

CONNECTING THE PIPELINE: LIBRARIES, OER, AND DUAL ENROLLMENT FROM SECONDARY TO POSTSECONDARY

LOUIS: The Louisiana Library Network (LOUIS), an academic library consortium, seeks a three-year National Leadership Grants for Libraries Project Grant to develop, implement, and share a model for connecting Open Educational Resources (OER) initiatives between secondary and postsecondary institutions within a library context. IMLS funds in total of \$676,718.61 are requested with a 1:1 match from LOUIS in the amount of \$676,718.61 for a total project budget of \$1,353,437.22. This request represents a modification in both timeline and funds requested in the preliminary proposal due to the new availability of matching funds, which if successful, allows LOUIS to expand the scope of the project. In collaboration with Institute for the Study of Knowledge Management in Education (ISKME), LOUIS will utilize interviews, focus groups, and workshops with school and academic librarian communities to build connections and capacity in OER support. This will advance an existing OER Textbook Transformation program to support the expansion of high school Dual Enrollment (DE) courses in Louisiana. Through this project LOUIS will create a replicable model for school and academic librarian professional development and collaboration that can inform other institutions looking to adopt OER in DE courses. Project teams will then redesign courses to eliminate textbook costs for priority dual enrollment courses and to remove a barrier to participation. Research across the country documents that students who participate in DE are more likely than their peers to enroll in college, build academic momentum, and persist to completion. LOUIS will also ensure that OER courses are also developed to meet the needs of diverse learners and institutional contexts, secondary and postsecondary.

STATEMENT OF NATIONAL NEED

LOUIS's work advancing open educational resources (OER) in the state of Louisiana has revealed barriers to developing collaborations between school and academic librarians to advance OER adoption and creation of Dual Enrollment (DE) courses. DE programs in Louisiana and beyond allow high school students to participate in postsecondary courses for which both college and high school credit may be earned, thus improving college access and completion rates. Yet the infrastructure and program experiences to connect OER expertise across these sectors is absent. In this 4-phased project, LOUIS will identify the professional development and infrastructure necessary to develop and connect OER expertise across secondary and postsecondary institutions in order to design a librarian-centered model for supporting the adoption and creation of OER for DE courses. This model will then be deployed to expand the use of OER in DE classes through the creation of materials. In this way, LOUIS will improve access to college experiences that lead to degree attainment, particularly amongst the minority student population of Louisiana. This will result in full re-deployable OER courses, built for transition between multiple learning management systems, for priority dual enrollment courses. Furthermore, by working with librarians and instructors to develop curricular alignment standards and metadata for OER courses, LOUIS will ensure courses are aligned to Advanced Placement (AP), DE, and Common Core State Standards, referred to as Louisiana Student Standards, for wider transference, adoption, and adaptation.

Implications of Dual Enrollment: Research across the country documents that students who participate in DE are more likely than their peers to enroll in college, build academic momentum, and persist to completion. One study, using a nationally representative sample of students, showed that students who took at least one DE course were 10% more likely to complete a bachelor's degree than the comparison group, with an increase to 12% for students whose parents never attended college (An, 2013). The U.S. Department of Education completed a review of dozens of studies on the effects of DE and found a medium-to-large

evidence base existed showing that DE has positive impacts on students in terms of degree attainment in college, college access and enrollment, and general academic achievement in high school (WWC, 2017).

The Board of Regents (BoR), a state agency created by the 1974 Louisiana Constitution, which coordinates all public higher education in Louisiana, adopted a Master Plan in 2019. The plan recognized the need to expand talent development within the state in order to meet current and future workforce needs. DE was a specific policy highlighted to achieve this vision as it accelerates the earning of early college credit by Louisiana’s high school students, thus increasing educational attainment.

Role of Textbooks in Educational Attainment: While DE is seen as a tactic for improving equity gaps for traditionally underserved populations by providing access to and supporting the completion of postsecondary education, achieving this requires deliberate design and effective execution. State investments and policies are key to this, but they are often broadly directed, instead of targeted, and therefore do not adequately address the equity imperative. As a result, “states and higher education providers need not only to support the increased matriculation of priority populations, but also to provide the necessary financial, structural and programmatic elements required for student success” (Moore, 2019).

Course material costs have been noted as barriers to DE in the work of Louisiana’s Dual Enrollment Task Force. Created via Act 128 of the 2019 Regular Legislative Session and under the jurisdiction of the BoR, the Task Force was charged with reviewing existing laws, policies, and efforts in Louisiana and other states on DE; and seeking to coordinate all DE efforts of the BoR, the State Board of Elementary and Secondary Education, the state Department of Education, public postsecondary education management boards and institutions, and the governing authority of each public high school.

