Academic Librarian Curriculum Developers:
Building Capacity to Integrate Information Literacy across the University

Purdue University in West Lafayette, IN is the lead applicant in partnership with the University of Nebraska in Lincoln, NE, and the University of Arizona in Tucson, AZ in this proposal for a Laura Bush 21st Century Librarian Program project grant. Academic Librarian Curriculum Developers: Building Capacity to Integrate Information Literacy across the University (ALCD) is a three-year project beginning September 1, 2019 and ending August 31, 2022.

Academic library professionals working directly with students in the classroom in support of student learning elicits problems of scalability and sustainability for academic libraries. A 2016 survey of North American library professionals (n=217) indicated that only 25% felt that their existing efforts were fully able to support the institution's information literacy needs. Intensifying the need for academic libraries to provide sustainable and scalable solutions for reaching more students is a growing body of research indicating that learning to use information should occur within disciplinary or professional learning environments. The ALCD project will enhance the ability and capacity of academic library professionals to enable student learning. ALCD project participants—library professionals and instructors—will develop curricula that enables students to more intentionally, creatively, and ethically engage with and use information in disciplinary contexts.

The intended audience of the ALCD project is academic library professionals at the three partnering institutions, which collectively serve 100,000+ students. The ALCD project will address professional development needs of academic library professionals by enabling them to effectively collaborate with disciplinary instructors to integrate information literacy into disciplinary courses and assess the outcomes of the co-designed coursework. Library professionals will learn a new educational design model that may be used to collaborate with instructors to develop assignments and learning activities through which students learn course content while learning to use information. The approach will enable academic libraries to better articulate their positive contributions to student learning while addressing common issues of sustainability and scalability for student success efforts.

Conducted at each of the three participating institutions, the major project activities are ½ day-long *Curriculum Developer Workshops*, 1½ day-long *Assignment Design Workshops*, and *Assignment Outcome Consultations.* The *Curriculum Developer Workshops* introduce academic library professionals to key characteristics of a curriculum design model. In the *Assignment Design Workshops*, academic library professionals and instructors collaborate to design learning outcomes, learning activities, assignments, and assessments. By the end of the *Assignment Design Workshops*, participants will have produced learning outcome statements, an assignment design plan, and an assessment plan. The library professionals and instructors will continue working together to develop assignment instructions, grading rubrics, and plans for gathering and analyzing student data. After assignments and learning activities have been implemented in courses, *Assignment Outcome Consultations* will be held with participants to support the collection and analysis of student data, and the creation of Assignment Results Reports providing an analysis of student performance and student perceptions of the learning activities.

Evidenced by their successful completion of project activities and deliverables, the intended outcomes for the academic library professionals participating in the project are knowledge of and the ability to use a curricular design model that supports a collaborative, sustainable, and scalable approach to integrating information literacy into curricula. An open access ALCD Facilitator Handbook will be developed using documentation created during the project that may be used by academic library professionals and other educators to facilitate similar projects on their campuses. The results of the project, including methods used, will be disseminated to the library and information science community at national and international conference presentations, institutional and regional workshops, and a Symposium held at Purdue University.

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Proposal Summary: Purdue University (Clarence Maybee, Michael Flierl), University of Nebraska, Lincoln (Catherine Fraser Riehle), and University of Arizona (Maribeth Slebodnik) propose a three-year project (September 1, 2019 to August 31, 2022) to enable academic library professionals to become curriculum developers. The project team requests $249,179 in support from IMLS. Academic libraries have promoted information literacy on university campuses but have struggled to integrate it widely into curricula. Academic library professionals will be trained in a learning design model that underscores the role that information plays in the learning process, and then apply the model with disciplinary instructors to create and evaluate assignments in which students learn to use information while learning disciplinary content. The results of the project will be disseminated to the library and information science and broader educational community, providing a model that is nationally replicable for library professionals to work with instructors to further student learning and information literacy.

1. Statement of Broad Need

Higher education stakeholders are seeking sustainable strategies to enable students to adapt to rapid advances in technology and to become lifelong learners capable of succeeding in an increasingly dynamic workforce. However, despite institutional efforts to prepare learners to be successful, the reality is that students leaving the university are frequently unable to use information and data to meet employers' needs.[1] Combined with another fact—that students have difficulty navigating the news, discerning what is true and false, and evaluating news on social media platforms[2]—it is clear that information literacy must become a "primary goal of education."[3]

Academic library professionals can play an important role in bridging the gap between employer needs and academic requirements by preparing students to learn and work in digital environments,[4] and, as IMLS sponsored research has shown, by educating students to critically engage with information beyond the scope of their academic careers.[5] There is recognition that academic library professionals contribute to core student educational outcomes, such as critical thinking, problem solving, and effectively using information.[6] Libraries may also be instrumental in helping their institutions recognize the educational implications of the changing information landscape, with advances in big data and artificial intelligence impacting the workplace and civic life.[7] While research has shown that using library resources and services may be correlated with students' GPA,[8] academic library professionals' efforts to integrate information literacy into course curricula may directly improve course grades and student engagement.[9]

Working directly with students in the classroom elicits problems of scalability and sustainability for academic libraries. Adequate support and resources for libraries to undertake or expand their educational efforts is lacking at many institutions. A survey of North American library professionals (n=217) indicates that while information literacy is viewed as a key contributor to success in the workforce (97%), only 25% felt that their existing efforts were fully able to support the institution's information literacy needs.[10] Despite a lack of adequate preparation provided by library and information science graduate programs, there is a trend for academic libraries to hire library professionals to function as curriculum developers,[11] and to redirect resources by having liaisons assume functional roles such as instructional design librarian, e-learning librarian, etc., to fulfill their educational mission.[12] However, library resources and labor will be misused if such efforts to contribute to lifelong learning fail to meet large numbers of students and to make a lasting impact.

