RE-246303-OLS-20 - Montana State University

Dr. Deborah Rinio, Dept. of Education, EHHD, Montana State University, *Indigenous Perspectives in*   1
School Librarianship

Statement of Broad Need

Indigenous Perspectives in School Librarianship (IPSL) is a **community catalyst project** that seeks to **build capacity** by preparing school librarians serving Indigenous populations to be culturally relevant educators who can serve as models and leaders in their schools and communities. To accomplish this goal, IPSL consists of two interrelated components: redesign the Montana State University (MSU) school library preparation program to feature a culturally relevant and responsive curriculum including Indigenous perspectives; and recruit and train 30 teachers in Alaska and Montana to become school librarians who are prepared to be culturally relevant educators in their states. This will be accomplished via MSU's fully online three-semester, 21-credit Master's-level Library Media Certificate program which leads to a teaching endorsement as a K-12 library media specialist in AK, MT, and many other states. Applicants residing in rural areas and/or serving Alaska Native populations/Montana reservation communities will be given priority consideration.

The MSU Library Media Certificate curriculum will be redesigned to align with best practices for culturally relevant education (Aronson & Laughter, 2016) including infusing Indigenous perspectives in support of the Montana Indian Education for All (IEFA) mandate, which requires recognition of the unique and distinct heritage of American Indians within the educational goals and settings of Montana, and Alaska's Standards for Culturally Responsive Schools, as well as continuing to meet Montana, Alaska and national Library Media Specialist Preparation Standards. IPSL falls under the **piloting phase of maturity** as it will test the feasibility of the redesigned curriculum within the context of the MSU Library Media Certificate Program, before dissemination to a nationwide audience. The curriculum redesign from this **Master's level project** will result in a tested and evaluated program of study in two states that is published in an open-access format under a Creative Commons license (CC:BY) in MSU's institutional repository in perpetuity, and can be adapted by school librarian preparation programs across the United States to meet their communities' needs.

Montana State University's Library Media Certificate Program. The MSU Library Media Certificate program, housed in the Department of Education, is a completely online graduate (Master's level) program that prepares educators for K-12 Library Media Specialist positions and leads to a K-12 endorsement/certificate in Montana as well as many states, Department of Defense schools, and international schools. In addition to the 7 course (21-credit) certificate program, students have the option to take an additional 3 classes (9-credits) and complete an M.Ed. in Curriculum & Instruction.

Operating continuously since 1978, the MSU Library Media Certificate program has a national and international reputation for excellence, engagement, and access to quality online education for future school library media specialists. Based on reputation alone, the program attracts students both in- and out-of-state and enrolls 10-15 new students per semester (30-45 annually). The program serves many students in rural areas of Montana, where there are considerable shortages of library media specialists. This aligns with MSU's land-grant mission by providing access to quality education to all residents of Montana, particularly in rural areas. Additionally, approximately one-quarter of current students live and work in Alaska. The redesigned curriculum proposed will prepare excellent K-12 educators in Montana and Alaska and strengthen their knowledge and understanding of culturally relevant education for all students. Specifically, the project seeks to prepare thirty new school librarians with these competencies who predominantly come to the program from schools serving Indigenous communities. These students will learn alongside other students in the program, all of whom will benefit from the redesigned curriculum.

Each state has different licensure requirements for school librarians. The Library Media Certificate program at MSU is designed to be an endorsement on top of an existing teacher certification. In Montana, adding an endorsement requires the completion of a program accredited by the Montana Board of Public Education and/or CAEP that includes supervised teaching experience in the subject area. Additionally, the

candidate must pass the Praxis exam for the subject area. In Alaska, school library candidates must complete a program in the special service area and have a recommendation from the preparing institution. Though Alaska does not require that school librarians have a traditional teaching certificate, an active teaching license is required for admission to the MSU Library Media Certificate program.

As a graduate-level program within Montana State University's Department of Education, the Library Media Certificate Program aligns to the CAEP Standards for Accreditation at the Advanced Level. Additionally, the MSU Library Media Certificate program is working toward ALA/AASL/CAEP accreditation by 2023 under the recently revised ALA/AASL/CAEP School Librarian Preparation Standards (ALA, 2019).