In 2020, this Task Force adopted recommendations that called for access to college coursework in core academic content areas and career/technical fields for all high school students, termed universal access. They identified 6 strategic priorities to increase access and equity in DE in areas of high need, one of which was: Development and adoption of Open Educational Resources to reduce textbook and materials costs. This strategic priority reflects findings on the role of textbook costs in educational attainment. DE programs “have a particularly difficult time financing college textbooks” (Cassidy et al, 2010). When students must cover textbook costs, this can “drastically reduce participation, particularly among traditionally underrepresented students who are less affluent than typical college-bound students” (Cassidy et al, 2010). States typically do not cover this cost and, in Louisiana, students are advised they “must secure the required textbooks and course materials to fully participate in the dual enrollment class” (Q&A, 2018). These costs, which on average range from \$82-100 per textbook, restrict access for families unable cover them (EDUCAUSE, 2020). The implication of these barriers has become more acute during the COVID-19 pandemic, which has surfaced and heightened inequities, extending and deepening the economic challenges students and their families face.

Given textbook costs, BoR enrollment data reveals current DE programs in Louisiana could result in an unfunded family burden of over \$3.6 million annually in textbook expenses. Designing and transitioning DE courses to utilize OER will eliminate family and/or school-funded textbook costs. Research shows that students receive benefits beyond cost savings when they participate in courses that have adopted OER. Benefits across students included improvements in end-of-course grades and decreases in DFW (grade letter D, failure, and withdrawal), and these benefits were greatest for Pell recipients, part-time, and historically underserved students (Colvard et al, 2018).

Across the LOUIS consortium, there is a breadth of experience in open education and adjacent areas of practices, and this established experience will be called on and advanced through this project. Library personnel across the consortium are trained in areas including copyright and licensing, instructional design, scholarly publishing, archival best practices, pedagogy, information literacy, metadata and discoverability, and

assessment. Notably within this existing skill set is the intensive training already completed by librarians statewide to build capacity. Sixty (60) librarians participated in a day-long Creative Commons beta certification training, and three librarians have gone on to complete a Creative Commons Certificate program. To become conversant in open education and support OER adoption, over 55 librarians have participated in Open Education Network train-the-trainer workshops. Objectives include increasing participants' familiarity with the nuances related to the issues in open textbook adoption, strengthening presentation capacity for open textbook workshops, and enhancing their local open textbook program development. Higher education contacts within and outside of libraries have relevant experience in administering LMSs, in accessibility requirements for digital sources, and in completing Quality Matters course review.

LOUIS has experience leading in this space. Demonstrations include:

- **Interactive OER for Dual Enrollment: An Open Textbooks Pilot** grant from the Fund for the Improvement of Postsecondary Education (FIPSE), U.S. Department of Education. LOUIS, in collaboration with Pressbooks, is engaging with secondary and postsecondary instructors in the curation and creation of OER for 25 of the state's general education courses, offered as both dual and traditional enrollment options. This process is collaboratively supported by institution personnel, including librarians, and will result in open educational resources (OER) and interactive assessment elements.
- **LOUIS OER Commons Curation Project:** LOUIS engaged a cohort of academic librarians and faculty to curate OER materials to align them with the courses from the Louisiana Master Course Articulation Matrix, a document maintained by the BoR to reflect course equivalencies among public postsecondary institutions. To successfully engage in this process, they received training on OER, evaluating materials using rubrics, and the OER Commons infrastructure.
- **LOUIS OER Commons Faculty Cohort Program:** A competitive program in which faculty participate in a semester-long learning community to build capacity in open education.
- **Course Transformation Program:** A competitive program in which faculty contributed to lowering the cost of postsecondary education for their students and improving retention, progression, and graduation through the adoption, adaption, and/or creation of OER.

PROGRAM DESIGN

Overview: Building upon successful LOUIS program design including a Faculty Cohort, OER Commons Curation, and Course Transformation programs, and the recently funded Interactive OER for Dual Enrollment grant from the U.S. Department of Education, LOUIS will continue to grow an OER professional development and course development program for DE and AP. To date, LOUIS initiatives have largely utilized the time and talents of the postsecondary community including librarians, instructional designers, and faculty. Furthermore, OER has taken root in both secondary and postsecondary environments but, given that students and instructors of DE courses span secondary and postsecondary environments, consideration needs to be given to the collaboration and skills needed for OER in this context. Students may take DE courses at their local school or at a college campus, with classes taught by high school teachers or college faculty. Given this landscape and the scope of stakeholders, and in order to expand and connect secondary and postsecondary OER initiatives, LOUIS will embark upon a program of community connection, which encompasses a process to examine the priorities and culture of the school library media specialists, curriculum design specialists, secondary school DE/AP instructors, and secondary school administrators. Drawing from these findings, LOUIS will connect new OER curriculum teams in priority subject areas for the development of standardized online or face-to-face re-