Intensifying the need for academic libraries to provide sustainable and scalable solutions for reaching more students is a growing body of research indicating that learning to use information should occur within

disciplinary or professional learning environments.[13] Students must have opportunities to practice using information as they are learning and making decisions—similar to what they will be required to do in their future work and personal lives. Addressing the growing need to prepare learners to succeed in an unknown and constantly evolving future falls on those at the frontlines of higher education—instructors who oversee course curricula.[14] Yet academic library professionals have information literacy expertise that is needed in the classroom. To expand their reach, academic library professionals must develop strategic partnerships with instructors—efforts proven to be beneficial to student learning outcomes.[15]

One approach to make a lasting impact on student learning and success, at scale, is to apply a 'train the trainer' model, in which academic library professionals work closely with disciplinary instructors to transform curricula. Library professionals can have a greater impact working with instructors, who may teach multiple courses, than in teaching students directly. However, designing curricula that allows students to learn to use information in a context in which they are gaining disciplinary knowledge requires a new approach—one that draws from both library professionals' and instructors' expertise. There is a need to develop new skill sets for academic library professionals so that they can more effectively work with disciplinary instructors to meet evolving educational, societal, and workplace-related needs of students.

As a Lifelong Learning project grant, the ALCD project will increase the capacity of academic library professionals to enable student learning by partnering with instructors to develop curricula that allows students to more intentionally, creatively, and ethically use information in disciplinary contexts. Learning to use information within a disciplinary context fosters lifelong learning—allowing students to engage with information to learn in personal and professional settings beyond higher education. Library professionals at Purdue University, the University of Arizona, and the University of Nebraska, Lincoln will be directly impacted by the project. Openly and accessibly sharing project documentation outlining how to facilitate similar projects, and offering local and national presentations, will provide the greater library and information science community with a sustainable, scalable model for supporting student success and learning. It will also provide examples of how academic libraries can document and provide evidence of such support, concretely demonstrating the value of libraries to key stakeholders: administrators, instructors, and students.

2. Project Design

ALCD is a project to develop the capabilities of academic library professionals so that they can effectively collaborate with disciplinary instructors. The goal of this collaboration is to integrate information literacy into disciplinary courses and assess the student outcomes of the co-designed coursework. Informed learning design, the model guiding the design of the coursework, is different than other models used to integrate information literacy into disciplinary courses.[16] Rather than adding information literacy-focused learning activities that supplement a course, informed learning design leads to the development of holistic assignments and learning activities where students learn disciplinary content while learning to use information.

Project activities will be conducted at each of the three participating institutions: Purdue University, University of Arizona, and the University of Nebraska, Lincoln. The major project activities are listed below and will be described in detail in this section:

- *Recruitment* of 15 academic library professionals and 15 instructors (5 teams of 2 from each institution) to participate in designing course assignments, assessments, and activities that integrate information literacy into disciplinary coursework.
- *Curriculum Developer Workshops* at each institution in which academic library professionals learn key characteristics of informed learning design, a curriculum design model.

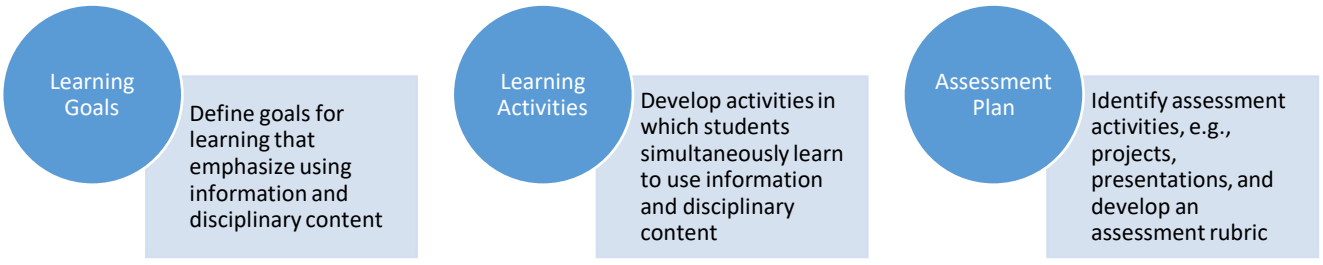
- *Assignment Design Workshops* at each institution in which academic library professionals and instructors collaborate to design an assignment, associated learning activities, and an assessment plan for measuring the efficacy of the intervention.
- *Assignment Outcome Consultations* will be held with participants to support the collection and analysis of student data, and the creation of Assignment Results Reports providing an analysis of student performance and student perceptions of the learning activities.
- *Sharing of project results* through presentations at national and international conferences (such as ACRL, ALA, and the European Conference on Information Literacy), open access hosting of a ALCD Facilitator Handbook, institutional and regional presentations describing how to use the Handbook to conduct similar projects, and a symposium featuring the collaborative assignments designed through participation in the ALCD project.

To continually refine and ensure success of the project, evaluation activities will be conducted regularly throughout the grant period. In consultation with the grant advisor, an expert in curriculum design (see Supportingdoc1.pdf for letter of commitment), the ongoing evaluation results will be used to address emerging concerns and modify project activities as needed to advance project goals.

Background

In this project, academic library professionals will apply a theoretically guided design model developed by Dr. Maybee that specifically focuses on integrating information literacy into course curricula.[17] Informed learning design draws from informed learning, an approach to information literacy developed by Dr. Christine Bruce that emphasizes the role that information plays in helping students to learn.[18] A central tenet of informed learning is that using information to learn in the classroom provides a model for students to follow when using information to learn in their professional, civic, and personal lives after graduation. Informed learning defines 'information' as anything that informs students as they learn. In a marketing classroom, students may find and interpret company information to make a business decision, while information needed by students in a technology course may be site observation data that identifies problems that can be solved with technological solutions.

Informed learning design provides a structured approach to designing course assignments and associated learning activities that intentionally teach students to use information in ways that support disciplinary learning goals. The three stages of informed learning design are: 1) identify goals for learning related to using information and course content, 2) create an assignment and related learning activities to enable students to learn to use information and content, and 3) develop an assessment strategy to determine if students' awareness of information use and subject content has changed.



Stages of Informed Learning Design

A pilot project was conducted at Purdue University in the summer of 2018 during which six Purdue instructors were introduced to the informed learning design model and worked with three librarians to develop assignments and associated learning activities in five courses. The librarians who conducted the pilot (members of the ACLD project team) drew from their experiences leading Purdue's Instruction Matters: Purdue Academic Course Transformation (IMPACT) program.[19] Recognized in *2018 Innovators: 6 Programs to Change Classroom Culture*, a special report by the *Chronicle of Higher Education*,[20] IMPACT is a faculty development program where instructors collaborate with librarians and educational developers to improve their courses through active learning, information literacy, and other research-based educational practices.

