

Advancing College Students' Career Information Literacy and Career Research Competencies: Empowering Informed Career Choices, Decisions, and Success for Life

Summary

The West Chester University (WCU) Libraries, in collaboration with the Twardowski Career Development Center and the School of Business at WCU, partnering with Indiana University - Bloomington (IU), Western Michigan University (WMU), and Delaware County Community College (DCCC) will request \$249,974.72 **NLG-L (Implementation) Grant** funding to develop a **CareerLit Learning Module Series** for college students to advance their career information literacy and career research competencies. This project intends to transform the ways that libraries serve the nation through a **substantive and learning-centered collaboration model** between libraries, career centers, and colleges. Grounded in the Protean Career Theory and Life Design Mindset, the project will bring together experts from diverse knowledge domains including career management, career counseling, library research, information literacy, philosophy, psychology, education, and organizational behavior. By leveraging the collective expertise, the CareerLit Learning Module Series will provide students with a structured pathway to identify career goals that are aligned with their intrinsic values and personal definitions of success. They will gain insights into career options, explore career resources and opportunities, and create a personalized roadmap for career success. **Targeting college students**, especially during their first or second year in college, this project will foster their self-efficacy, adaptability, and agency in early-stage career exploration, planning, and decision-making. The project is aligned with the **NLG-L Goal 1 Objective 1.1** in developing a replicable library program, models, and tools to support learning, workforce development, and literacy in the context of **career development**. This project will benefit all students and higher education institutions; however, its impact is most profound for students with **limited family resources or social capital** (such as first-generation students, students of color, and those from low-income and immigrant families) as well as institutions that are **less selective or resource-limited**. By addressing equity disparities in career exploration, this project underscores higher education's commitment to advancing **social and economic mobility and equity for all**.

Project Justification

Challenges Facing Higher Education and Why Career Guidance is More Important Than Ever

In recent years, the landscape of higher education has been characterized by mounting pressures surrounding student retention and heightened public scrutiny regarding the value of higher education (Hanover Research, 2024). According to the latest data from the National Student Clearinghouse (NSC) Research Center (2023), out of 2.4 million students who began college in the fall of 2021, 24% (over half a million) did not return for their second year. For the student cohort who enrolled in college in the fall of 2017, the overall six-year completion rate was 62.2%, but notably lower for black students (43.4%) and Hispanic students (50%) (NSC Research Center, 2023).

As the National Alumni Career Mobility (NACM) Survey indicated, **career success** and **career aspirations** are two of the top four motivations for pursuing a college education (Career Leadership Collective (CLC), 2022). However, there is a **“disconnect between students' career decision-making processes, and the availability and utilization of campus resources to assist with career decision-making and preparation”** (CLC, 2022; Hora, 2023; NACE, 2021). Only 47% of surveyed students agreed that their institution helped prepare them for their careers and only 21% agreed that their institution invested in their careers (CLC, 2022). These findings align with the Mintel Student Lifestyles Survey, where nearly half (48%) of students expressed a need for additional career-planning resources (Mintel, 2023).

Furthermore, the rapidly evolving career landscape, driven by technological advancements in artificial intelligence and globalization, demands higher levels of self-direction and adaptability from job seekers (Hall, 2018). The lack of knowledge, skills, and self-efficacy for career exploration often results in uncertainty, indecisiveness, and missed opportunities during formative years of career development and often leads to a heightened level of anxiety among college students in their career-planning and decision-making process (Gordon & Steele, 2015; Pisarik, Rowell, &

Thompson, 2017; Shin & Lee, 2019). These challenges affect all students but **disproportionately** impact students who have **limited family resources or social capital**, such as first-generation students, students of color, and those from low-income and immigrant families.

Despite these challenges, research consistently shows that students with clear career goals and career maturity are more likely to persist and overcome academic challenges (Hull-Blanks, et al, 2005; Lucas & Hunt, 2002; Perry et al., 1999; Pizzolato, 2007) and students engaged in career planning courses demonstrated a higher level of academic performance, higher rate of retention, increased use of career-related internships to acquire job skills, and fewer credit hours to earn a degree; this impact is particularly pronounced among undecided students and first-generation students (Folsom et al., 2005; Hansen & Pedersen, 2012; Raque-Bogdan & Lucas, 2016; Reardon et al., 2015).

Challenges Facing Career Services and Gaps in Current Academic Libraries' Career Support

Career centers and faculty play indispensable roles in supporting students' career development, however, both face significant challenges (Hiration, 2023; WCU, 2023). Career centers often face **resource constraints**, increased pressure to provide personalized guidance to all students, and challenges in serving historically marginalized students (Hiration, 2023). Faculty members also face various **barriers** to providing sufficient career assistance to students. A recent survey conducted by the WCU Career Center with faculty (N=233) identified obstacles including a lack of time (83%), limited specific training in career preparation (37%), inadequate knowledge of career options (27%), not a high priority task (26%), and out of the scope of faculty role (21%) (WCU, 2023). These challenges impact all institutions but are more pronounced in **less selective, broad-access, and resource-limited institutions**.

Academic libraries, especially business librarians, have significantly expanded their support in career services in recent years. While Quenoy & Orgeron (2003) previously reported limited collaboration between academic libraries and career centers, more recent articles indicate a noteworthy increase in such partnerships. These efforts often involve the development of career collections, resource guides, career wikis, and resource portals, as well as providing consultations, workshops, and instructions for job and co-op searches, career fairs, and interview preparation (Dugan et al., 2009; Ferer, 2017; Song, 2005). Stonebraker, Maybee, & Chapman (2019) integrated career information literacy and research into students' career fair preparation and found that the "navigator" student uses the career information to complete a series of steps, "performer" student seeks to connect with the right person, and "aligner" student uses career information to determine if a company is a match for them. Additionally, Hamlett (2021) documented the successful integration of career information literacy into a First-Year Experience course. However, current collaboration with career centers has not systematically extended information literacy and research competencies to **early-stage career exploration** and has not **holistically** integrated them into students' learning **on a large scale**.