deployable OER courses. Teams will develop curricular alignment standards and metadata for postsecondary courses with AP, DE, and Common Core standards. To facilitate this process LOUIS and the Institute for the Study of Knowledge Management in Education (ISKME) will deliver a professional development program to the curriculum design teams prior to and throughout the curriculum development and alignment period. Employing this model, the project will leverage librarians and instructors to create OER full classes for priority DE courses, determined based on a gap analysis and by examining BoR data reflecting enrollment trends and grades. This will result in OER courses tailored to DE, increasing the availability of OER with ancillary and interactive materials for DE courses nationwide, minimizing the cost of attendance for students and removing a barrier to participation that has disproportionately impacted students from traditionally underserved communities. The final phase of the project will focus on dissemination of results including a whitepaper on training for OER curriculum support within the school librarianship certification, and widespread promotion of OER courses developed by curriculum teams. The following is a description of overarching goals, project phases, and community deliverables, which are work products that will be made openly available.

Program Goals:

Goal 1: Create a replicable model for school and academic librarian professional development and collaboration that can inform other institutions looking to adopt OER in DE courses.

- Objective 1.1: Identify pathways informed by research to support school and academic librarian participation.
 - Performance Indicator: Percentage of secondary and postsecondary librarian participating in cohorts.
- Objective 1.2: Deliver proven OER training that enhances the self-efficacy of librarians working to collaborate and enable OER adoptions at their institution.
 - Performance Indicator: Percentage change in perceptions of self-efficacy following training as measured by pre- and post-tests.

Goal 2: Eliminate textbook costs for priority DE courses to remove a barrier to participation.

- Objective 2.1: Create open courses with interactive assessments connected to the LMS gradebook using Pressbooks.
 - Performance Indicator: Number of open courses with interactive assessments completed by the end of the grant period.
- Objective 2.2: Implement the open courses in DE courses statewide.
 - Performance Indicator: Number of instructors, courses, enrolled students, and institutions within the consortium that adopt the resources for dual enrollment.

Goal 3: Ensure that OER courses are developed to meet the needs of diverse learners and institutional contexts, secondary and postsecondary.

- Objective 3.1: Create project working teams that leverage the expertise of secondary and postsecondary librarian and instructor personnel.
 - Performance Indicators: Percentage of institutions represented via working team participation. Percentage of participants affiliated with one of the 7 HBCU institutions, 12 community and technical college institutions, and/or Title 1 secondary school.

- Objective 3.2: Provide a course design and review structure that ensures accessibility of content and alignment to: dual enrollment, AP courses, and Louisiana Student Standards (K-12 academic standards that define the knowledge and skills that students are expected to learn in a subject in each grade).
 - Performance Indicator: Total number of QM-certified courses aligned to dual enrollment, AP courses, and Louisiana Student Standards.

Phase 1. Environmental Scan (September 2021 – May 2022): LOUIS will partner with the Institute for the Study of Knowledge Management in Education (ISKME) on an environmental scan to facilitate greater awareness between LOUIS and secondary and postsecondary representatives involved in course construction, OER, DE, and AP courses. Representatives from school librarianship certification programs in Louisiana and beyond will be consulted to better understand current curriculum requirements and how the needs and demands for OER expertise in the profession have evolved.

LOUIS will contract with ISKME to carry out an environmental scan by conducting structured interviews by videoconference with a twelve to fifteen representatives of the stakeholder communities. After completion of the interviews, ISKME will facilitate a minimum of three virtual focus groups with stakeholders to further investigate findings from the interviews. ISKME will supply recommendations to LOUIS, informed by their IMLS-funded framework for facilitating K-12 librarians in curating and promoting OER to enhance teaching and learning. These recommendations will include best practices for the expansion of course design support infrastructure for the Louisiana DE/OER context. Key goals will be to identify pathways to support secondary school participation in an existing OER course transformation program for DE settings.