At a day-long pilot workshop, each instructor worked closely with a librarian to apply the informed learning design model to create assignments in which students simultaneously learned to use information in specific ways while also learning facts, theories, and concepts related to the subject of the course. The assignments designed in the workshop spanned a range of subject areas, including communication, English literature, aviation technology, pharmacy, and management. Examples include revising an assignment in the communication course in which students make short 'how-to' videos to be more explicit about how to use information to be more engaging and lend credibility to the procedure being described. In the pharmacy course, the instructors created exercises to help students reflect on how they engage with patient information and standards to develop personalized guidelines to more efficiently create patient care plans.

Four of the informed learning assignments developed in the workshop were implemented during the 2018-2019 academic year. The librarians conducted short semi-structured interviews with 21 of the students (4 to 6 in each course) to gauge their perceptions of the new assignments. The initial findings from the interviews suggest students were aware of the role that information played in the assignments, which enabled them to learn. Quotes from interviews with select students reveal the contextual nature of how the students need to learn to use information to successfully complete course assignments. For example, students who completed the how-to videos described their struggle to determine what could be considered credible information when discussing a non-academic subject:

> …if you are learning how to program a robot, there are clearly sources that can help you, but doing something that everyone can do differently [a hair curling technique]…it was harder to find more reliable sources…I looked at a magazine that was talking about it…it was a women's magazine …they know a lot about health and beauty…that's a reliable source. (undergraduate student, communication course)

The pharmacy students talked about prioritizing and organizing the information on a patient's chart as a key strategy for developing a patient care plan more quickly:

> …this class allowed me to figure out my process, to get through the information [in a patient's chart and disciplinary standards] that I need for the background more concisely, and more efficiently, and then to put that into the important stuff—like making a plan for the patient. (undergraduate student, pharmacy course)

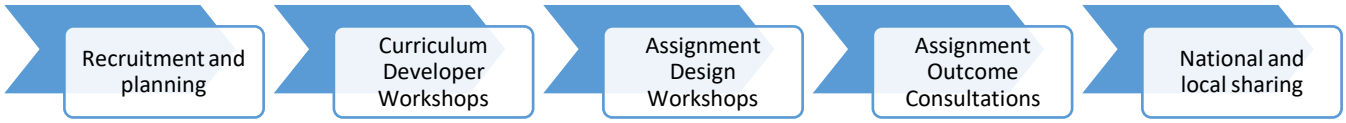
Recruitment Plan

Academic library professionals and instructors will each receive a $1,000 stipend for participation in the ALCD project. Library professionals who are members of underserved minorities or early career will be given priority for acceptance. Each of the three project team leaders at the different institutions will promote the ALCD project among the library professionals at their institution. Five library professionals from each of the three

institutions will be selected to participate in the project. Drawing from their liaison relationships and knowledge of departmental curricula, library professionals may recommend instructors for participation in the project. The project will also be promoted through organizations at each institution that foster and support faculty diversity and inclusivity. At Purdue, project team members are working with administrators of the Center for Intercultural Learning, Mentorship, Assessment, and Research (CILMAR), whose mission is to develop intercultural competence within the Purdue community, to promote the project. At the University of Arizona, the project team member is working with the Arizona Nursing Inclusive Excellence (ANIE) initiative,[21] which supports students' success during their academic career to ensure a more diversified nursing workforce. At the University of Nebraska, Lincoln promotion will be targeted to programs with significant diversity components, and courses that address diversity.[22] An indicator that recruitment efforts will be successful, letters indicating willingness to participate in the ALCD project pending funding and selection were collected from instructors at each of the three institutions (see Supportingdoc2.pdf).

Project Activities

The ALCD project is comprised of five major activities to enable academic library professionals to collaborate with disciplinary instructors to integrate information literacy into disciplinary courses, and to share the results of the project with the academic library community.



Major Project Activities

If the grant is awarded, a position announcement will be posted on Purdue's graduate student listservs to recruit a graduate assistant. In the first two months, the project team at Purdue will conduct interviews and hire for the assistantship. In the first four months of the grant project, the entire project team, including the graduate assistant, will meet via tele-conferencing to develop the curriculum and learning materials for the workshops. The materials for both workshops include an agenda, presentation slides, and handouts. At this time, the project team will publicize the project on all three campuses (see Recruitment Plan). The project team will accept up to five academic library professionals from each campus to participate in the project.

Between January and May of 2020, up to five instructors from each campus will be selected to participate in the project. During this period, Curriculum Developer Workshops will be held at each campus. This ½ day-long workshop will be facilitated by Dr. Maybee, the graduate assistant, and the local project team member(s). It is anticipated that library professional participants will have existing knowledge of teaching and curriculum design, and may have participated in education-focused collaborations with instructors. However, they are less likely to be familiar with a design model, such as informed learning design, that emphasizes teaching students to use information as they learn disciplinary content.

The Curriculum Developer Workshop will outline the benefits of taking an informed learning approach to collaborations with instructors. The workshop agenda will include: 1) discussion of library professionals' experiences of collaboration with instructors to integrate information literacy into curricula, 2) an overview of the project, 3) approaches used by curriculum developers,[23] 4) an overview of informed learning design, and 5) group worktime in which participants practice using informed learning design to develop assignments and

learning activities through case studies. The workshop will conclude with an exercise in which participants will provide written reflections on their perceived challenges to collaborating with instructors to design assignments and other learning activities that integrate information literacy into disciplinary coursework. In consultation with the grant advisor, the data collected from this exercise will be used to further develop the Assignment Design Workshops held in the summer of 2020.

The Assignment Design Workshops held at each institution between June and August of 2020 will build on the agenda developed in 2018 for the two pilot workshops at Purdue (see Supportingdoc3.pdf). As with the first workshop, Dr. Maybee, the graduate assistant, and the local project team member will facilitate the Assignment Design Workshop. In this workshop, the participating academic library professionals will collaborate with classroom instructors to integrate information literacy into disciplinary course assignments. The agenda for the 1.5 day-long Assignment Design Workshop will include: 1) an overview of the project, 2) an overview of informed learning design, 3) working time in which each team (comprised of an academic library professional and an instructor), will work through the three stages of the informed learning design model to create an assignment and associated learning activities.