The Significance of this Project: A New Substantive, Learning-Center Collaboration Model

This project will transform the ways that libraries serve the nation through a **substantive and learning-centered collaboration model** between libraries, colleges, and career centers, capturing the value of library services in supporting college students' early-stage career exploration (Walter & Eodice, 2005; Wilhelm, 2021). Different from existing library career support services, this project will set an example for libraries' leadership in the collaborative efforts to address college **curriculum gaps** in career development, facilitate a **personalized** career exploration approach **on a large scale**, and empower students' **self-direction** and life-long **self-efficacy** in early-stage career exploration (see [SupportingDoc2: Theory of Change and Impact Model](#) for details).

This project makes another significant contribution by incorporating new theories in career management, positive psychology, and design thinking into the creation of the **CareerLit Learning Module Series**. Guided by the principles of the **Protean Career Theory** and **Life Design Mindset** (see details in the [theoretical foundation](#) section), the Series will provide students with a structured pathway to identify career goals that are aligned with their intrinsic values and their own definition of success. Through self-directed research, students will gain insights into their career options, explore career resources and opportunities, and create a personalized roadmap for career success. These efforts align

closely with the **high-impact career practices** recognized by CLC (CLC, 2022). Students who engage in such high-impact career practices are more likely to “have more positive success with career preparation, career satisfaction, and economic mobility, decide on their career prior to graduating with their degree and perceive their degree to be worth the tuition they paid” (CLC, 2022).

Building upon the project director's experience in developing a comprehensive career guide for business students in the past three years and her previous success in developing a Learning Module on the [4-Step Strategy for Evaluating Online Sources](#) (see details on the [public site](#)), which attracted **1,870** students at WCU to earn a completion certificate and credits on co-curricular transcript since fall 2022, the project will prioritize the integration of the learning module series into students' educational experience and learning.

The **target audience** of the project is **college students**, particularly during their first and second years in college. Moreover, the project will extend its benefits to **academic librarians** (especially business librarians), faculty, and career centers, offering them valuable resources to enhance their services for career development support and alleviate their workload in guiding students' career exploration. The pilot test will directly involve **hundreds of students** in the four institutions and the promotion of the project nationwide will extend the benefit far beyond. The open-access website will benefit **anyone** who is interested in this topic.

The project is aligned with the **NLG-L Goal 1 Objective 1.1** in developing a replicable library program, models, and tools to support learning, workforce development, and literacy in the context of career development. Moreover, by making the learning resources accessible to all college students, and preparing all students for lifelong career competency and self-efficacy, the project will contribute to **reducing equity disparities** among college students in their career exploration and help fulfill higher education's commitment to **social and economic mobility** and **equity for all**.

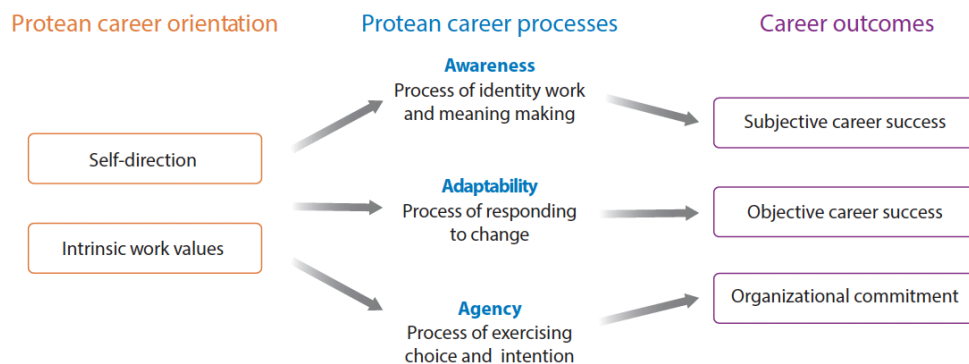
Project Workplan

Theoretical Foundations, Knowledge Domains, and Experts

Protean Career Theory

The Protean Career Theory (see Figure 1) views career as a series of learning cycles that involves the exercise of self-direction and an intrinsic values orientation in the pursuit of psychological success (Hall, 1976; 2003). It emphasizes an individual's independent stance toward generating, pursuing, and evaluating career goals (Brisco & Hall, 2002). Guided by the Protean Career Theory, the CareerLit Learning Module Series will lead students through self-directed assessment and research activities to identify career paths that are aligned with their intrinsic values. This process will foster the development of a protean career orientation, increase students' awareness of career options and opportunities, and empower the agency to exercise their choices and intentions in career exploration. The evidence-based decision-making will prepare students to develop a growth mindset and adaptability to change. These efforts will result in both subjective and objective career success and future job commitment and satisfaction among college students (Brisco & Hall, 2002).

Figure 1: Key mechanisms in the protean career process.



Life Design Mindset:

This project will also incorporate the Life Design Mindset, which encompasses elements such as curiosity, bias to action, reframing, awareness, and radical collaboration. The Life Design concept was developed by Bill Burnett and Dave Evans (2018) through their Designing Your Life Course at Stanford University and detailed in their book *“Designing Your Life: How to Build a Well-lived Joyful Life.”* The Life Design Mindset emphasizes “Bias to Action,” which lies at the core of design thinking. It encourages individuals to prototype and test out ideas while embracing change. The Learning Module Series will prepare students to explore different career paths that all potentially lead to career success.