Phase 1. Community Deliverables

- Development of a semi-structured interview instrument for stakeholder engagement
- Preparation of a summary document of interview and focus group findings to incorporate into the final LOUIS whitepaper and to inform program planning
- Recommendation on methods to develop a contact list for potential program participants from the secondary school community
- Development of a communications plan including identification of appropriate outlets for recruitment of program participants from the library media and DE/AP instructor communities
- Recommendations for the application of the Black Hills Special Services Cooperative's and ISKME's IMLS-funded school library research to an OER dual enrollment project

Phase 2. Stakeholder Recruitment and Call for Participation (May 2022 – October 2022): In conjunction with the Louisiana Board of Regents, LOUIS has identified high priority dual enrollment courses using data from the Louisiana Statewide Student Profile System (SSPS). Twenty-five courses were previously selected for a course development program utilizing funding from the U.S. Department of Education's Open Textbooks Pilot Program. Primary responsibility for course development for that program rests with the postsecondary community of librarians and instructional faculty. In order to scale development and address the growing needs for DE in the Louisiana Fast Forward initiative – a program that predefined pathways for public high school graduates to complete high school with college credit (academic and/or career-technical), a postsecondary credential of value or both – additional collaboration is needed between secondary and postsecondary stakeholders. The LOUIS community offers an experienced team of librarian OER support personnel, a robust OER technology infrastructure, and a tested professional delivery framework to bring a wider community into the process.

Informed by stakeholder feedback, statewide data, a gap analysis reviewing the current OER landscape, LOUIS will identify fifteen priority DE courses, not already funded for transformation to OER courses, from the subset of DE courses included in the Fast forward program (Figure 1). Consistent with Open Textbooks Pilot, courses will be prioritized for selection based on metrics including: high overall enrollment (determined to be an academic year enrollment of 2,000 students or more) across state public postsecondary institutions; high overall DFW rate (DFW of 20% or more of enrolled students in a course) in both dual enrollment and traditional postsecondary contexts; and high potential impacts for minority students (disproportionate DFW rates for minority students as a percentage of total enrollment).

To address project goals and objectives, LOUIS will vet final course development priorities with the Louisiana Dual Enrollment Task Force, system Chief Academic Officers (CAOs), and Fast Forward Regional Centers for the dual enrollment course development cohorts. Upon finalization of prioritized courses, LOUIS will recruit participants from current (non-student) employees with teaching and support responsibilities for dual enrollment courses listed on the Louisiana Course Articulation Matrix. This document is maintained by the Board of Regents and reflects course equivalencies among public postsecondary institutions, with courses largely falling under General Education core subject areas, with additional listings in natural sciences and business. Selected applicants must be from Fast Forward Centers in Louisiana or at postsecondary institutions from the four public systems: Louisiana State University System, University of Louisiana System, Southern University System, and the Louisiana Community and Technical College System; or from Louisiana Association of Independent Colleges and Universities, a public policy association representing 10 regionally accredited non-profit four-year colleges in LA.



Fast Forward Planning Grant

Grade 11	
First Semester	Second Semester
1 English: DE English Composition I 3 hrs.	1 English: DE English Composition II 3 hrs.
2 Math: DE College Algebra 3 hrs.	2 Math: DE Math choice of various courses 3 hrs.
3 Science: DE Biology I for Science Majors 3 hrs.	3 Science: DE Biology II for Science Majors 3 hrs.
4 Science: DE Biology I Lab for Science Majors 1 hr.	4 Science: DE Biology II Lab for Science Majors 1 hr.
5 Social Studies: DE Humanities U.S. History 3 hrs.	5 Elective: DE Western Civilizations 3 hrs.

Grade 12	
First Semester	Second Semester
1 Social Studies: DE Humanities Elective 3 hrs.	1 Science: DE Natural Science 3 hrs.
2 Science: DE Natural Science 3 hrs.	2 Elective: DE Literature 3hrs.
3 Elective: DE Natural Sc., Humanities or Math 3 hrs.	3 Elective: DE Natural Sc., Humanities or Math 3 hrs.
4 Science: DE Chemistry I for Science Majors 3 hrs	4 Elective: DE Natural Sc., Humanities or Math 3 hrs.
5 Science: DE Chemistry I Lab for Science Majors 1 hr.	5 Elective: DE Social Science 3 hrs.
6 Elective: DE Economics 3 hrs.	6 Art: DE Arts Elective 3 hrs.

The student meets the requirements to earn a TOPS University Diploma and an Associate of Science.

Figure 1. Fast Forward Program Proposed Grade 11 and 12 DE Curriculum.

Cohort recruitment will prioritize diversity in selecting participants. This will ensure a mix of different institution types and sizes are represented, with emphasis on recruiting instructors involved in dual enrollment courses at the state's public and private seven HBCU institutions (four institutions from the Southern System, Grambling State University, Dillard University, and Xavier University of Louisiana), at the 12 institutions that make up the community and technical college system.