Culturally Relevant Education. In rural, urban, and suburban communities that serve Indigenous students, like those in Alaska and Montana, access to quality education requires "a stable, well prepared, and culturally responsive teacher workforce that is integrated into the community life" (Burton et al., 2013). K-12 Indigenous students comprise a significant proportion of students in both Alaska at 19.5% and Montana at 11% (AK DEED, 2019; Montana Office of Public Instruction, 2019).

To encourage retention, researchers suggest that educators (including school librarians) need support to understand and engage with the cultural context of their schools and be prepared for the specific demands of teaching in schools that serve Indigenous students (Kaden et al., 2016); yet such teachers are resistant to adopting and applying culturally relevant education (CRE) due to the "absence of a range of practical know-how, usable pedagogical models, and high-quality resources" (Neri et al., 2019, p. 211). Further, a recent report from the National Congress of American Indians (2019) suggests that professional development is one of the barriers to providing Native American educational content in classrooms.

For school librarians in particular, the *National School Library Standards (NSLS) for Learners, School Librarians, and School Libraries* (AASL, 2018) consists of six shared foundations: Inquire, Include, Collaborate, Curate, Explore, and Engage. Include states "demonstrate an understand of and commitment to inclusiveness and respect for diversity in the learning community." To be effective school librarians, school librarian candidates must be prepared to enact the Include shared foundation with their learners, within their professional practices as librarians, and in managing and promoting the school library. Adopting culturally relevant education is one method of approaching the competencies within the Include shared foundation.

IPSL adopts Aronson and Laughter's (2016) definition of culturally relevant education (CRE) as a collection of approaches for culturally relevant teaching that include instruction as well as curriculum design and implementation; and culturally relevant educators as those who:

1. use constructivist methods to develop bridges connecting students' cultural references to academic skills and concepts while also building on the knowledges and cultural assets students bring with them into the classroom;
2. engage students in critical reflection about their own lives and societies and use inclusive curricula and activities to support analysis of all the cultures represented;
3. facilitate students' cultural competence and construct a classroom learning environment in which students both learn about their own and others' cultures and develop pride in their own and others' cultures; and
4. explicitly unmask and unmake oppressive systems through the critique of discourses of power; extending their work beyond the classroom in active pursuit of social justice for all members of society. (p. 167)

According to Neri, Lozano, & Gomez (2019), "adoption of CRE approaches remains sporadic and underwhelming" (p. 198). They identify two main issues that lead to resistance in adopting and implementing CRE: (a) a limited understanding, and belief in the efficacy, of CRE and (b) a lack of know-

how needed to execute it" (Neri et al., 2019, p. 202). Learning what CRE is, how to use it effectively, the principles behind it, and why it works can be difficult and time consuming, particularly when educators have different cultural frames of reference than those of their students.

Culturally relevant education has been repeatedly demonstrated to positively impact student outcomes (Aronson & Laughter, 2016). In their meta-analysis, Aronson & Laughter (2016) refer to numerous studies of CRE in connection with student outcomes in multiple curricular areas. In English Language Arts for example, 13 studies were analyzed. Several studies showed how using culturally relevant materials engaged students in the ELA classroom (Civil & Khan, 2001; Conrad et al., 2004; Feger, 2006; Hastie et al., 2006; Hefflin, 2002; Morrison, 2002). Equally important is framing students' real-life experiences as legitimate and making them part of the official curriculum (Duncan-Andrade, 2007).

In order to have effective conversations around culture and inclusion in support of becoming culturally relevant teachers, learners must have space to challenge their existing assumptions and explore new ideas. Aronson and Laughter (2016) point out a variety of reasons why teachers are resistant to CRE. Understanding these reasons is critical to the curriculum redesign process. First, it is notable that educators often hold problematic views about race and culture that can lead to an overreliance on direct instruction by the educator (Borrero & Sanchez, 2017; Coffey & Farinde-Wu, 2016; Patchen & Cox-Petersen, 2008). Further, educators often believe that "my practice and my students are fine" (Evans, 2007; McKenzie & Scheurich, 2008) or "I do not need to do this work because I am not racist" (Vaught & Castagno, 2008). Aronson & Laughter (2016) demonstrate that educator's level of content, pedagogical, and racial / cultural knowledge is critical to their alignment of practice, beliefs, and attitudes around CRE. Therefore, one of the major components of the curriculum redesign is an effort to educate school librarian candidates around issues of race / cultural knowledge as well as the mechanisms of culturally relevant education.