The first stage of the design model focuses on identifying the content-focused learning goals and then determining how students need to learn to use information to accomplish those goals. The team composes learning outcomes that reflect both learning goals for information literacy and disciplinary content. The second stage of the design model focuses on determining assignment-related learning activities that explicitly enable the students to learn to use information. Each team will create an assignment design plan that describes the informed learning assignment and associated learning activities, e.g., case studies, team-based learning, class discussions, etc., necessary for students to successfully complete the informed learning assignment.

The third stage of the model focuses on determining an assessment strategy. Facilitators will introduce participants to an approach for designing grading rubrics for measuring student performance that evaluate how students learned to use information as well as disciplinary content (for example rubric from 2018 pilot see Supportingdoc3.pdf). Facilitators will also discuss options, such as reflection questions or interviews, for gathering student perception data about their experience of completing the assignment. In addition to measuring student performance using a rubric, each team must select a method to collect data on student perceptions of their learning. By the end of the 1 ½ day-long workshop, each library professional/instructor team will have produced three deliverables related to the assignment: 1) learning outcome statements, 2) assignment design plan, and 3) assessment plan.

The workshop will conclude with an exercise in which participants will provide written reflections on their perceived challenges of creating and implementing learning activities where students intentionally learn to use information to understand disciplinary content, such as concepts or theories. As with the first workshop, in consultation with the project advisor, the data collected from this exercise will be used to refine future ALCD project activities.

Academic library professionals and instructors will work independently after the workshop to complete two other deliverables: 1) assignment instructions that are shared with the students, and 2) the assignment grading rubric. These deliverables will be shared with the project team before implementation of the assignment in the course.

During the second year of the project (September 2020 to May 2021), instructors (in consultation with library professionals) will implement the new assignments and learning activities in their disciplinary courses. The library professional, instructor, or both may facilitate the learning activities developed through the informed

learning design process. Once the assignments have been completed by students, the instructors will share assessment data with the academic library professional. This will include anonymized student data (e.g., graded rubrics) for the designed assignment. If included in the assessment plan, the academic library professionals will interview between three and six students to collect data about their perceptions of what they learned from the assignment.

Between June and August 2021, members of the project team will hold consultations via tele-conferencing with the library professional/instructor teams to support their analysis of collected data related to student learning. At this time, the academic library professional (in consultation with the instructor), will complete an Assignment Results Report, which outlines aggregate student performance data as it corresponds to rubric criteria, an anonymized synopsis of student reflections, and a reflection on how to improve the assignment and learning activities to make them more effective.

The results of the project, including methods used, will be disseminated to the library and information science community through four activities (described fully in the Broad Impact section). Beginning June 2021, participants may apply for funding to supplement travels costs for attending conferences to present on their ALCD efforts and conclusions. Between February and August 2022, workshop materials will be compiled into an ALCD Facilitator Handbook and openly shared via an institutional repository for a minimum of three years. During this time, the project team will provide institutional or regional presentations describing the project and explain how to use the Handbook to work with instructors to integrate information literacy into course curricula. Between June and August 2022, the project will culminate with a symposium held at Purdue University to introduce the broader library and information science community to the benefits of using the ALCD model.

Evaluation Plan

The primary goal of the ALCD project is for academic library professionals to integrate information literacy into disciplinary courses. To do so, the library professionals will adopt the role of curriculum developers by applying an instructional design model to collaborate with disciplinary instructors who have oversight of course curricula. The project evaluation focuses on determining if the informed learning design model and related workshops enables the library professionals to collaborate with instructors to integrate information literacy into course curricula. Our assessment strategy aligns with the first five levels of curriculum development program evaluation identified by Hines: 1) participation, 2) participant satisfaction, 3) participant learning, 4) change in practice, and 5) changes related to student learning.[24] Data related to participant satisfaction and learning will be collected through survey and reflection exercises at the workshops.

Changes in library professional practice will be determined through an analysis of participant deliverables, which include: 1) learning outcome statements, 2) assignment design plan, 3) assessment plan, 4) assignment instructions, and 5) assignment grading rubric. The relationship between more intentional student engagement with information and student learning will be captured in Assignment Results Reports completed by each of the library professionals in consultation with the instructor with whom they are collaborating. Each report will provide aggregate student performance data in the form of grades broken down by rubric criteria, anonymized student perception data resulting from an analysis of student answers to reflection questions or interviews, and recommendations for revisions to the assignment to improve learning outcomes in future iterations. The project team will not have direct access to individual student performance data. To protect student confidentiality regarding the collection and use of assignment grades, reflections, or interview data, project team leaders will ensure that participants are aware of national and institutional policies for working with student data. If required by the institution, the library professional will apply for approval from their institution's Institutional Review Board (IRB) to collect and/or examine student data for research purposes.

Evaluation data collected during all major project activities will be examined by the project team to decide if activities are meeting project goals. After the implementation of key project activities, the project team will consult with the grant advisor, Dr. Chantal Levesque-Bristol. Dr. Levesque-Bristol, an expert in curriculum development, is a Professor of Educational Studies and the Executive Director of the Center for Instructional Excellence (CIE) at Purdue University. In consultation with Dr. Bristol, the project team will determine if changes may be necessary to the project to achieve project outcomes. A summative evaluation of the project will be conducted in the final year of the grant.