Project Personnel, Experts, Knowledge Domains, and Their Roles

This project brings together experts in many different knowledge areas (see the [List of Key Project Staff, Resumes, and SupportingDoc3: Letters of Commitment](#))

- **Prof. Grace Liu** (MSLIS, MBA) (**Project Director** (PD)), Associate Professor, Business Librarian at WCU has extensive experience in grant project management, learning module development, and business and career research. She will lead project management and learning module development; coordinate the pilot testing at four institutions; lead the development of integration, promotion, sustainability, and impact assessment strategies; conduct ongoing project evaluation, and submit project reports.
- **Dr. Jennifer Bozeman** (Co-PD), Associate Professor of Management at WCU (expert in organizational behavior, leadership, and human resources management) will collaborate on designing the learning module content and lead the pilot testing at WCU, with the potential to evolve the learning module into a collaborative credit-bearing course between the Library and the School of Business.
- **Subaward Co-PDs: Prof. Ilana Stonebraker**, Head, Business Library, Associate Librarian, IU, **Prof. LuMarie Guth**, Associate Professor, Business Librarian at WMU, and **Prof. Louise Feldmann**, Assistant Professor, Reference and Instruction Librarian at DCCC have extensive experience in information literacy, business research, and preparing students for job search and career fairs. They will collaborate in developing the learning module and lead the research and pilot testing efforts in their institutions.
- **Collaborative Advisors: Ms. Jen Long** (Director) and **Ms. Katelyn Shellaway** (Associate Director) of the Twardowski Career Development Center (experts in career development and career counseling) will collaborate and advise on learning content and module development and help promote the learning module series.
- **Advisory Board: Dr. Jon Briscoe**, Professor of Management at Northern Illinois University (**Protean Career Theorist**) will provide advice on the application of protean career theory in learning module content design. **Mr. Gene Rhee**, Executive Director of Mohr Career Services at the University of Oregon (expert in career services integration into college curricula) will provide advice on the development of the learning module integration strategies. **Dr. Vipanchi Mishra**, Professor of Psychology at WCU (expert in organizational psychology), **Dr. Ann Colgan (Advisor)**, Professor, and Director of Interdisciplinary Studies; Advisor, Exploratory Studies at WCU (expert in education and exploratory studies), **Dr. Tim Jussaume (Advisor)**, Associate Professor and Director of the WCU Honors College (expert in philosophy and ethics) will advise on the development of learning content, research methodologies, and assessment instruments to measure the impact of the learning modules. Additionally, they will assist in piloting the modules with students in exploratory studies and honors studies at WCU.
- **Other Personnel:** staff members from the WCU Office of Digital Learning and Innovation will advise on building the platform-independent learning modules. Graduate assistants and undergraduate assistants will be hired to assist with the project management, graphic design, and creation of the learning videos.

Project Schedule and Activities

The project will take an **iterative approach** to learning module design with a continuous cycle of planning, analysis, developing, evaluation, and refining (see details in the [Project Schedule of Completion](#)) and project progress

will be monitored and tracked through regular project meetings and on-going assessment activities (see details in the [Performance Measurement Plan](#)):

- **Phase I Planning and Ideation (August 2024 – May 2025)**

During Phase I, the project will (1) submit an Institutional Review Board (IRB) proposal for a multi-site online study; (2) conduct eight focus group interviews with 24 business students and 12 faculty from four institutions to incorporate their perspectives into learning module development; (3) develop a learning content outline; (4) gather input from collaborators and advisors to refine the outline; (5) ongoing and end of the Phase I project evaluation on the timeline, cost, scope, resources, risk, and quality.

- **Phase II Learning Content Development (May 2025 – April 2026)**

During Phase II, the project will (1) set up regular individual and group meetings with advisors and collaborators to discuss content development details; (2) engage three students in the participatory design to create and refine the learning activities; (3) prepare the learning texts, video scripts, activities & pop-up quizzes, and resource guides; (4) gather input from collaborators, advisors, and students to refine the learning content; (5) ongoing, end-of-first-year, and end-of-Phase II project evaluation.

- **Phase III Learning Videos and Learning Module Development (January – December 2026)**

During Phase III, the project will (1) work with two instructional designers from the WCU Office of Digital Learning and Innovation and student assistants to create the learning videos; (2) engage three participatory design students to design the learning modules; (3) build the learning modules following the platform-independent Common Cartridge Open Standard; (4) gather input from collaborators, advisors, and students to refine the learning modules; (5) ongoing, end-of-second-year, and end-of-Phase III project evaluation.

- **Phase IV Pilot Testing (January – May 2027)**

During Phase IV, the Learning Module Series will be introduced to students and faculty in the four pilot testing institutions. Feedback will be collected from student participants and collaborative faculty at four institutions. The project will further incorporate pilot testing feedback to refine and finalize the learning modules (see the details in the Learning Module Development section: [E. Pilot Testing](#)).

- **Phase V Finalization and Dissemination (June – July 2027)**

During Phase V, the project will (1) finalize a series of other deliverables and documentation. These deliverables will facilitate **easy adoption and customization** of the Learning Module Series and provide integration, promotion, and sustainability strategies and assessment instruments for academic libraries to track the project's short-term and long-term impact. The project will conduct an assessment at the end of the 3rd year and submit the final report.