School Librarian Recruitment, Retention, and Training. IPSL, in redesigning the MSU Library Media Certificate program curriculum to adopt CRE practices seeks to build capacity by improving the preparation of school librarians to serve Indigenous communities, collaboratively, effectively; and in alignment with the *National School Library Standards (NSLS) for Learners, School Librarians, and School Libraries* (AASL, 2018) and ALA/AASL/CAEP School Librarian Preparation Standards (American Library Association (ALA), 2019).

School districts across the nation experience difficulty in finding and hiring certified school librarians (Kachel & Lance, 2018). The ratio of librarians per school and librarians per student has declined to its lowest level in a decade. According to an NEA report, there is only 1 librarian for every 2.8 schools in the nation, and only 1 librarian for every 1,129 students (Tuck & Holmes, 2016). Most communities in the United States experienced increases in libraries and librarians since 2007, and yet the increasing student population resulted in a lower ratio of librarian to school and librarian to student; in most communities, student and school growth are outpacing librarian growth. In Alaska, the number of public school libraries decreased more than any other state (15.1%).

Unfortunately, teacher and librarian training and professional development can often be difficult to acquire as nearly 60% of Alaska's and 70.4% of Montana's schools are rural (Showalter et al., 2017) and many rural schools are isolated, which impacts the ability to develop professional learning communities. Travel for graduate-level programs and professional development is expensive, time consuming and often impossible during the school year.

IPSL student recruitment efforts will focus – primarily though not exclusively – on grow-your-own programs, which encourage existing teachers in a school district with current or anticipated vacancies to complete added endorsement training with the goal of transitioning to a position within the same school or district. "Grow your own" programs are effective in recruiting and retaining educators for a variety of

endorsement areas including library media (Murray, 2007; Sutton et al., 2014). To further encourage recruitment and retention, and provide the necessary support for deep discussions around issues of cultural relevance and the challenges faced by school librarians, IPSL will engage participants in a cohort model of structured support and community as described in the Project Design section below.

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Project Design

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IPSL seeks to accomplish two main goals: redesign the MSU Library Media Certificate program curriculum to be culturally relevant and responsive, and then build capacity by sharing the resulting curriculum in an open-access format for adaptation by other United States school library preparation programs; and recruit and train 30 teachers to complete MSU's three-semester, 21-credit, fully online Library Media Certificate program with the redesigned curriculum utilizing a cohort model of support.

Design and Implementation Team. To ensure that the curriculum redesign is culturally appropriate, meaningful, and pedagogically sound, ***an advisory board*** consisting of Indigenous education, library science, and e-learning experts from Alaska and Montana will guide the development of the curriculum throughout all three years of the program from initial conception to published, open-access materials in order to effectively meet culturally relevant standards in schools with an emphasis on Indigenous perspectives. This group will meet two to three times annually (see Timeline below, and Schedule of Completion attached) to review and provide feedback on course syllabi, rubrics, evaluation tools and protocols, and program evaluation reports; and provide guidance for refinement of the curriculum between Cohort 1 and Cohort 2.

We have recruited the following advisory board members:

- Amy Conley Andreas, Librarian, Browning (MT) High School (Blackfeet Reservation)
- Joy Bridwell, Librarian, Stone Child College, Box Elder, MT (Rocky Boy's Reservation)
- Jason Cummins, Principal, Crow Agency (MT) School (Crow Reservation)
- Mary Anne Hansen, Director of the Tribal College Librarians Institute IMLS # RE-95-18-0007-18), MSU
- Sheryl Kohl, MSU Library Media Certificate graduate, Poplar (MT) Public Schools (Ft. Peck Reservation)
- Aaron LaFromboise, Librarian, Blackfeet Community College (MT, Blackfeet Reservation); Montana State Library Commissioner
- Janet Madsen, School Library Coordinator, Alaska State Library, Juneau, AK
- Matthew Rantanen, Director of Technology, Southern California Tribal Chairmen's Association, Pala, CA
- Sue Sherif, Head of Library Development (retired), Alaska State Library, Fairbanks, AK
- Sean Asiqłuq Topkok, PhD, Associate Professor of Indigenous Education, School of Education, University of Alaska Fairbanks

An instructional designer and Indigenous education specialist will be contracted to provide guidance and support to program faculty and the IPSL advisory board during the curriculum redesign process in year one to ensure accurate and culturally respectful inclusion of Indigenous perspectives, as well as best practice for online course design. These individuals will review course syllabi and rubrics; provide assistance and support in locating, utilizing, and developing course materials; and aide program faculty in using Quality Matters (QM) publicly-accessible rubrics to evaluate their online course design.