Project Milestones and Evaluation

Date	Activity	Evaluation
September - October 2019	• Hire graduate assistant	
September - December 2019	• Develop workshop curricula • Publicize project • Accept academic library professional participants	• Advisor feedback of workshop curriculum • Number of applicants • Number of applicants from underserved minorities or early career
January - May 2020	• Curriculum Developer Workshops for academic library professionals held at each institution • Accept instructor participants	• Pre/post surveys of participants • Written reflections • Number of instructor applicants from underserved minorities or early career • Advisor feedback
June - August 2020	• Assignment Design Workshops for library professional/instructor team	• Learning outcomes • Assignment design plan • Assessment plan • Survey and written reflections • Advisor feedback
September 2020 - May 2021	• Teams finalize assignment design and assessment rubric • Instructors implement assignments in a fall 2020 or spring 2021 course • Library professional/instructor collect student assessment data	• Assignment instructions • Assessment rubric
June - August 2021	• Members of the project team hold Assignment Outcome Consultations • Applications for supplemental funding for conference travel	• Assignment Results Report • Number of conferences • Advisor feedback
September 2021 - January 2022	• Project evaluation	• All collected data • Advisor feedback
February - May 2022	• ALCD Facilitator Handbook created and made available via institutional repository • Institutional, regional, national and/or international presentations	• Site visits and downloads • Number of presentations

June – August 2022	• ALCD Symposium • Summative Evaluation Report	• Number of attendees • Conference evaluation form

3. Diversity Plan

Diversity, equity, and inclusivity are important values to academic librarianship and curriculum design.[25] Academic library professionals want to ensure equitable and supportive learning experiences for all students regardless of age, sex, race, gender identity, ethnicity, disability, or other aspects. Accordingly, the project will actively recruit a diverse body of academic library professionals and instructors, acknowledging that cultivating diverse perspectives can yield richer conversations between participants.

The project will also be promoted through organizations at each institution that foster and support faculty diversity and inclusivity. At Purdue, project team members are working with administrators of the Center for Intercultural Learning, Mentorship, Assessment, and Research (CILMAR),[26] whose mission is to develop intercultural competence within the Purdue community, to promote the project. At the University of Arizona project team members are working with the Arizona Nursing Inclusive Excellence (ANIE) initiative,[27] which supports students' success during their academic career to ensure a more diversified nursing workforce. At the University of Nebraska, Lincoln, the project team will reach out to facilitators and instructors affiliated with programs with significant diversity components, and courses that address diversity.[28]

In preparation for the ALCD project, project team members consulted with Dr. Charles Calahan, the Assistant Director for Global Diversity Faculty Development in Purdue's Center for Instructional Excellence (CIE), who recommended strategies that will be used to address issues of diversity, equity, and inclusivity in workshop materials.[29] Documents, videos, and web content will follow common accessibility standards, such as closed captioning for audio and video files and using headings to make documents easier to use with screen readers. Finally, facilitators and participants will acknowledge clearly articulated rules of conduct for engaging with other facilitators and participants.

4. Broad Impact

The results of the project, including methods used, will be disseminated to the library and information science community through four activities:

1. National and international conference presentations
2. Open access hosting of a ALCD Facilitator Handbook
3. Institutional and regional presentations describing how to use the Handbook to conduct similar projects
4. ALCD Symposium held at Purdue University

Beginning in June of 2021, academic library professionals and instructors can apply for funding of $500 to supplement the costs associated with travel to national or international conferences, such as ACRL, ALA, and the European Conference on Information Literacy, to make presentations related to the ALCD project. The purpose of funding travel to conferences is to encourage participants to publicly share the results of their design efforts with other educators, and receive feedback which they may use to enhance efforts moving forward—thus, engaging in a scholarly approach to educational design and teaching.[30] Up to six individuals from each institution may receive funding.

An ALCD Facilitator Handbook will be developed using documentation created during the project that may be used by academic library professionals and other educators to facilitate similar projects on their campuses. The

Handbook will contain 1) presentation slides, agenda, and facilitator notes to guide the facilitation of the Curriculum Developer and Assignment Design Workshops, 2) worksheets and handouts used by the library professionals and instructors to guide the design of: a) learning outcome statements, b) assignment design plan, c) assessment plan, d) assignment instructions, and e) assignment grading rubric, 3) assignment results report template, and 4) list of references and other materials related to the project. By March of 2022, the Handbook will be openly shared via Purdue's 'e-Pubs' institutional repository for a minimum of three years after the end of the grant period.

During the final six months of the project, the project team will provide institutional or regional presentations explaining how to facilitate a similar project using the ALCD Facilitator Handbook. Potential presentation venues include a webinar for the Academic Libraries of Indiana's Information Literacy Committee, a workshop at the Arizona Library Association annual meeting, and the Libraries annual Teaching Summit (retreat) attended by librarians at all University of Nebraska campuses.

The project culminates with the ALCD Symposium for up to 100 attendees. The goal of the Symposium is to showcase the ALCD model as an effective and sustainable way for academic libraries to integrate information literacy into course curricula and provide examples of how the model may be applied. Held at Purdue University between June and August 2022, registration for the Symposium will be free. The target audience for the Symposium is information literacy coordinators, academic library administrators, and instructional librarians. The Symposium will be promoted through various information literacy-related listservs, including the Big Ten Academic Alliance Instruction Coordinators list, and the Information Literacy Instruction Discussion list (ILI-L). The Symposium will feature a keynote speaker who is a leader in the field of information literacy in higher education. A workshop session will be provided on informed learning design. Up to two teams of library professionals and instructor collaborators from each institution will share their design experiences of developing, implementing, and evaluating assignments using the informed learning design model. Funding will be provided for presenters from the University of Arizona and University of Nebraska, Lincoln to travel to Purdue.

One of the ALCD project's goals is to amplify geographically distributed efforts and resources into a more coherent and effective professional development program—providing opportunities for library professionals to embed information literacy into curricula while developing curricular design knowledge and experience. Of particular note is the 'train the trainer' methodology that ALCD uses, focusing on library professionals working with disciplinary instructors outside of the classroom, rather than providing instruction themselves. This enables the library professionals at the three institutions (whose institutions collectively serve 100,000+ students) to better articulate how academic libraries positively contribute to student learning while addressing common issues of sustainability and scalability for student success efforts.

Assessment efforts within the program will further this goal by modelling tools and methods to assess and report how information literacy can support student academic success in a variety of disciplines and contexts. The ALCD project provides a model that is nationally replicable for academic library professionals working with instructors to further student learning and information literacy. The impact of the project will be increased by making workshop materials open and accessible while also incentivizing conference presentations on the project to increase awareness. Presentation materials, download statistics, and attendance at presentations like webinars, will be collected as indicators of broad impact and included in reporting.