After the project's completion, the project team will (1) continue to promote and disseminate the learning module series nationwide; (2) continue to assess the learning module based on built-in student feedback surveys and collect data for assessing the short-term and long-term impact of the project (see the details in the [Sustainability and Dissemination](#) section below).

Learning Module Development and Integration

A. Tentative Learning Module Structure and Characteristics

Based on conversations with librarian colleagues and feedback from faculty, and drawing from the PD's previous experience in learning module development, the project plans to create three Learning Modules in a Series to address different needs:

- **CareerLit Essentials: General Research Pathways Across Disciplines**

The CareerLit Essentials module covers all essential components of early-stage career research and exploration. Students in undecided majors or any major can gain an essential understanding of the career research resources and processes.

- **CareerLit Business Focus: Tailored Research Pathways for Business Majors**

CareerLit Business Focus delves deeper into business career choices, targeting college students majoring in business. It serves as a model for developing more in-depth, major-specific career research modules and lays the groundwork for developing similar modules for Arts & Humanities or STEM majors.

- **CareerLit Express: Abbreviated Pathways for Rapid Insight**

CareerLit Express offers a concise overview of key topics for career exploration and research. It serves as a leading introduction and motivates students to take the full-length learning module to develop a personalized roadmap for career success. It can be easily integrated into a course as an assignment.

Each learning module will comprise (1) learning text with citations, (2) scripts, (3) videos with closed captions, (4) self-assessment or research activities, (5) pop-up quizzes, (6) resource guides, (7) end-of-module feedback surveys, and (8) a completion certificate. Collectively, (1), (2), (4), (5), (6) are referred to herein as “**Learning Content;**” (3) is referred to as “**Learning Videos;**” (1)-(8) are referred to as “**Learning Module.**” The learning module will be created and hosted in a Learning Management System (LMS). The project will create platform-independent packages aligned with the **Common Cartridge** Open Standard that allows sharing across LMS including D2L, BlackBoard, Canvas, Moodle, etc. for easy adoption and customization.

The full-length **CareerLit Essentials** and **CareerLit Business Focus** modules are estimated to comprise 4 hours of learning videos and 30-40 hours of research or assessment activities, comparable to a **1-credit** course. The abbreviated **CareerLit Express** module aims to introduce key concepts within 45-60 minutes of learning video, with limited research activities, requiring completion in less than 2 hours. It can be integrated seamlessly into college courses, whether as part of the course learning content or as an assignment for one or two weeks.

B. Target Group Perspective Incorporation and Consensus Building

The project will integrate the perspectives of target groups into the learning module development by engaging in external input, validation, and consensus-building with stakeholders through the following efforts:

- 1) **Focus Group Interviews with Business Students and Faculty to Inform Learning Content Development and Integration:** eight focus group sessions will be organized with 24 business students (six participants for each session) and 12 faculty (three participants for each session) from four institutions. Students will be recruited through flyers posted in business buildings, with screening questions implemented to select participants representing diverse backgrounds and a range of career exploration experiences. The focus group interviews will gather input from students regarding their information needs, information-seeking behaviors, and challenges in career exploration, as well as their preferred ways of learning. Faculty will be recruited by the PDs and Co-PDs. Faculty interviews will gather input on integrating the learning modules into the curricula and students’ learning.
- 2) **Participatory Design to Enhance Learning Content and Learning Module Development:** The project will engage six WCU students (three in the first year and three in the second year) in a participatory design of the learning module series on campus in collaboration with the PDs and the instructional designers at the Office of Digital Learning and Innovation. Participatory design is a collaborative design approach that involves end-users in the design process (Muller & Kuhn, 1993). The participants will join the team to brainstorm, co-create, and co-examine the script, video, and learning module and will go through the learning topic and research activities and provide feedback. The project will select the participants who experienced more challenges with career exploration. The project will work with the WCU **Dowdy Multicultural Center**, the **Promise Program** (serving homeless and foster youth), the **First Generation Student Group**, and the **COMPASS Program** (serving African-American males currently on academic probation) to identify participatory design participants. In addition, the undergraduate student assistant and graduate assistant will also be involved in the process.
- 3) **External Input, Validation, and Consensus Building:** Ongoing external input, validation, and consensus building is an integral part of learning module development processes. For each of the phases and ongoing project formative and summative evaluation, the feedback will be collected from student participants, project

collaborators, and advisors. These inputs represent the perspectives of library colleagues, career centers, faculty from the business school, exploratory studies, and honors studies.

C. Tentative Learning Content Structure and Learning Outcomes

Based on the previous conversations with students, librarians, and faculty, and the PD's research in the past three years in developing in-depth career guides for business students, we've developed the following tentative learning content structure as a baseline example. The learning content will be fully developed based on further literature research, focus group studies and interviews with students and faculty at the four institutions, and in-depth conversations with collaborators and advisory board members.

