing an assessment strategy.
Project Rubric Handout

Course title: Student Name

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Room for Improvement</th>
<th>Meets Expectations</th>
<th>Exceeds Expectations</th>
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Instructors may add more rows as necessary to the rubric. Additional comments or a checklist can go after the rubric, if desired.
Post-Project Student Reflection Handout

Please read the post-project student reflection questions below and consider if you want to use the questions as listed or revise the wording to align with your specific criteria for your student project. For example, in the first question the phrase “using information” might be changed to “analyzing peer-review articles,” “conducting research,” or another phrase describing how the students are using information to learn in your specific student project. You may also consider revising the other questions to more closely align with the context of your specific course, although they should remain repackaging or reconstructing questions.

1) Please indicate if you will use the questions provided or make changes.

Provided______  Changes______

2) If you choose to change the wording of the questions, please list the revised questions here:
Classroom Instructor and Librarian Partnerships

The first three chapters outlined the CILC curriculum through which classroom instructors and librarians were familiarized with informed learning design (Maybee et al., 2019), and applied that design model to identify goals, activities, and assessment focused on students using information to learn. In this chapter, the CILC project team shares their reflections on fostering effective partnerships between classroom instructors and librarians. All members of the CILC project team have experience conducting faculty development programs and this was particularly beneficial in creating and supporting effective librarian and classroom instructor partnerships over the course of the CILC project. For anyone planning to create an informed learning design program on their campus, determine if you have faculty development experience amongst your team. If not, consider partnering with others on campus who do have experience, such as teaching center staff or information technologies staff who work with instructors on course design (Maybee, 2018).

It is important to recognize that partnerships between the librarians and classroom instructors are individual and may vary widely. Important factors to consider when matching partners include recognizing: 1) if the culture of the institution supports librarians engaging in curriculum development, and 2) if there is a prior working relationship between the classroom instructor and librarian. As the CILC project involved three institutions, it was useful to have a member of the project team at each campus. These team members were able to explain their perceptions of the institution culture related to librarians collaborating with instructors, which helped the team make decisions about how to recruit and work with participants in their campus context.

One institution participating in the project had a long history of classroom instructors working closely with librarians to co-design coursework. At another institution, it was common for librarians to work closely with instructors to support student learning. At the third institution, the librarians tended to have less interaction or input from the instructors whose courses they visited to conduct information literacy instruction. Being aware of these differences in how librarians and classroom instructors work together in specific institutional contexts allowed the project team to apply different recruitment strategies when seeking participants for the project.

At all three institutions involved in the CILC project, emails were sent out via departmental list-servs to librarians and instructors inviting them to join the project.
However, at the first two institutions where librarians were involved in curriculum development or had close working relationships with classroom instructors, the librarians were asked to invite classroom instructors with which they had previously worked to participate in the CILC project. This resulted in a number of applications from librarians and classroom instructors requesting to work together. At the third institution, where librarians did not have close relationships with classroom instructors, the project team assigned partnerships.

The way in which the partnerships were formed, either through prior working relationships or by being assigned by the project team, did not impede or promote success in creating a student project in which the students learned to use information in a disciplinary course. However, the project team members observed that it appeared easier for partners who had worked together prior to the CILC project to more quickly begin their co-design efforts. Therefore, if implementing an informed learning design program at your institution, it may be worthwhile asking librarians who apply to invite a classroom instructor with whom they would like to partner. Brief descriptions of CILC partnerships provided in this chapter are intended to offer a sense of the variety of ways that different partners worked together.

Chemistry

In this project, the chemistry professor developed a student project to teach students how to read chemistry research articles and required them to evaluate the content of an article they chose. The librarian, a liaison to the chemistry department, and the chemistry instructor were very well acquainted and had worked together extensively. The librarian describes them as "longtime allies." Typically, their collaborations involved much more interaction but this was not possible due to the COVID 19 pandemic. Since the librarian has an advanced degree in chemistry, the librarian and the chemistry professor had a shared, disciplinary vocabulary to leverage during their collaboration; the librarian suggested that this shared vocabulary streamlined their communication and allowed them to focus on course goals quickly and easily. They were also both able to identify areas for improvement in current graduate students’ approaches to reading and using chemistry literature, and they tailored the course to help address those areas. Both the instructor and librarian were very satisfied with the student learning gains that were reported to them from the student reflections. One particular insight was that students did not consistently examine graphics such as figures and tables so the instructor has concrete plans to reinforce the usefulness of doing so in future iterations of the course.
Public Health

The student project in the public health course focused on students using data to create a public health campaign for sharing COVID-19 information with a regional audience. The classroom instructor and the librarian had not worked together previously, but the librarian’s expertise in digital humanities was of great interest to the instructor who wished to bring data more substantively into the course. The instructor initially planned to have students construct data portals to communicate information about COVID-19 to the public, for which the librarian’s expertise would have been particularly valuable. However, constraints caused by the COVID-19 pandemic led the instructor to shift the focus of the student project to developing a local public health campaign. Collaborating to revise an existing project rather than co-designing a brand new one was a change from what the librarian had originally agreed to work on. Initially anticipating working directly with students on their projects in workshops and activities, the librarian instead described their contribution as serving in an advisory capacity on the project design. While this was a new role, the librarian found that using the informed learning design model supported the collaboration and led to the creation of an information rich student project. Overall, the librarian felt that the partnership was successful, both in terms of student learning and in the outcomes of the collaborative brainstorming that lead to the development of the student project.