Phase 2. Community Deliverables

- Documentation of course development priorities from the DE Fast Forward program
- Publication of reusable CFP for DE OER Course Design

Phase 3 Professional Development & Course Design (October 2022 – May 2024): Using the findings from the environmental scan phase, LOUIS will design and deliver programming to connect DE instructors and librarians, both from K-12 and higher ed institutions. This training will target professional development gaps identified through the surveys and interviews. Working groups will be geographically dispersed across the state and therefore rely on collaborative and communications software to enable online synchronous and asynchronous participation. All cohort participation and professional development will occur virtually. Following the professional development, funds will support the development of re-deployable complete online courses in the LOUIS Learning Management System that identify pathways for assignment of credit that simultaneously fulfill requirements for college credit, graduation requirements, and AP standards. Librarians will serve as lead technical consultants on projects to ensure development of local expertise, assignment of appropriate discovery metadata, and a connection to the LOUIS and school library member community. Librarians will be charged with coordinating team activity and acting as a technical advisor on copyright, OER repositories, and open education. All teams will be supported by LOUIS staff who will coordinate training and professional development across cohort groups to build capacity. Service contracts will be issued to participating institutions to compensate for receipt of professional services. To address the alignment of courses to standards for DE, AP, and Common Core, ISKME will provide additional participant training to complement LOUIS' approach.

For the professional development, LOUIS will enact a collaborative approach that engages multiple stakeholders based on previously successfully utilized statewide models: the OER Commons Curation Program and Faculty Cohort Program. Training will address key areas: skills to support and engage with OER creation and adoption, including OER discovery and curation, Creative Commons licensing, creation using Pressbooks, open pedagogy, accessibility, creating materials reflective of student populations and experiences in LA, and maintenance and sustainability. Running throughout these topics will be an emphasis on the capacities allowed by an open license to create materials that are diverse in terms of the content created and the associated teaching practices. This process will incorporate a structure to align educational standards into the course development project plans. This will include curricular alignment between new DE course design projects with AP and Common Core standards. In this way institutions can offer the maximum reward and incentive structure to students electing to take DE courses.

During the course design process, cohort working groups will find and critically examine existing OER to map resources to targeted courses. Using rubrics, materials will be evaluated with attention given to comprehensiveness, content accuracy, relevance/longevity, clarity, consistency, modularity, organization/structure/flow, interface, cultural relevance, and accessibility. Prior training will ensure capacity to review these areas. Teams will use the Pressbooks platform and will be supported through ongoing training

and technical experts. Instructors will construct comprehensive, interactive open courses using a Quality Matters course template. Completed courses will also be reviewed with consideration of accessibility requirements. Following completion, participants will implement OER courses in pilot sections and provide project evaluation feedback.

Phase 3. Community Deliverables

- Syllabus for OER training to enhance self-efficacy of instructors serving as course designers
- Re-deployable open courses using Pressbooks and the LOUIS Learning Management System

Phase 4. Dissemination & Program Evaluation (March 2024-July 2024): LOUIS will issue a whitepaper to expand upon the application of two IMLS-funded projects Black Hills Special Services Cooperative’s *Reaching Out: Meeting the Needs of Rural School Librarians* and ISKME’s *Exploring OER Curation and the Role of School Librarians*. The whitepaper will examine the application of these projects to the Louisiana Dual Enrollment Context. These results and recommendations for curricular enhancements for professional school librarians will be shared with the AASL community and Louisiana Directors of School Librarianship Certificate programs. Finally, program review and assessment of student-level outcomes is a high priority of LOUIS. Project evaluation will encompass four key areas: team participant self-efficacy; material and course quality and accessibility; qualitative and quantitative measures of student success; and financial impact via course cost reduction.

Course development cohort team participants will be administered a pre- and post-test in the format of a self-efficacy test. The pre-test will be administered at the project kickoff, while the identical post-test will be administered at the conclusion of the course design phase. The pre-test will inform training areas throughout the program, and the model will be used to measure knowledge gained throughout the experience and to validate the training approach.

Student-facing metrics, including enrollment counts, including dual enrollment counts, and impacts in terms of educational outcomes, including changes in DFW percentages and by student race/ethnicity, will be captured and tracked using the Statewide Student Profile System (SSPS). All higher education institutions report data to the Board of Regents using the SSPS, and data must be entered using uniform specification. This is a required reporting framework that is routinely audited.