Learning Outcomes	Tentative Topic + Research Activities (RA) or Self-Assessment/Reflection (SAR)
<p>1. Students will identify personalized career information needs and career goals aligned with their intrinsic values and their own definition of success and meaningful life.</p>	<p>1. Identifying Career Goals and Career Information Needs (SAR)</p> <ul style="list-style-type: none"> a. Meaning and Purpose of Life; b. Definition of Happiness and Life Success; c. Intrinsic Value and Motivation; d. Personal Strength and Virtues; e. Personalities and Individual Unique Characteristics.
<p>2. Students will utilize authoritative career information sources to research and develop multiple career path prototypes and evaluate the impact of different occupational choices and career paths on their lives.</p>	<p>2. Research for Career Choices and Career Paths</p> <ul style="list-style-type: none"> a. Protean Career Theory: Self-directed exploration in career goals, directions, activities, and assessment; (SAR) b. Life Design Mindset and develop multiple career path prototypes; (SAR & RA) c. Understand general career and occupation choices; (RA) d. Compare occupational differences in the work environment, education, salary, job outlook, location, work styles, and values; (RA) e. Understand hard skills vs. soft and transferable skills needed for specific occupation; (RA) f. Career paths, progressions, adaptation to change; (RA) g. Potential career choices by major. (RA)
<p>3. Students will utilize business and industry research databases and online sources to compare and identify desired industries and potential employers and evaluate the impact of different industries and employer choices on their lives.</p>	<p>3. Research for Career Opportunities</p> <ul style="list-style-type: none"> a. Understand the career opportunities across industries, the impact of industry cycles and industry trends on career opportunities; (RA) b. Understand technological trends and their impact on career opportunities and career disruptions; (RA) c. Compare the same occupation in different industries; (RA) d. Identify large, medium, and small employers; national and regional employers in an industry; (RA) e. Compare the differences in employers in their values and culture; (RA) f. Analyze the meaning of work and factors contributing to job satisfaction.
<p>4. Students will apply information literacy and research skills to analyze knowledge and skill gaps and identify career resources to fill</p>	<p>4. Research for Career Gaps and Resources</p> <ul style="list-style-type: none"> a. Find and analyze job ads for the most desired job and from the most desired employer; (RA) b. Find role models and analyze their career paths; (RA) c. Design resumes for the future "You";

such gaps.	<p>d. Analyze knowledge & skills gaps and learning opportunities;</p> <p>e. Identify resources to fill the knowledge & skill gap for career development, including finding part-time job opportunities (RA); internship opportunities (RA); finding networking and mentorship opportunities (RA); finding learning resources. (RA)</p>
<p>5. Students will learn evidence-based career planning and decision-making and develop a growth mindset and protean career orientation and processes for life-long career success.</p>	<p>5. Evidence-based Career Decision-Making</p> <p>a. Career information quality and evidence-based career decision-making</p> <p>b. Causation and effectuation decision logic;</p> <p>c. Ladder of inference (examine assumptions);</p> <p>d. Life Design Mindset (reframe dysfunctional beliefs);</p> <p>e. Build a growth mindset, grit, and habit for change;</p> <p>f. Develop protean career orientation, identity, adaptability, and agency.</p>
<p>6. Students will organize and communicate career research results in a holistic way with a roadmap visualization.</p>	<p>6. Put it Together: A Roadmap of Career Success for Life</p> <p>a. Outlined life purposes, intrinsic values, strengths, unique individual characteristics, and psychological success;</p> <p>b. Outlined career goals, desired occupation prototypes, career paths, desired industry, and employer choices;</p> <p>c. Identified knowledge & skill gaps towards the most desired career and role models;</p> <p>d. Identified resources and opportunities for internships, part-time jobs, networking, mentorship, learning & growth, etc.;</p> <p>e. Identified necessary steps and milestones for achieving the goals and strategies for making adaptive changes during college years and beyond.</p>

D. Integration into Students' Learning

As one of the important deliverables, the project will develop comprehensive integration and promotion strategies for adopting and customizing the Learning Module Series for adopted libraries and institutions. Following the previous success of the PD in creating and integrating an Evaluating Online Sources Learning Module into the First-Year Experience and First-Year Writing program, the project will facilitate seamlessly embedding the Learning Module Series into existing courses. Potential options for integrating the Learning Module Series into the college curriculum include:

- Integrating it as a one-credit course for library information literacy programs, collaborative programs between library and business schools, career centers, exploratory studies, honors college, etc.
- Integrating it as a for-credit or non-credit learning experience for service-learning programs, experiential learning programs, co-curricular transcript, etc.
- Integrating it into certificate programs, badging, or micro-badging programs on campus
- Integrating it into existing curricula as part of the course learning content, assignment for one week or two weeks, or extra course credit
- Working with several classes to ladder the learning experience and develop a roadmap in 1-2 years

E. Pilot Testing

To pilot test the learning module series, the collaborative libraries will engage in the following efforts:

- **WCU F.H.G. library** will integrate the modules into the RAM Plan Co-curricular Transcript Program, FYE (First Year Experience) Course, MGT200 business courses, IDS Interdisciplinary Studies, and Honors College Leadership course and will also directly promote it to pre-business students.

- **IU Library** will integrate the modules into C104: Business Presentations and C204: Business Writing courses.
- **DCCC Library** will integrate the modules into the existing Library Badging program and promote the modules to business students in 100 and 200-level courses through business faculty, the business department, and through targeted announcements to students via the LMS.
- **WMU library** will integrate the modules into Badging programs and work with the Business School to promote the series to business students via BUS 1000, BCM 1420, ACTY 2000, BUS 3000, BCM 3700, and BUS 4000 business courses.

Feedback will be collected via the pilot testing and after the official release, efforts will be made to promote the learning module series campus-wide and nationwide to other libraries and universities (see **Dissemination** for details).

Diversity Plan

The project fosters collaboration between libraries, colleges, and career centers and it brings together project directors, collaborators, and advisors with expertise in a wide range of knowledge areas including career management, career counseling, library research, information literacy, philosophy, psychology, education, and organizational behavior. The team represents institutions that span from Carnegie Classification R1 and R2 to two-year associate's colleges and geographic locations from the northeastern, midwestern, to southern United States.