Forensics

The student project in forensics provided students with the opportunity to evaluate expert testimony and forensic evidence submitted during high stakes murder cases. In this example, the librarian and forensics instructor were acquainted with each other and had worked well together on a previous project. The librarian recognized that a big part of their work on this project centered around reminding the instructor to think about how they would use information (as a disciplinary expert) if they themselves were doing the student project. That emphasis was attributed to the use of the informed learning design framework, which provided support for these interactions with the instructor. The students primarily had to use information found in government documents to complete the project, with which the librarian had little experience. The librarian appreciated that informed learning design provided a framework for working with instructors, even when
the librarian is less familiar with their area of study. The librarian who participated in this partnership is currently designing an information literacy course for students in the life sciences, and noted that the increased familiarity gained with informed learning design during this study will help to frame the learning activities as they design that course. The librarian also suggested that the learning curve for informed learning design can be steep and encouraged librarians to engage in reading and training to become more familiar with the approach.

In addition to making efforts to ensure that librarian and classroom instructor partners are well paired, it is also important to dedicate time for librarians to learn about informed learning design before partnering with classroom instructors. To accomplish this, it is best to connect the informed learning design model to concepts the librarians may already know about teaching and learning and curriculum design. For example, the features of informed learning design may be compared to backward design (Wiggins, & McTighe, 2005). Recognizing the difference between the two may help librarians focus their work with a classroom instructor on the unique perspective of informed learning design, which specifically emphasizes how information is used in the learning process.

Classroom instructors and librarians who participated in the CILC project found the working time in breakout rooms to be incredibly valuable to their progress developing the student projects. If you are hosting an informed learning design project on your campus, carve out more time than you may anticipate for instructors and librarians to work together on their student project through each stage of the informed learning design model. ‘Flipping’ instruction so that participants engage with materials ahead of the meeting times will allow partners to have more time to work together during meetings. The CILC project team leveraged our learning management software to create a course with carefully selected pre-work materials and activities. Meeting times were dedicated to summarizing key aspects of the pre-work, addressing points of confusion, and then providing working time with opportunities for sharing and feedback.
Tips for Doing This Project on Your Campus

Project Planning

- Collaborate with other units on campus who have an interest in faculty development, such as the teaching center
- Use formal (campus newsletter, departmental emails, etc.) as well as informal (direct outreach to librarians and instructors) recruitment methods
- Incentivize librarians and classroom instructors equally as they are partners in the design process
- When reaching out to classroom instructors, focus on student learning gains and avoid library and information science jargon
- When possible, pair up librarians and classroom instructors who already have a working relationship
- If collaborating with other institutions, recognize that it may require additional time (and patience) when working with different business offices, research support offices, or institutional review boards

Project Implementation

- Introduce librarians to informed learning design before they work with classroom instructors so that they are better equipped to apply the model
- Set aside ample working time for librarians and classroom instructors to work through the stages of informed learning design
- Build in opportunities for classroom instructors and librarians to share their designs with other teams and receive feedback
- Leverage the collaborative aspect of the project in the workshop sessions (both librarians and classroom instructors greatly appreciated discussing teaching and learning with their colleagues)
Reference List


TeachOnline@UW. (n.d.). *Rubrics – Advantages and Best Practices.* https://wisc.pb.unizin.org/teachonlinerubrics/chapter/types-of-rubrics/


Additional Resources

CILC Website

Full and Preliminary IMLS Project Proposals

CILC Symposium
The symposium was held on July 12th and 13th, 2022 on Zoom. Follow the links below to watch videos of the presentations, which are hosted in Purdue’s ePubs repository.

Welcome Address and Showcase 1

Clarence Maybee, Purdue University  
Beth McNeil, Purdue University  
Danni Gilbert, University of Nebraska - Lincoln  
Anita Breckbill, University of Nebraska - Lincoln  
Annette Bochenek, Purdue University

Keynote Speech: Information Literacy Ethics: Towards a Framework to Guide Professional Practices

Dr. Christine Bruce, James Cook University

Librarian's Experiences Panel

Chao Cai, Purdue University  
Jason B. Reed, Purdue University
Showcase 2

**Jeannine Relly**, *University of Arizona*
**Mary Feeney**, *University of Arizona*
**Rose Holz**, *University of Nebraska - Lincoln*

*Developing Informed Learning through Discursive Assessments in Higher Education*

**Drew Whitworth**, *University of Manchester*

Showcase 3

**Tracy L. Clark**, Purdue *University*

*Creating an Inter-Institutional Program*

**Clarence Maybee**, Purdue *University*
**Rachel Fundator**, Purdue *University*
**Maribeth Slebodnik**, The *University of Arizona*
**Catherine Fraser Riehle**, *University of Nebraska - Lincoln*
This project (Academic Librarian Curriculum Developers: Building Capacity to Integrate Information Literacy across the University) was made possible in part by the Institute of Museum and Library Services (RE-13-19-0021-19).