A graduate research assistant (GRA) will assist with student recruitment and retention, support curriculum redesign and program implementation activities, participate in data collection and evaluation, and co-facilitate the advisory board. Moreover, we will recruit six practicing mentor librarians to support learners (one-on-one, and within their cohort groups) to develop professional growth plans, discuss deeper issues

of inclusion and diversity, and apply content and pedagogical knowledge from coursework to the candidates' practice during the distributed practicum that occurs during the Internship course. Mentor librarians will be recruited from a variety of locations and supported by the Library Media Certificate program advisor. An effort will be made to ensure mentors represent different school levels (elementary, middle, high) and environments (urban, suburban, rural, international).

Current program faculty will acquire training on how to facilitate dialogue around difficult topics such as race and culture during Year 1, including conflict management and modeling the goals of inclusion. The Indigenous education specialist will locate culturally appropriate and relevant training resources that address these topics and facilitate discussion of these principles with faculty, including course design and teaching methods.

Project Success Outcomes. As a graduate-level program within Montana State University's Department of Education, the Library Media Certificate Program is accredited by the Montana Board of Public Education and CAEP. These standards apply to all teacher preparation programs at the graduate level; as opposed to the ALA/AASL/CAEP School Librarian Preparation Standards (ALA, 2019), which are specific to school librarian preparation programs and offered as a National Recognition option within CAEP accreditation. IPSL project success will be measured against outcomes aligned to the first four CAEP Standards for Accreditation at the Advanced Level: *A.1* (Candidates will demonstrate) *Content and Pedagogical Knowledge*, *A.2 Clinical Partnerships and Practice* (will be achieved through internships), *A.3 Candidate Quality and Selectivity* (will be achieved via recruitment and admission processes), and *A.4 Program Impact* (will be measured by completer satisfaction).

Risks associated with IPSL include the potential inability to recruit sufficient librarian candidates to the program, low retention numbers, and lack of meaningful collaboration with advisory board members. To mitigate these risks, IPSL will focus on diverse recruiting strategies, institute a cohort model of support, and engage the advisory board in program decision making and evaluation at all levels. As a result of these activities and meeting these success outcomes, IPSL will have a significant impact on the capacity of school library professionals in Montana and Alaska to contribute to the well-being of their diverse and Indigenous populations.

We will conduct an internal program evaluation that closely engages stakeholders in the process, including timely discussions about formative information and implications for program implementation. Annual reports will be developed as well as a final summative report. These reports will be shared with all stakeholders. We will evaluate the implementation and impact of the program's objectives. A mixed methods program evaluation design (Greene et al., 1989) will provide performance feedback (formative and summative) and permit periodic assessment of progress toward achieving intended outcomes. Data sources include surveys, interviews and/or focus groups, student tracking during the program, and examination of artifacts. An application will be filed with the MSU Institutional Review Board and no data will be collected until IRB approval has been received. Participants will be guided through informed consent documents and any questions will be answered prior to participant signature. Basic demographic information will be collected from all individuals who consent to participate. Data will be blinded. Electronic templates for recording data will be created for record keeping and will be kept in MSU's secure data management system. Analysis will be led by co-PI Ewbank, assisted by the graduate research assistant. Data will be analyzed using quantitative and qualitative software. The evaluation design is outlined in Supporting Document 1.

Content and Pedagogical Knowledge. ALA/AASL/CAEP School Librarian Preparation Standards (ALA, 2019) apply to all master's level certificate programs that prepare candidates to develop and manage library and information services in a PreK-12 setting. Currently, the program will seek ALA/AASL/CAEP accreditation in 2023. Library Media Certificate program faculty have already begun the process of aligning the courses and curriculum to the revised ALA/AASL/CAEP standards (see Supporting

Document 5). The ALA/AASL/CAEP School Librarian Preparation Standards consists of five standards comprised of 23 elements, which are predicated on the philosophy and mission of the *National School Library Standards (NSLS) for Learners, School Librarians, and School Libraries* (AASL, 2018). The NSLS consists of six shared foundations: Inquire, Include, Collaborate, Curate, Explore, and Engage. For the purpose of IPSL, this grant will focus on the elements that are most closely aligned to the Include shared foundation of the NSLS and therefore most appropriate to a CRE focused curriculum:

- **1.2 Learner Diversity**. Candidates articulate and model cultural competence and respect for inclusiveness, supporting individual and group perspectives.
- **2.1 Planning for Instruction.** Candidates collaborate with members of the learning community to design developmentally and culturally responsive resource-based learning experiences that integrate inquiry, innovation, and exploration and provide equitable, efficient, and ethical information access.
- **3.1 Reading Engagement.** Candidates demonstrate a knowledge of children's and young adult literature that addresses the diverse developmental, cultural, social, and linguistic needs of all learners. Candidates use strategies to foster motivation to read for learning, personal growth, and enjoyment.
- **4.2 Information Resources.** Candidates use evaluation criteria and selection tools to develop, curate, organize, and manage a collection designed to meet the diverse curricular and personal needs of the learning community. Candidates evaluate and select information resources in a variety of formats.
- **4.3 Evidence-Based Decision Making.** Candidates make effective use of data and information to assess how practice and policy impact groups and individuals in their diverse learning communities.

Candidates will be expected to demonstrate mastery of the above five ALA/AASL/CAEP School Librarian Preparation Standards (ALA, 2019) that explicitly refer to diversity and inclusion. Mastery will be demonstrated through coursework and measured against rubrics developed by program faculty and then reviewed by the advisory board, Indigenous education specialist, and instructional designer.

One of the Library Media Certificate program courses will be redesigned and piloted during Year 1 with existing students prior to Cohort 1 implementation of the entire curriculum redesign. The design and implementation team will decide on an appropriate course and work with course faculty to redesign, implement, and assess the course. This pilot course will be used to provide guidance to other faculty regarding the redesign process, as well as best practice for implementation of instruction.

At the conclusion of the pilot course, and each course during Cohort 1, candidate artifacts will be evaluated by the advisory board using interrater reliability. Program faculty will use this information to make modifications to courses prior to Cohort 2 participation.

To effectively support librarian candidates throughout the Master's-level certificate program *a cohort model* will be utilized to create community among participants and make space for co-construction of knowledge beyond coursework. In a cohort model, learners are purposefully grouped. In teacher education programs that focus on diversity and inclusion, the cohort structure can aide learners in developing the skills and attitudes necessary to become inclusive and culturally relevant educators (Ross et al., 2006). Teacher candidates who have participated in cohorts have expressed that they felt being a part of the cohort made them feel part of the community, increased their academic success, and encouraged deeper discussions of difficult topics (Maher, 2005; Ross et al., 2006; Tisdell et al., 2004). In a fully online program, such as MSU's Library Media Certificate, it is important that learners feel connected to the program and to one another; a cohort model will help achieve these goals and help increase learner retention. MSU's completion rate for the Library Media Certificate program is already high (85% during 2014-2019). In addition to utilizing a cohort model of support and guidance, IPSL will use program-tested

and established models of advising support, such as frequent communication, periodic videoconference and phone meetings with students, and prompt response time to student questions.

Based on other successful cohort models and best practices the following mechanisms will apply:

1. During recruitment, learners will be made aware that the program utilizes a cohort-model and what this means for their participation in the program (Maher, 2005).
2. Students will be placed in a cohort such that they are taking a core class together throughout the program (Ross et al., 2006).
3. Learners will stay in the same cohort throughout their program, unless there are extenuating circumstances.
4. Program faculty and librarian mentors will meet regularly to discuss program progress and collaborative opportunities (Beck & Kosnik, 2001).
5. Internship (see Clinical Partnerships and Practice) class discussions will utilize both large group (whole program) and small group (cohort only) discussions and collaborations (Beck & Kosnik, 2001).
6. Learners will engage in face to face interactions (Tisdell et al., 2004) via videoconference where possible, especially at the beginning of the program.

Clinical Partnerships and Practice. As part of the accreditation process, the Library Media Certificate program has already examined alignments across the Montana Professional Educator Preparation Program Standards (PEPPS), ALA/AASL/CAEP School Librarian Preparation Standards, Library Media Praxis exam requirements, Montana IEFA essential understandings, and Alaska Cultural Standards for educators and for curriculum. This alignment, as shown in Supporting Document 6 will be used as a starting point to address strengths, weaknesses, and gaps in curriculum.