The learning module development will incorporate diverse perspectives from students. It will engage 24 students with diverse demographic backgrounds and career exploration experiences in focus group studies. We will also invite six students who experienced more challenges with career exploration in the participatory design of the learning module series. These students will be recruited from the WCU Dowdy Multicultural Center, the Promise Program (serving homeless and foster youth), the First Generation Student Group, and the COMPASS Program (serving African-American males currently on academic probation). The learning module development will also apply universal design principles and produce deliverables that are accessible and inclusive for students of all abilities and backgrounds.

The project will disseminate its deliverables through a diverse array of channels and formats, including self-organized webinars, publications, and conference presentations. Additionally, it will reach out to various stakeholders, including business librarians, academic librarians, career professionals, and faculty, through connections with professional organizations including the American Library Association (**ALA**), Association of College & Research Libraries (**ACRL**), the Association to Advance Collegiate Schools of Business (**AACSB**), and the National Association of Colleges and Employers (**NACE**).

The Learning Module Series will benefit all students but will have the greatest impact on students with limited family resources or social capital, such as first-generation students, students of color, students from low-income families, or immigrant families. It will benefit all institutions but will have the greatest impact on less selective, broad-access, and resource-limited institutions. Promoting equitable opportunities for students' career exploration and decisions, this project contributes to fulfilling higher education's promise of social and economic mobility and promoting equity for all.

Project Results

Project Deliverables

Through the creation of a series of deliverables, the project ensures that the learning modules can be easily **adapted**, **integrated**, and **utilized** by other libraries and institutions. These project deliverables include:

- 1) **A Learning Module Series**: CareerLit Essentials; CareerLit Business Focus; and CareerLit Express (developed in an LMS environment, following Common Cartridge Open Standard)
- 2) **Implementation Support**: (a) Adoption and Customization Instructions; (b) Integration Strategies for Academic Libraries; (c) Promotion Materials and Promotion Strategies for Academic Libraries
- 3) **Sustainability Strategies** for Ongoing Communication and Knowledge Sharing between Adopted Libraries
- 4) **Assessment Instruments** for Academic Libraries to Track Project's Short-Term and Long-term Impact

5) An Open Access Project Website

Intended Results

This project lays the groundwork for systemizing knowledge in career information literacy and career research competency while building the infrastructure to enrich students' learning in these areas. It integrates new theories in career management, positive psychology, and life design into the creation of the Learning Module Series and provides college students with opportunities to leverage their knowledge and research skills to improve their career and life prospects. As a National Leadership Grant for Libraries project, it will demonstrate the leadership role of libraries in the substantive and learning-centered collaboration between libraries, colleges, and other campus departments. As an implementation grant, it directly addresses the needs of college students in early-stage career exploration, empowering them to make informed career choices and decisions and building students' confidence and self-efficacy for life-long career success.

The **short-term, direct result** of the project is to empower college students' early-stage career exploration, cultivate students' protean career orientation, and develop lifelong awareness, adaptability, and agency for their career development (Hall et al, 2018). Backed up by various research, the clearly defined career goals and enhanced career research skills will also positively impact students' motivation, engagement, and retention, and contribute to overall academic success and job satisfaction (Alniaçık et al., 2012; Graciani Hidajat et al., 2020; Hull-Blanks et al., 2005). So for the **long-term impact**, hopefully, the project will enhance college students' motivation, academic performance, retention, graduation, and job placements. Furthermore, by making the learning resources accessible to college students, and preparing all students for lifelong career competency and self-efficacy, the project will contribute to **reducing equity disparities** among college students in their career exploration and help fulfill higher education's promise of **social and economic mobility and equity for all**.

Dissemination & Sustainability

Efforts will be made to widely disseminate the project results to academic librarians (especially business librarians), faculty, and career professionals in higher education:

- (1) **Promotion Webinar:** The project will host a project webinar to introduce the Learning Module Series nationwide. We will utilize a robust dissemination network built upon a prior IMLS-awarded national forum grant project led by the PD, which engaged over two thousand academic librarians. We will also promote the Series and webinar through channels such as the ALA RUSA Business Reference and Services Section (BRASS), BUSLIB-L Listserv, ACRL, the Business Librarian Affinity Group at AACSB, and the Member Forum at NACE.
- (2) **Publications:** The project team will also publish the project experience and its outcome via the publication channels including the Journal of Business & Finance Librarianship, the Academic Business Librarianship Review, the Journal of Information Literacy, the Journal of Academic Librarianship, College & Research Libraries, College & Research Libraries News, etc.
- (3) **Conference Presentations:** The project team will also promote the project outcomes through participating in conferences. Potential venues include the BRASS Online Symposium, LOEX Conference, RUSA Online Forum, the ACRL Annual Conference, the ALA Annual Conference, the AACSB Dean's Conference or International Conference and Annual Meeting, and the NACE Annual Conference.
- (4) **Sustainability Plan and Future Opportunities:** The project will ensure the sustainability of the project results through a comprehensive sustainability plan and promote ongoing communication and knowledge sharing between libraries that adopt the Learning Module Series. Furthermore, the successful completion of the project will pave the way for leveraging other funding opportunities to develop discipline-specific learning modules, including those tailored to students in the Arts and Humanities or STEM-H disciplines.