As a result of Act 125/SB117, passed in the 2019 Legislative session, Louisiana’s postsecondary public colleges and universities are required to use a conspicuous symbol to highlight each course in the course schedule that exclusively utilizes OER course materials. To comply with this legislation, new course marker fields have been added to SSPS to ensure reporting to the Board of Regents regarding OER adoptions. This will serve as another mechanism for tracking adoptions of OER materials for DE courses, and postsecondary courses more broadly in the state, by making use of the required and uniform reporting structures. It will serve as a mechanism for measuring enrollment trends and cost savings of OER versus non OER courses.

Project outputs will be disseminated through multiple mechanisms, described in depth in National Impacts.

Phase 4. Community Deliverables

- Whitepaper on training for OER curriculum support
- Methods and instruments related to LOUIS evaluation mechanisms
- Public dissemination of all program outcomes through conference presentations and webinars

DIVERSITY PLAN

As described above, the project will engage diverse or underserved communities in the project through the following: focus on dual enrollment programs, which have traditionally underserved minority students in Louisiana; selection of course priorities by emphasizing courses with disproportionate DFW rates for minority students; recruitment for project cohort teams from the state's HBCUs, community and technical college institutions, and ensuring that OER courses are developed to meet the needs of diverse learners and institutional contexts, secondary and postsecondary.

This project proposes an approach to strengthen the field's commitment to DEI by emphasizing diversity in all project stages. Project deliverables in terms of professional development and course design practices will engage in intentional and reflective work to train, promote, and ensure inclusive curriculum design and assessment practices. In adapting and creating OER content, project cohort teams will be asked to interrogate materials to ensure content provides diverse perspectives, including those that are often marginalized, and that materials are reflective of the student populations they serve.

NATIONAL IMPACT

Project outputs will be disseminated through multiple mechanisms. Locally, LOUIS and the BoR have established communication channels that promote resources and shared learning and encourage collective engagement. Within the LOUIS community, there is an established practice of information sharing through listservs, bi-weekly digests, quarterly newsletters, biweekly community calls, and a routine webinar series. LOUIS is a member of the Professional Development Alliance, a collaboration between multiple library consortia, which serves as a forum for international virtual shared learning.

Within the BoR and the Louisiana higher education community, multiple existing inter-institution groups will be engaged throughout the project. First, the Dual Enrollment Task Force remains in place to make recommendations for the establishment of a statewide dual enrollment framework. This group will be routinely engaged throughout the life of the project and will play a key role in supporting adoption. The 12 members of the Task Force are statewide secondary and postsecondary administrators who, in turn, serve on multiple other local, statewide, and national boards and task forces, furthering the dissemination. Second, an existing statewide E-Learning Task Force that works on issues including expanding student access to online higher education programs across the state will be engaged. The Project Director serves as a liaison to both groups.

OER developed will be published on the LOUIS OER Commons. Openly available to all and built on OER Commons infrastructure developed by ISKME, the LOUIS OER Commons site hosts all OER materials adopted, adapted, or created through LOUIS programs. It also provides a mechanism for aligning materials to the courses in the Master Course Articulation Matrix, allowing for easy discovery. This site currently receives on average 2,000 site visits per month from Louisiana and beyond.