As part of this initial work, faculty determined that the internship should be redesigned to better meet ALA/AASL/CAEP standards and the needs of school librarian candidates. Experience indicates that a 3-credit course (typically taken during the 2nd or 3rd semester) does not achieve desired outcomes and imposes undue burden on learners. Therefore, the internship was changed from a one-time 3-credit course to a 1-credit practicum that is repeated three times (once during each semester of the program).

Internship content will be structured around the ALA/AASL/CAEP School Librarian Preparation Standards (ALA, 2019) as aligned with the *National School Library Standards for Learners, School Librarians, and School Libraries* (AASL, 2018) so that learners can begin to apply competencies from the learner, school librarian, and school library frameworks into their practice as they learn related concepts in their other courses. The fully online and asynchronous 1-credit course will include: self-paced readings and videos; a group discussion space facilitated by a mentor librarian and library media certificate program faculty; a 30-hour practicum with defined activity choices (90 hours over the length of the program); and periodic one-on-one virtual meetings with an assigned mentor librarian.

The six mentor librarians will work with the thirty program participants, forming cohorts of approximately ten learners led by two mentors that will stay together across the length of the program (three semesters). Mentor librarians will be responsible for posting to the message boards periodically, and contributing to learners' growth by helping them develop individual professional growth plans, semester-based goals, and aiding in tracking progress. Mentor librarians will be recruited, trained, and supported by the project director.

The revised internship course will be assessed using the publicly available Quality Matters rubric for online courses during course development (year 1). During course implementation and subsequent assessment (years 1-2), internal course assessments (e.g., learner reflections, discussion posts, etc.) will be used to determine whether course learning outcomes were met.

Candidate Quality and Selectivity. IPSL's target population consists of certified teachers in Alaska and Montana serving Indigenous communities who wish to obtain their school librarian endorsement. To ensure a robust recruitment strategy and high selectivity, in Year 1 and Year 2, during the recruitment of both cohorts, IPSL staff will engage teachers in Alaska and Montana via email, mailing lists, and at in-person events such as statewide education conferences. During Cohort 1 (Year 1-2) IPSL staff will record short testimonials from faculty and students to include for Cohort 2 (Year 2-3) recruitment efforts, and later to be used in the open-access curriculum as introductions and explanations of individual courses and course components.

Applicants will complete the standard application process for admission to the MSU Library Media Certificate Program. Once admitted to the program, new students will be invited to complete a brief application to participate in the IPSL program. The additional application and scoring rubric will be reviewed by the advisory board before implementation, and will include questions that demonstrate serving Indigenous populations, commitment to school librarianship as a profession, interest in becoming a culturally relevant educator, interest in staying in their local communities, and interest in leadership in the profession.

Program Impact. Program impact will be measured by completer satisfaction as determined through surveys, course evaluations, and cohort-level focus groups for all students in the MSU Library Media Certificate program. All program evaluation, including completer surveys, will be developed, analyzed, and reported by the GRA and Co-PI. The rest of the design and implementation team (PI, program faculty, advisory board, Indigenous education specialist, and instructional designer) will review program evaluation reports and provide feedback and input as part of continuous program improvement efforts.

Course evaluations are conducted at the end of each course by MSU and will be collected and examined as part of program evaluation efforts. A survey will be written and disseminated to address students' perceptions and attitudes of program components including: culturally relevant education; their self-efficacy as culturally relevant educators, and specifically school librarians; the value of the cohort; and the value of the internship practicum experiences. The survey will be disseminated to students at the end of each semester via the Internship course (which all students will be enrolled in every semester).

At the conclusion of each cohort, cohort-level focus groups will be conducted to determine learner perception of the role and impact of cohorts. Questions in the focus group protocols will be informed by the surveys.

Timeline (see Schedule of Completion). To begin this process, the PI and Co-PI have created the MSU Library Media Certificate Program Assessment Alignment Chart (Supporting Document 6). This chart provides a starting point for assessing and improving the program. Next steps will involve adding Library Media Certificate course numbers and learning objectives to the chart to determine where there are gaps and duplications. This will form the starting point for program redesign and resulting changes to individual courses. Library program faculty will collaborate to add and modify learning outcomes, move learning outcomes between courses, and/or remove or add courses to ensure that all assessment outcomes are met. After initial program re-design by faculty, the advisory board will review the updated MSU Library Media Certificate Program Assessment Alignment Chart for input.