Note: See Supportingdoc4.pdf for the list of references to materials cited in the Narrative.

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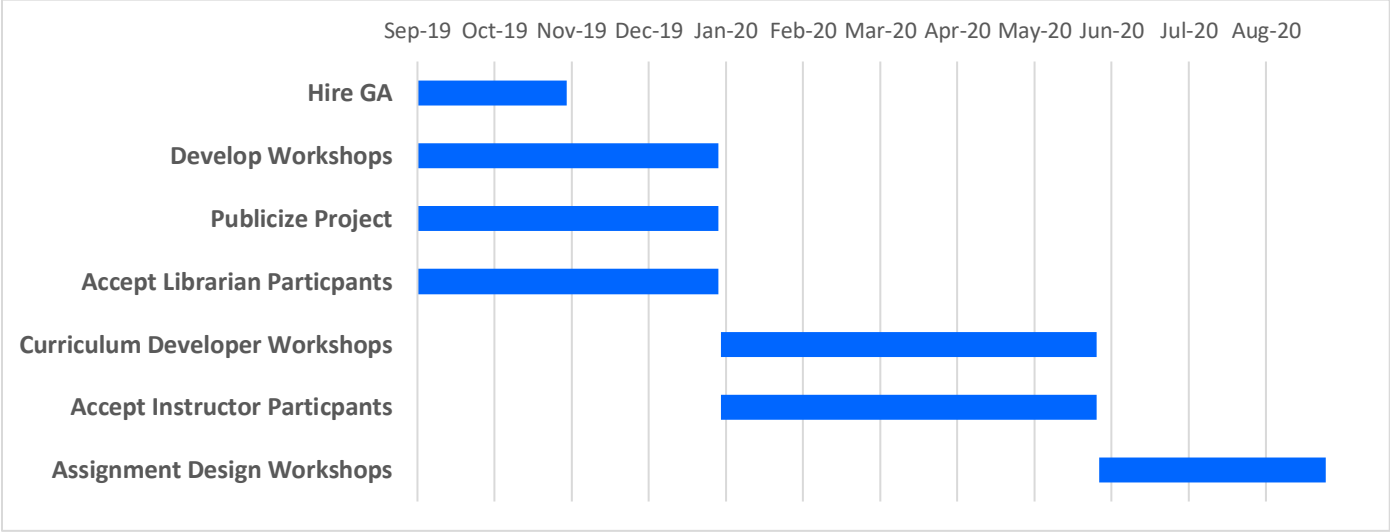

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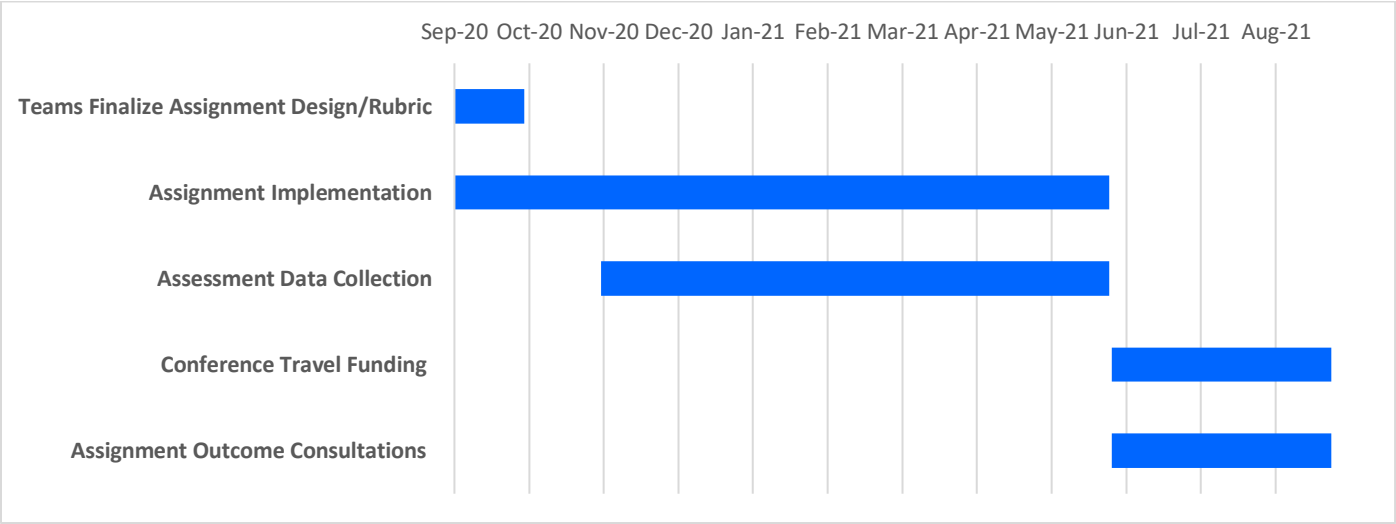
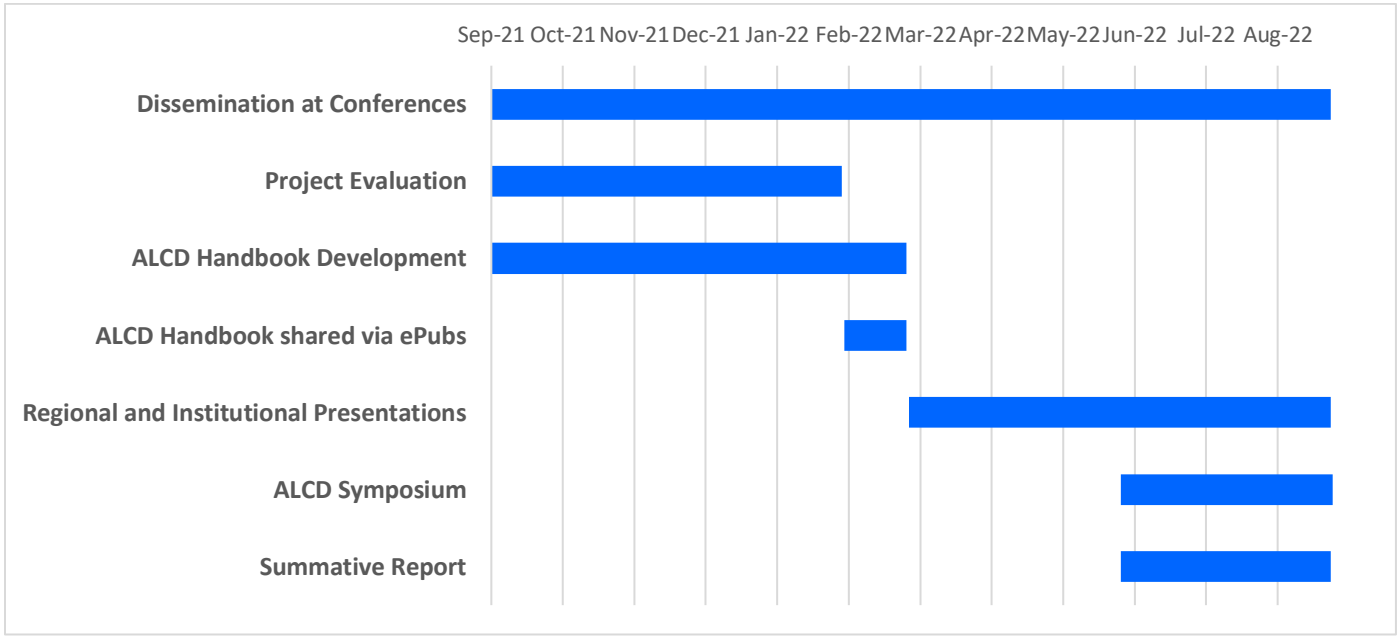