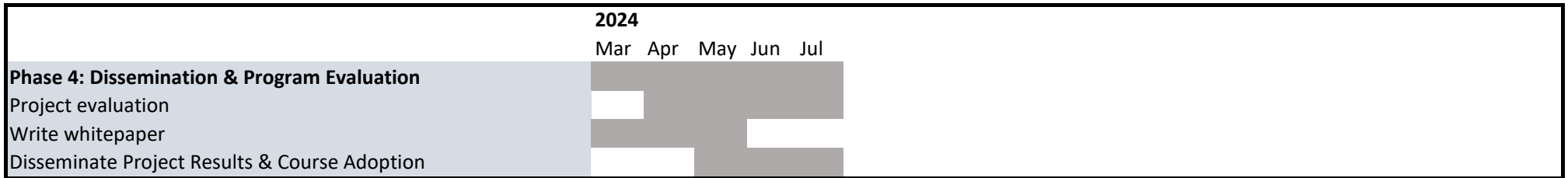
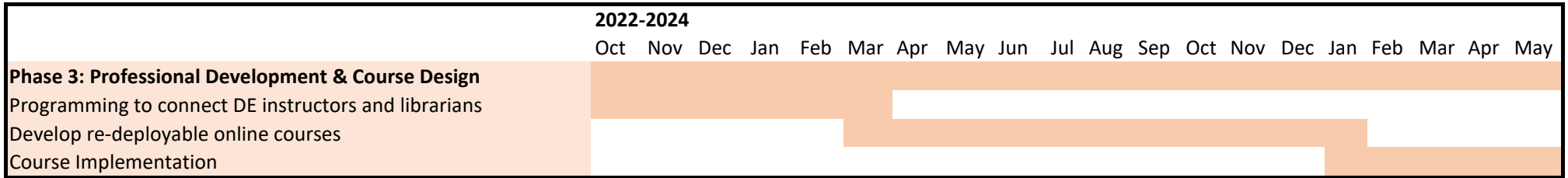
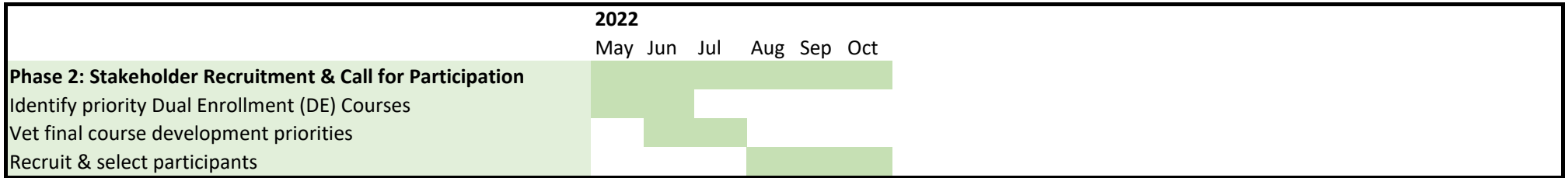
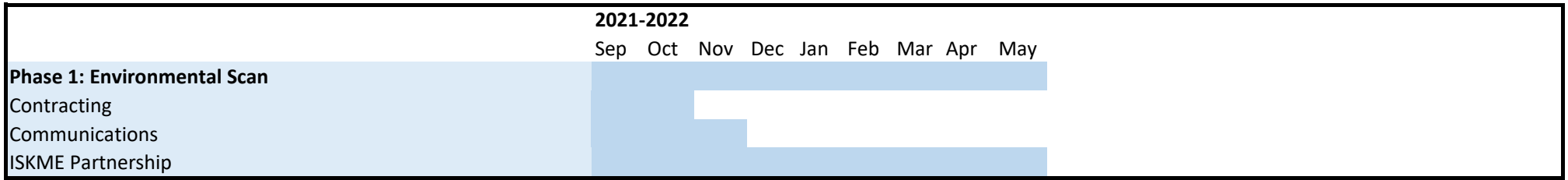
In addition, all content developed as part of this program on the Pressbooks platform will be indexed in the newly-launched Pressbooks Directory, a free and open directory of all openly available content in the Pressbooks ecosystem. This Directory – currently listing some 3,000 resources from 90 institutions – is expected to further the reach of all content developed under this program, by making it easily findable and usable by anyone with an Internet connection, and easily cloned and adapted by other institutions using Pressbooks, or anyone wishing to modify the editable downloadable files made available by Pressbooks.

Promoting the creation and adoption of OER in DE environments provides an opportunity for systemic change locally and nationally. First, this project sets out to understand barriers to librarian involvement in DE OER activity and to address these barriers through a replicable professional development and collaboration model. Findings from this research phase will be shared to inform practice broadly through a whitepaper. Secondly, the project will result in OER for DE courses, helping to transform the DE landscape locally and nationally by introducing OER materials tailored to this specific audience. Focusing on those high enrollment courses that are common across institutions presents an opportunity for reuse of program deliverables beyond Louisiana. The OER created will be available for adoption worldwide, supporting the extension of access to high-quality secondary and postsecondary opportunities to high school students across Louisiana and beyond. All items will be licensed under a Creative Commons license to support the adaptability and usability of these resources.

Extending beyond the project timeline, sustainability will be a key feature of the activity. LOUIS and the Board of Regents operate in a framework of continuous improvement. Projects will be assessed via instructor feedback for content that needs to be revised, adapted, or improved to reflect currency and evolving best practices. LOUIS' Course Transformation Program will serve as a vehicle for instructors to receive compensation for substantive improvements, such as the creation of new resources to support this.

Finally, as described in the Program Design deliverables, LOUIS will contribute to prior IMLS-funded research on best practices in the development OER support capabilities within the school media specialist community. A LOUIS whitepaper and national presentation will highlight opportunities for curricular enhancements for professional school librarians, which will be shared with the AASL community and the national directors of School Librarianship Certificate programs.

CONNECTING THE PIPELINE: LIBRARIES, OER, AND DUAL ENROLLMENT FROM SECONDARY TO POSTSECONDARY





DIGITAL PRODUCT FORM

INTRODUCTION

The Institute of Museum and Library Services (IMLS) is committed to expanding public access to digital products that are created using federal funds. This includes (1) digitized and born-digital content, resources, or assets; (2) software; and (3) research data (see below for more specific examples). Excluded are preliminary analyses, drafts of papers, plans for future research, peer-review assessments, and communications with colleagues.