		Schedule of Completion (1st Year)															
Phase I	Planning and Ideation	Activity (Year 1: August 2024- July 2025)	Project Lead	Timeline												Task	Code
				Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul		
		1 Regular project meetings (bi-weekly, monthly) and quarterly assessments	GL													Meetings and Admin	
		2 Hire graduate student to assist with project management	GL													Project Assessment	
		3 Prepare and submit the IRB proposal for multi-site online focus group study	GL, IS, LG, LF													Planning	
		4 Conduct eight focus group interviews (with 36 interviewees)	GL, IS, LG, LF													Content Development	
		5 Draft a learning content outline and module structure	GL, JB, IS, LG, LF													Module Development	
		6 Gather input for the outline and structure from collaborators and advisors	JL, KS, VM, AC, TJ, JBr, GR													Website Development	
		7 Incorporate feedback to refine outline and module structure	GL, JB													Feedback	
		8 Recruit students for participatory design	GL													Strategy Development	
		9 Develop learning content through research and discussion with advisors	GL, JB, TJ, VM, JBr, AC													Pilot Testing	
		10 Gather feedback for the learning content from collaborators and advisors	JL, KS, VM, AC, TJ, JBr, GR, IS, LG, LF													Deliverable	
		11 Incorporate feedback to refine the learning content and materials	GL, JB														
		12 First-year project summative assessment and report	GL, VM, IS, LG, LF														
		Schedule of Completion (2nd Year)															
Phase II	Learning Content Development	Activity (Year 2: August 2025 - July 2026)	Project Lead	Timeline												Task	Code
				Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul		
		1 Regular project meetings (bi-weekly, monthly) and quarterly assessment	GL														
		2 Develop learning content through research and discussion with advisors	GL, JB, TJ, VM, JBr, AC														
		3 Engage students in designing & reviewing the learning text and research activities	GL, GA														
		4 Gather feedback for the learning content from collaborators and advisors	JL, KS, VM, AC, TJ, JBr, GR, IS, LG, LF														
		5 Incorporate feedback to refine the learning content and materials	GL, JB														
		6 Develop learning videos and build learning modules	GL, IDs, GA, UA														
		7 Engage students in designing & reviewing the learning video and modules	GL, IDs, GA, UA														
		8 Gather feedback for the learning module from collaborators and advisors	JB, JL, KS, VM, AC, TJ, JBr, GR, IS, LG, LF														
		9 Incorporate feedback to refine the learning videos and modules	GL, IDs, GA, UA														
		10 Second year project summative assessment and report	GL, VM, IS, LG, LF														
		Schedule of Completion (3rd Year)															
Phase III	Module Development	Activity (Year 3: August 2026 - July 2027)	Project Lead	Timeline												Task	Code
				Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul		
		1 Regular project meetings (bi-weekly, monthly) and quarterly assessment	GL														
		2 Develop learning content through research and discussion with advisors	GL, JB, TJ, VM, JBr, AC														
		3 Engage students in designing & reviewing the learning text and research activities	GL, GA														
		4 Gather feedback for the learning content from collaborators and advisors	JL, KS, VM, AC, TJ, JBr, GR, IS, LG, LF														
		5 Incorporate feedback to refine the learning content and materials	GL, JB														
		6 Develop learning videos and build learning modules	GL, IDs, GA, UA														
		7 Engage students in designing & reviewing the learning video and modules	GL, IDs, GA, UA														
		8 Gather feedback for the learning module from collaborators and advisors	JB, JL, KS, VM, AC, TJ, JBr, GR, IS, LG, LF														
		9 Incorporate feedback to refine the learning videos and modules	GL, IDs, GA, UA														
		10 Second year project summative assessment and report	GL, VM, IS, LG, LF														

		Schedule of Completion (3rd Year)													
Phase III Learning Videos and Learning IV	Activity (Year 3: August 2026 - July 2027)	Project Lead	Timeline												Milestone: Deadline
			Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	
	1 Regular project meetings (bi-weekly, monthly) and quarterly assessment	GL													Phase I Planning and Ideation
	2 Develop learning videos and build learning modules	GL, IDs, GA													Learning Outline: May 2025
	3 Engage students in designing & reviewing the learning video and modules	GL, IDs, GA													Phase II Content Development
	4 Gather feedback for the learning module from collaborators and advisors	JB, JL, KS, VM, AC, TJ, JBr, GR, IS, LG, LF													Learning Content: April 2026
	5 Incorporate feedback to refine the learning videos and modules	GL, IDs, GA													Phase III Module Development
	6 Build project website and ongoing update	GA, UA													Learning Module: Dec. 2026
Phase IV Piloting	7 Pilot testing at four institutions	GL, JB, IS, LG, LF													Phase IV Pilot Testing
	8 Collect pilot testing feedback	GL, JB, IS, LG, LF													Pilot Testing: May 2027
Phase V Finalization	9 Incorporate pilot testing feedback to refine and finalize the learning modules	GL, IDs, GA													Phase V Finalization
	10 Develop adoption and customization instructions	GL, JB, IS, LG, LF													Project Completion: July 2027
	11 Develop integration strategies	GL, GR, JL, KS, TJ, AC, IS, LG, LF													
	12 Develop promotion materials and promotion strategies	GL, IS, LG, LF													
	13 Develop sustainability strategies	GL, IS, LG, LF													
	14 Develop assessment instruments and strategies for tracking project impact	GL, VM, JBr													
	15 Evaluate project outcome and submit project final report	GL, VM, IS, LG, LF													
Ongoing	16 Organize project webinar and continued efforts for disseminating project deliverables	GL, IS, LG, LF													
	17 Continued efforts for sustainably maintaining project deliverables	GL													
	18 Continued efforts for assessing and tracking project long-term impact	GL													
Personnel: Pro. Grace Liu (GL, Project Director); Dr. Jennifer Bozeman (JB, Project Co-Director); Ms. Jennifer R. Long (JL, Collaborative Advisor); Ms. Katelyn Shellaway (KS, Collaborative Advisor); Dr. Vipanchi Mishra (VM, Advisor); Dr. Ann Colgan (AC; Advisor); Dr. Tim Jussaume (TJ, Advisor); Prof. Ilana Stonebraker (IS, Subaward Co-Director); Prof. LuMarie Guth (LG, Subaward Co-Director); Prof. Louise Feldmann (LF, Subaward Co-Director); Dr. Jon Briscoe (JBr, External Advisor); Mr. Gene Rhee (GR, External Advisor); Graduate Assistant (GA); Undergraduate Assistant (UA), Instructional Designers (IDs), Student Designers (SDs)															