Once course modifications are decided, program faculty will work to modify or create syllabi accordingly. As shown in the Schedule of Completion, Year 1 (August 2020-December 2020) will consist of hiring program staff including a 0.5 graduate research assistant, Indigenous education specialist, and instructional designer; choosing a pilot course and redesigning the pilot course; and library program faculty training in culturally relevant education. The Indigenous education specialist will locate appropriate, existing training for faculty to conduct; and then facilitate discussion around the application of training to course design and instruction.

Two to three times annually, the advisory board will be convened to review and provide feedback on program activities. Specifically, they will provide feedback on course syllabi and rubrics; evaluate student artifacts based on rubrics, using an inter-relater reliability model; and examine evaluation reports including survey data and cohort focus groups at various points during the project. During curriculum redesign in Year 1, the advisory board workload will be more significant, as there will be more material to review and more decisions to make around curriculum redesign and implementation.

Year 1 (January 2021-May 2021) will also involve the implementation of the pilot course; recruitment of Cohort 1 (15 students), development of student surveys and interview/focus group protocols with review by the advisory board and MSU-IRB; continued curriculum redesign; and submission of the redesigned program to the 2021-2022 MSU catalog. After the conclusion of the pilot course, the advisory board will be convened to review pilot course outcomes. The advisory board will also provide feedback on the student survey and focus group protocols to be conducted at the end of each semester and cohort, respectively.

Year 1 (May 2021-July 2021), Cohort 1 will begin their program with the newly redesigned curriculum; and final work on curriculum redesign will be completed. At the conclusion of the summer semester, Cohort 1 data collection will begin in the form of student artifacts and survey data at the close of each semester, to be analyzed by the internal evaluation team and reported to the advisory board. The advisory board will provide feedback that will be used in continued curriculum redesign and revision for implementation with Cohort 2.

Year 2 (August 2021-July 2022) will involve continued program redesign. The advisory board will convene to review Year 1 Summer outcomes. Program faculty will continue to teach cohort 1 students even while curriculum revision based on semester 1 student performance will commence with advisory board feedback. Student artifacts and survey data will be collected from Fall courses. Year 2 Spring semester will see the start of Cohort 2 (15 students) recruitment and implementation of the final semester of Cohort 1 courses. The advisory board will be convened to discuss project progress and review student data from Year 2 Fall semester. In Year 2, Summer semester Cohort 2 will begin and evaluation of Cohort 1 outcomes will be analyzed and prepared for reporting.

Year 3 (August 2022-July 2023), Cohort 2 will continue their program during the Fall semester with continued data collection and advisory board input. In the Spring semester, Cohort 2 will complete the program. Dissemination of project outcomes (see Broad Impact) will commence, as well as the work to prepare the curriculum for deposit into MSU's Institutional Repository, ScholarWorks. The curriculum will be added to ScholarWorks in May 2023, at which point Cohort 2 evaluation will be conducted alongside final program evaluation and dissemination before final grant closeout.

Diversity Plan

IPSL focuses on diversity in a variety of ways. The program itself plans to redesign the MSU Library Media Certificate program to be culturally relevant and include Indigenous perspectives; and then to prepare 30 educators in Alaska and Montana to become culturally relevant school librarians, who are able to implement culturally relevant teaching practices in their school libraries, and by extension their entire school community.

Alaska and Montana have high proportions of K-12 Indigenous students, but a low percentage of Indigenous educators. Nationwide, Indigenous (Alaska Native / American Indian) educators consist of less than 1% of all teachers in public elementary and secondary schools (de Brey et al., 2019). Data for Alaska and Montana is not available due to reporting standards not being met. IPSL intends to prepare educators currently serving Indigenous populations to more effectively meet the needs of their communities.

IPSL students participating in Cohort 1 and 2 will engage in a cohort-based model of structured support and community with opportunities to address issues of individual and mutual concern, discuss relevant

opportunities and challenges in their schools, and work with experts. Learners will engage with instructors, each other, and mentor librarians around topics related to the issues raised in these standards through discussion prompts and application during distributed practicum activities in the school library. By providing pre-service school librarians in these states with the competencies to effectively serve their communities, we believe they will be more likely to stay in their schools and more likely to collaborate with others educators in their capacity as school librarians and practitioners of culturally relevant education, thereby broadening their impact to the entire school community.