The digital products you create with IMLS funding require effective stewardship to protect and enhance their value, and they should be freely and readily available for use and reuse 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

If you propose to create digital products in the course of your IMLS-funded project, you must first provide answers to the questions in **SECTION I: INTELLECTUAL PROPERTY RIGHTS AND PERMISSIONS**. Then consider which of the following types of digital products you will create in your project, and complete each section of the form that is applicable.

SECTION II: DIGITAL CONTENT, RESOURCES, OR ASSETS

Complete this section if your project will create digital content, resources, or assets. These include both digitized and born-digital products created by individuals, project teams, or through community gatherings during your project. Examples include, but are not limited to, still images, audio files, moving images, microfilm, object inventories, object catalogs, artworks, books, posters, curricula, field books, maps, notebooks, scientific labels, metadata schema, charts, tables, drawings, workflows, and teacher toolkits. Your project may involve making these materials available through public or access-controlled websites, kiosks, or live or recorded programs.

SECTION III: SOFTWARE

Complete this section if your project will create software, including any source code, algorithms, applications, and digital tools plus the accompanying documentation created by you during your project.

SECTION IV: RESEARCH DATA

Complete this section if your project will create research data, including recorded factual information and supporting documentation, commonly accepted as relevant to validating research findings and to supporting scholarly publications.

SECTION I: INTELLECTUAL PROPERTY RIGHTS AND PERMISSIONS

A.1 We expect applicants seeking federal funds for developing or creating digital products to release these files under open-source licenses to maximize access and promote reuse. What will be the intellectual property status of the digital products (i.e., digital content, resources, or assets; software; research data) you intend to create? What ownership rights will your organization assert over the files you intend to create, and what conditions will you impose on their access and use? Who will hold the copyright(s)? Explain and justify your licensing selections. Identify and explain the license under which you will release the files (e.g., a non-restrictive license such as BSD, GNU, MIT, Creative Commons licenses; RightsStatements.org statements). 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.

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.

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.

SECTION II: 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.

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

A.3 List all the digital file formats (e.g., XML, TIFF, MPEG, OBJ, DOC, PDF) you plan to use. If digitizing content, describe the quality standards (e.g., resolution, sampling rate, pixel dimensions) you will use for the files you will create.

Workflow and Asset Maintenance/Preservation

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

B.2 Describe your plan for preserving and maintaining digital assets during and after the award period. Your plan should 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).

Metadata

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

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

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).

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, delivery enabled by IIIF specifications).

D.2. Provide the name(s) and URL(s) (Universal Resource Locator), DOI (Digital Object Identifier), or other persistent identifier for any examples of previous digital content, resources, or assets your organization has created.

SECTION III: SOFTWARE

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 or similar functions, and explain how the software you intend to create is different, and justify why those differences are significant and necessary.

Technical Information

B.1 List the programming languages, platforms, frameworks, 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), URL(s), and/or code repository locations for examples of any previous software your organization has created.

Access and Use

C.1 Describe how you will make the software and source code available to the public and/or its intended users.

C.2 Identify where you will deposit the source code for the software you intend to develop:

Name of publicly accessible source code repository:

URL:

SECTION IV: RESEARCH DATA

As part of the federal government's commitment to increase access to federally funded research data, Section IV represents the Data Management Plan (DMP) for research proposals and should reflect data management, dissemination, and preservation best practices in the applicant's area of research appropriate to the data that the project will generate.

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

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 sensitive information? This may include personally identifiable information (PII), confidential information (e.g., trade secrets), or proprietary information. If so, detail the specific steps you will take to protect the information while you prepare it for public release (e.g., anonymizing individual identifiers, data aggregation). If the data will not be released publicly, explain why the data cannot be shared due to the protection of privacy, confidentiality, security, intellectual property, and other rights or requirements.

A.4 What technical (hardware and/or software) requirements or dependencies would be necessary for understanding retrieving, displaying, processing, or otherwise reusing the data?

A.5 What documentation (e.g., consent agreements, data documentation, codebooks, metadata, and analytical and procedural information) will you capture or create along with the data? Where will the documentation be stored and in what format(s)? How will you permanently associate and manage the documentation with the data it describes to enable future reuse?

A.6 What is your plan for managing, disseminating, and preserving data after the completion of the award-funded project?

A.7 Identify where you will deposit the data:

Name of repository:

URL:

A.8 When and how frequently will you review this data management plan? How will the implementation be monitored?