Academic Librarian Curriculum Developers:
Building Capacity to Integrate Information Literacy across the University



DIGITAL PRODUCT FORM

Introduction

The Institute of Museum and Library Services (IMLS) is committed to expanding public access to federally funded digital products (e.g., digital content, resources, assets, software, and datasets). The products you create with IMLS funding require careful stewardship to protect and enhance their value, and they should be freely and readily available for use and re-use by libraries, archives, museums, and the public. Because technology is dynamic and because we do not want to inhibit innovation, we do not want to prescribe set standards and practices that could become quickly outdated. Instead, we ask that you answer questions that address specific aspects of creating and managing digital products. Like all components of your IMLS application, your answers will be used by IMLS staff and by expert peer reviewers to evaluate your application, and they will be important in determining whether your project will be funded.

Instructions

All applications must include a Digital Product Form.

☐ Please check here if you have reviewed Parts I, II, III, and IV below and you have determined that your proposal does NOT involve the creation of digital products (i.e., digital content, resources, assets, software, or datasets). You must still submit this Digital Product Form with your proposal even if you check this box, because this Digital Product Form is a Required Document.

If you ARE creating digital products, you must provide answers to the questions in Part I. In addition, you must also complete at least one of the subsequent sections. If you intend to create or collect digital content, resources, or assets, complete Part II. If you intend to develop software, complete Part III. If you intend to create a dataset, complete Part IV.

Part I: Intellectual Property Rights and Permissions

A.1 What will be the intellectual property status of the digital products (content, resources, assets, software, or datasets) you intend to create? Who will hold the copyright(s)? How will you explain property rights and permissions to potential users (for example, by assigning a non-restrictive license such as BSD, GNU, MIT, or Creative Commons to the product)? Explain and justify your licensing selections.

Purdue University, University of Nebraska, Lincoln, and University of Arizona grant intellectual property rights to authors of instructional materials. Intellectual property rights for open access reports and products distributed by authors will be held by authors. Digital products will be licensed under a Creative Commons Attribution-ShareAlike 4.0 (CC BY-SA 4.0) License (https://creativecommons.org/licenses/by-sa/4.0/). The CC license will be visible on every page of workshop material with hyperlinks and URLs.The goal of using a CC BY-SA 4.0 license is to increase the broad impact of the ALCD project by making workshop materials as widely available as possible. We will disseminate workshop materials via local and national conferences and organization meetings, allowing participants to download and use materials.

A.2 What ownership rights will your organization assert over the new digital products and what conditions will you impose on access and use? Explain and justify any terms of access and conditions of use and detail how you will notify potential users about relevant terms or conditions.

We do not believe that any of the three universities will assert ownership rights for grant products. Digital products will be hosted by Purdue ePubs, an open access institutional repository. Authors do not transfer copyright when using Purdue ePubs, but "license the right for Purdue University to provide access to their scholarly material." The Purdue Libraries are committed to provide access, technical support, and bit-level preservation for digital objects in ePubs, regardless of format (https://www.lib.purdue.edu/repositories/epubs/about#copyright). Grant products will be made freely available with no conditions of use beyond those carried by the CC license or relevant terms and conditions on ePubs.

A. 3 If you will create any products that may involve privacy concerns, require obtaining permissions or rights, or raise any cultural sensitivities, describe the issues and how you plan to address them.

We will not create any content or products that may involve privacy concerns or cultural sensitivities. Some instructors and/or librarian professional participants may collect and analyze data as a result of their participation in the ALCD project, but the project team will not be responsible for such projects or for handling their data. The project team may consult with instructors and/or library professional participants on such projects.

Part II: Projects Creating or Collecting Digital Content, Resources, or Assets

A. Creating or Collecting New Digital Content, Resources, or Assets

A.1 Describe the digital content, resources, or assets you will create or collect, the quantities of each type, and the format(s) you will use.

Digital content will be created for workshops and assignment consultations. This will include documents to aid participants to execute an informed learning design project, assignment instructions for students, an assignment grading rubric document, and reflection prompts for participants for ALCD assessment purposes. The rubrics and instruction documents will be tailored to instructor needs, and so will result in as many different kinds of rubrics as instructor participants. While instructors may share assessment data with their partnering academic library professional including anonymized student data, i.e. graded rubrics and/or student interviews, the stewardship of such research data, such as gaining institutional IRB approval, will not be the responsibility of the ALCD project. The .pdf format will be prioritized for digital content, though others like .docx and .pptx. may be used.

A.2 List the equipment, software, and supplies that you will use to create the content, resources, or assets, or the name of the service provider that will perform the work.

Documents, reports, presentations, and other digital products for the ALCD project will be developed on laptop and desktop computers using standard word processing software by members of the project team.