In addition to the students participating in Cohort 1 and 2, IPSL engages an expert advisory board to ensure a mix of cultural and professional perspectives and experiences. By engaging the advisory board, and the entire design and implementation team, at all levels of IPSL development, evaluation, and revision we hope to improve project outcomes and ensure a high quality school librarian preparation program curriculum than can be used by MSU and adapted by other school librarian preparation programs across the nation for years to come.

Broad Impact

IPSL seeks to prepare an open-access curriculum that can be adapted by any school library preparation program in the country. After successive revisions of program curriculum, the redesigned curriculum comprised of learning competencies; course descriptions, syllabi, assignments, rubrics, and suggested detailed course schedules; as well as best practice guidelines for cohort-based learning and instructor facilitation will be published in MSU's open-access institutional repository, ScholarWorks under a Creative Commons license (CC:BY), to ensure accessibility in perpetuity for school library preparation programs and instructors (see Digital Product Form). In addition to curriculum materials, an explanation of the curriculum development process will be included. Further, during Cohort 1, short videos will be recorded by program faculty and students describing their process and learning experiences. These videos will be embedded into the curriculum to provide context and background.

This open-access curriculum will be designed for maximum flexibility, such that other school library preparation programs and instructors can adapt the materials for their needs and audience. Once the MSU Library Media Certificate program is redesigned it will be in place at MSU indefinitely, with annual program assessment and periodic accreditation review helping to keep it relevant and effective. By making the curriculum adaptable to any school library preparation program, IPSL will impact not only its 30 graduates during cohort 1 and 2, and its future graduates, but also the graduates of other school librarian preparation programs that choose to adapt the IPSL curriculum for their own program.

After program redesign, all MSU Library Media Certificate program graduates will be better prepared to serve their communities as school librarians with special attention to ensuring a diverse and inclusive library to meet the needs of the entire school community.

Dissemination of project design, evolution, and results will occur through presentations at relevant conferences, such as the *Tribal College Librarians Institute, Association for Library and Information Science Education* (ALISE) and AASL's *Educators of School Librarians Section*; promotion through email lists and social media; and submission to peer-reviewed journals, such as the *Journal of Education in Library and Information Science.* Additionally, the PI and Co-PI will propose a workshop at the ALISE conference to help faculty at other school librarian preparation programs engage with and adapt the curriculum to their needs.

Dr. Deborah Rinio, Dept. of Education, EHHD, Montana State University, *Indigenous Perspectives in School Librarianship*

Year One 2020-2021	Fall					Spring					Summer	
	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	July
Hire Program Staff	█	█										
Convene Advisory Board		█				█			█			
Pilot Course Redesign			█	█	█							
Program Faculty Training			█	█								
Curriculum Redesign			█	█	█	█	█	█				
Pilot Course Conducted						█	█	█				
Cohort 1 Recruitment						█	█	█				
Submit Redesigned Program to 21-22 MSU Catalog								█				
Implement Redesigned Curriculum with Cohort 1										█	█	█
Collect Student Artifacts and Survey Data												█

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Year Two 2021-2022	Fall					Spring					Summer	
	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	July
Convene Advisory Board		■				■			■			
Curriculum Redesign	■	■	■	■	■							
Curriculum Revision Based on Cohort 1 Data	■	■	■	■	■	■	■	■	■	■	■	■
Implement Redesigned Curriculum with Cohort 1	■	■	■	■	■	■	■	■	■	■		
Collect Student Artifacts and Survey Data					■					■	■	■
Cohort 2 Recruitment						■	■	■				
Implement Redesigned Curriculum with Cohort 2										■	■	■
Cohort 1 Evaluation											■	■

Year Three 2022-2023	Fall					Spring					Summer	
	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	July
Convene Advisory Board		■				■				■		
Implement Redesigned Curriculum with Cohort 2	■	■	■	■	■	■	■	■	■	■		
Collect Student Artifacts and Survey Data					■					■		
Cohort 2 Evaluation										■	■	■
Dissemination						■	■	■				
Prepare Curriculum for ScholarWorks						■	■	■	■			
Deposit Curriculum in ScholarWorks										■		
Final Program Evaluation and Dissemination											■	■
Grant Closeout												■

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?