Digital Products Plan

Type

The project will create the following digital products:

- (1) The **Learning Module Series** will be created in a Learning Management System (LMS) environment with a platform-independent package aligned with the **Common Cartridge** Open Standard that allows sharing across LMS including D2L, BlackBoard, Canvas, Moodle, etc. for easy adoption and customization. The Libraries adopting this Learning Module Series can embed it into their own LMS system and distribute it to faculty or students via a URL. **Three** learning modules will be created and the **full-length** learning module will include the following content:
 - (a) learning text with citations (PDF) (35+ topics);
 - (b) video scripts (Word; PDF); (35+ topics and 30,000+ words)
 - (c) videos with closed captions (MP4) (35 videos; estimated in total 4-5 hours);
 - (d) self-assessment or research activities (Word; LMS) (50+ activities);
 - (e) pop-up quizzes (MP4) (35-70);
 - (f) resource guide (HTML; LMS) (35+);
 - (g) student feedback survey (e.g. Qualtrics; LMS)
 - (h) completion certificate (PNG)
- (2) **Project Website:** The project will build an open-access website in HTML format to display all the digital content created by the project:
 - (a) LMS Common Cartridge Package (.imscc) Files for three learning modules;
 - (b) Learning Module Content (above list (a)-(f)) will also be displayed on the project website to allow the public to view it. The videos will be hosted on YouTube.
 - (c) Other digital documents (PDF) will be shared via the project website, including 1) Learning Module Integration Strategies and Recommendations for Academic Libraries; 2) Learning Module Promotion Materials and Strategies for Academic Libraries; 3) Sustainability Strategies for Academic Libraries to Update, Share, and Distribute the Learning Module Series; 4) Assessment Instruments for Academic Libraries to Track Project's Short-Term and Long-term Impact
 - (d) Sign-up forms for libraries or institutions to adopt the learning module.

Availability

The digital products will be made widely available to librarians, faculty, career professionals, and the public, through the following efforts:

- (1) All digital products will be **publicly available online** via the project website. The website will be search-engine optimized to increase discovery and website analytics will be embedded to track its visits and usages.
- (2) The Learning Module Series (project website link) will also be shared in **Open Educational Resources** platforms such as the Association of College & Research Libraries (ACRL) Sandbox, OER Commons, MERLOT, etc.
- (3) The digital products will be distributed to academic librarians (especially business librarians), faculty, and career professionals via various **distribution channels**, including the ALA RUSA

Business Reference and Services Section (BRASS) and BUSLIB-L Listserv; the Association of College & Research Libraries (ACRL); the Business Librarian Affinity Group at the Association to Advance Collegiate Schools of Business (AACSB), and the Member Forum at National Association of Colleges and Employers (NACE).

- (4) The project will host a **project webinar** to introduce the Learning Module Series nationwide. We will utilize a robust dissemination network built upon a prior IMLS-awarded national forum grant project led by the PD, which engaged over two thousand academic librarians.
- (5) The project will continue to prompt the project outcome via **publications** after the project completion (potential venues include *the Journal of Business and Finance Librarianship*, *the Academic Business Librarianship Review*, *the Journal of Information Literacy*, *the Journal of Academic Librarianship*, *College & Research Libraries*, *College & Research Libraries News*, etc). The author will self-archive the pre-print copy in an institutional repository in compliance with the publication's copyright policies.
- (6) The project will continue to prompt the project outcome via **presentations** (Potential venues include the Business Reference and Services Section (BRASS) Online Symposium, LOEX Conference, RUSA Online Forum, the Association of College & Research Libraries (ACRL) Annual Conference, the American Library Association (ALA) Annual Conference, the Association to Advance Collegiate Schools of Business (AACSB) Dean's Conference or International Conference and Annual Meeting, and National Association of Colleges and Employers (NACE) Annual Conference).

Access

- (1) All digital products created by the project members will be publicly available online via the project website under the **CC BY-NC License**. **Users can download, adapt, and customize it upon** this work non-commercially.
- (2) Guided by the Office of Digital Learning and Innovation, the learning module development will apply **universal design principles** and produce deliverables that are accessible and inclusive for students of all abilities and backgrounds.
- (3) The **accessibility** of all digital products and project web pages will be checked with the assistance of West Chester University's Web Team Services via [WAVE Web Accessibility Evaluation Tool](#), with reference to [BCCampus' Accessibility Statement](#) before dissemination.

Sustainability

- (1) The digital products created by this project will be **freely and readily available** for use and reuse by libraries, other institutions, and **the public**.
- (2) The public-facing **website** will be built and will be maintained by the project team for an indefinite period of time with a commitment of at least 10 years.
- (3) The project will develop a comprehensive **sustainability plan** and promote ongoing communication and knowledge sharing between libraries that adopt the Learning Module Series.
- (4) The learning videos will be hosted in LMS but will also be made **public and permanently available** via YouTube and embedded into the project website.