A.3 List all the digital file formats (e.g., XML, TIFF, MPEG) you plan to use, along with the relevant information about the appropriate quality standards (e.g., resolution, sampling rate, or pixel dimensions).

Documents, reports, presentations, and other digital products will be developed using word processing software, such as Microsoft Word, Microsoft PowerPoint, or Google Docs, and will be exported as PDF documents as appropriate.

B. Workflow and Asset Maintenance/Preservation

B.1 Describe your quality control plan. How will you monitor and evaluate your workflow and products?

Quality control will be exercised via an iterative development process between Purdue, University of Nebraska, Lincoln, and University of Arizona ALCD team members. Team members will meet regularly via web conferencing software to prepare for various workshops and prepare documents, and digital products and workshop instructional design will be reviewed by the project's advisor, Dr. Levesque-Bristol.

B.2 Describe your plan for preserving and maintaining digital assets during and after the award period of performance. Your plan may address storage systems, shared repositories, technical documentation, migration planning, and commitment of organizational funding for these purposes. Please note: You may charge the federal award before closeout for the costs of publication or sharing of research results if the costs are not incurred during the period of performance of the federal award (see 2 C.F.R. § 200.461).

Digital products will be hosted by Purdue ePubs, Purdue's institutional repository. ePubs is hosted by bepress, which is used by over 300 Colleges and Universities and claims 99.9%+ uptime. The Purdue Libraries are committed to provide access, technical support, and bit-level preservation for digital objects in ePubs, regardless of format. The Purdue University Libraries will be responsible for the long-term management and maintenance of these digital products.

C. Metadata

C.1 Describe how you will produce any and all technical, descriptive, administrative, or preservation metadata. Specify which standards you will use for the metadata structure (e.g., MARC, Dublin Core, Encoded Archival Description, PBCore, PREMIS) and metadata content (e.g., thesauri).

Metadata for digital content (e.g. workshop materials) created by the ALCD team and published on ePubs will be created at time of deposit in Purdue ePubs, following ePubs institutional repository standards and metadata structures.

C.2 Explain your strategy for preserving and maintaining metadata created or collected during and after the award period of performance.

Metadata files will be preserved with the same methods described in section B.2.

C.3 Explain what metadata sharing and/or other strategies you will use to facilitate widespread discovery and use of the digital content, resources, or assets created during your project (e.g., an API [Application Programming Interface], contributions to a digital platform, or other ways you might enable batch queries and retrieval of metadata).

Purdue ePubs software, bepress, is widely discoverable on the open web, including Google Scholar and other searching sites on the standard web. All metadata in ePubs can be harvested via OAI-PMH, a low-barrier mechanism for repository interoperability, in Dublin Core.

D. Access and Use

D.1 Describe how you will make the digital content, resources, or assets available to the public. Include details such as the delivery strategy (e.g., openly available online, available to specified audiences) and underlying hardware/software platforms and infrastructure (e.g., specific digital repository software or leased services, accessibility via standard web browsers, requirements for special software tools in order to use the content).

Workshops materials, rubrics, and other digital products created for workshops will be openly available online via Purdue's ePubs, Purdue's institutional repository. .pdf format will be prioritized for documents intended to be shared.

D.2 Provide the name(s) and URL(s) (Uniform Resource Locator) for any examples of previous digital content, resources, or assets your organization has created.

Purdue ePubs is online at https://docs.lib.purdue.edu/

Part III. Projects Developing Software

A. General Information

A.1 Describe the software you intend to create, including a summary of the major functions it will perform and the intended primary audience(s) it will serve.

A.2 List other existing software that wholly or partially performs the same functions, and explain how the software you intend to create is different, and justify why those differences are significant and necessary.

B. Technical Information

B.1 List the programming languages, platforms, software, or other applications you will use to create your software and explain why you chose them.

B.2 Describe how the software you intend to create will extend or interoperate with relevant existing software.

B.3 Describe any underlying additional software or system dependencies necessary to run the software you intend to create.

B.4 Describe the processes you will use for development, documentation, and for maintaining and updating documentation for users of the software.

B.5 Provide the name(s) and URL(s) for examples of any previous software your organization has created.

C. Access and Use

C.1 We expect applicants seeking federal funds for software to develop and release these products under open-source licenses to maximize access and promote reuse. What ownership rights will your organization assert over the software you intend to create, and what conditions will you impose on its access and use? Identify and explain the license under which you will release source code for the software you develop (e.g., BSD, GNU, or MIT software licenses). Explain and justify any prohibitive terms or conditions of use or access and detail how you will notify potential users about relevant terms and conditions.

C.2 Describe how you will make the software and source code available to the public and/or its intended users.

C.3 Identify where you will deposit the source code for the software you intend to develop:

Name of publicly accessible source code repository:

URL:

Part IV: Projects Creating Datasets

A.1 Identify the type of data you plan to collect or generate, and the purpose or intended use to which you expect it to be put. Describe the method(s) you will use and the approximate dates or intervals at which you will collect or generate it.

A.2 Does the proposed data collection or research activity require approval by any internal review panel or institutional review board (IRB)? If so, has the proposed research activity been approved? If not, what is your plan for securing approval?

A.3 Will you collect any personally identifiable information (PII), confidential information (e.g., trade secrets), or proprietary information? If so, detail the specific steps you will take to protect such information while you prepare the data files for public release (e.g., data anonymization, data suppression PII, or synthetic data).

A.4 If you will collect additional documentation, such as consent agreements, along with the data, describe plans for preserving the documentation and ensuring that its relationship to the collected data is maintained.

A.5 What methods will you use to collect or generate the data? Provide details about any technical requirements or dependencies that would be necessary for understanding, retrieving, displaying, or processing the dataset(s).

A.6 What documentation (e.g., data documentation, codebooks) will you capture or create along with the dataset(s)? Where will the documentation be stored and in what format(s)? How will you permanently associate and manage the documentation with the dataset(s) it describes?

A.7 What is your plan for archiving, managing, and disseminating data after the completion of the award-funded project?

A.8 Identify where you will deposit the dataset(s):

Name of repository:

URL:

A.9 When and how frequently will you review this data management plan? How will the implementation be monitored?