Summary
I have a theory. It’s that supporting curiosity leads to greater academic persistence and improved student success. There are many theoretical approaches to supporting student curiosity and inquiry; this proposal is about taking time to explore teaching and learning by using design-thinking (context-driven, human-centered problem solving) and maker-thinking (thinking-through-making) as one potential approach.

I have selected a number of librarians and “thinkers” to engage during this investigation. Most notably, I will be working directly with Sara Ryan, author of young adult literature and Teen Services Specialist of Multnomah County Library. I have also set interviews with Jaime Hammond, Acting Director of Library Services at Naugatuck Valley Community College and Steve Teeri, cofounder of the Detroit Public Library H.Y.P.E. Teen Center and maker space. Additionally, I will be making visits to the Athenian School Maker’s Studio (late Summer 2014, Danville, California) and to ADX Portland (Fall, Portland, Oregon).

Recent scholarship around the impact of design-thinking, maker-thinking, and interest-driven learning on student success within STEM disciplines give me hope for greater application in all disciplines. I’m not suggesting that all classrooms need 3D printers, or that we’re all going to begin making things as a means of teaching general education fundamentals. I do think there’s a way to bring these strains of pedagogy, design, and curiosity together in a meaningful way for students. Maker focused thinking (and learning) incorporates educational practices we’re already using at PCC: small group discussion, project-based learning, and collaboration. Maker-thinking invites the learner to figure things out, invoking self-reflection and problem-solving behaviors.

PCC Values: Leadership through innovation, continuous improvement, efficiency, and sustainability; Being a responsible member of the communities we serve by actively participating in their development; Collaboration predicated upon a foundation of mutual trust and support; An agile learning environment that is responsive to the changing educational needs of our students and the communities we serve – making students marketable for jobs in the future and promoting economic development

PCC Institutional Goals: Quality Education; Student Success; Economic, Workforce, and Community Development, Sustainability

A. Provide a detailed description of the activity you are proposing along with supporting evidence.

i. Phase one, prior to official leave, Fall, Winter, Spring 2013-2014: Review research begun by PCC librarians Rachel Bridgewater and Torie Scott, who thoroughly investigated the role of serendipity and synchronicity in terms of teaching research skills (information literacy instruction). This research has already been provided and is substantial. Additionally, these librarians have shared
From this research I will construct a foundation of understanding so that I may initiate a literature review designed to incorporate the concepts of curiosity and design and maker-thinking into this framework of pedagogy and practice around presenting information literacy instruction. As noted by Bridgewater and Scott in their most recent presentation on serendipity, Zora Neale Hurston is reported to have said that "Research is formalized curiosity. It is poking and prying with a purpose." This flow from curiosity to poking and prying leads to the actions associated with design and maker-thinking and also parallels the research process.

This background research will allow me to create targeted interview questions for different audiences (community maker/design educators; secondary school STEM educators using the maker framework; public library staff working with adolescent and early adult populations; and community college library faculty who work in a different demographic context).

**Rationale:** This is an attempt to consider what it might look like to incorporate maker-thinking into information literacy curriculum in a manner that is efficient, scalable, and personalized. This is not a proposal to bring physical maker spaces to PCC, but to bring design-thinking and maker-thinking to PCC, which I feel fits solidly into our institutional goal to strive for educational excellence “through practicing continuous improvement and innovation in all that we do.” I’d love to suggest that a 3 month professional leave is enough time for these activities, but pragmatism dictates that research begins in advance.

**ii. Phase two, prior to official leave, Summer 2014:** Tour the Athenian School Maker’s Studio (disclosure: This private secondary school is my alma mater and will be allowed extensive access to the space and the faculty to ask a lot of questions). Tour the ADX Portland space, meet and greet with ADX’s community educators. I’m still working to finalize access to the OMSI Makers Lab, but have been in dialogue with the program administrator about obtaining access to their Teen Advisory Council to conduct interviews – in the event that face to face interviews are not granted, I should be able to conduct electronic interviews with the Teen Advisory Council.

**iii. Phase three, official leave, Fall 2014:** Using a variety of methods (face to face, video chat, text-based exchanges) I will conduct interviews with a number of key informants. These key informants include the participants listed in the summary (include their related faculty and staff), as well as a number of other interested parties from the library and instruction community. Having served on the boards of several national library non-profit organizations, I have a relatively large network of professionals to access. I will be scheduling these interviews in summer and conducting them throughout Fall (so as to catch the maximum number of returning secondary and community college faculty).

Key informant Jaime Hammond is the current co-chair of the Association of College & Research Libraries’ Student Retention Discussion Group. We’ll be focusing extensively on potential information literacy assessment methods that would suit library and research assignments grounded in maker-thinking, based on her expertise and access to the larger national discussion group.

During the 2013/2014 academic year and throughout Summer and Fall 2014 I will be in contact with Sara Ryan frequently, attending meetings and providing assistance on Multnomah County Library projects that relate to my professional leave. We’ll establish goals and outcomes intended to improve both PCC Library and Multnomah County Library’s connectivity around our shared teen and early adult library patron populations. In support of our collaborative preparation for this
professional leave project, I have been asked to consult on Multnomah County Library’s community needs analysis, intended to directly target this same teen and early adult population.

**Rationale:** Better connectivity between freely available information education sources (public libraries) and formal education sources (PCC) benefits students and faculty. PCC Library will benefit greatly from understanding the mentality, behaviors, and community/information needs of youth who are already accustomed to supporting their own information seeking behaviors.

iv. **Phase four, after official leave, Winter 2014:**
Work with Jaime Hammond of Naugatuck Valley Community College to identify specific areas for future research and presentation at the national library community level. Begin to develop content for publication and presentation.

Work with Sara Ryan of Multnomah County Library to review the work done and identify specific areas for publication and presentation, at the national and the local level. Likely venues include Annual Meeting(s) of the Oregon Library Association, Washington Library Association, and the Association of College and Research Libraries Pacific Northwest meetings (ACRL-NW).

Continue to build upon my past presentations and publications in the areas of non-traditional information literacy instruction methods (teaching skills rather than tools), incorporating the new information gleaned during this project.

B. **Relationship to professional duties:** Explain how the activity will enhance your knowledge, skills and/or instructional ability since the reviewers may not share your knowledge and insights about your teaching assignments or your project.

i. **Explain the value of the project to the college from your perspective.**
In his 2010 commentary piece for The Chronicle of Higher Education, Robert J. Steinberg, provost and senior vice president at Oklahoma State University opines that the most significant problem that colleges face, across the board, is being “locked into an archaic notion of what it means to be intelligent.” In the library context, this is frequently seen in discussions between students and faculty over topic selection; students want to explore a variety of topics that the instructor deems academically inappropriate. Developing a sense of academically appropriate topics seems to go hand-in-hand with boring topics that don’t suit the students’ passions and interests. In the community college library, this process is often exacerbated by students who have already had any sort of general or academic curiosity structured right out of them somewhere along the path to degree attainment.

Certain elements of higher education actually reinforce (by design) what Sternberg calls a “specific kind of cognitive and memorization-based intelligence.” He continues, “If we are looking for qualities like creativity -- which we hear so much about today-- but teach students primarily in a way that rewards how well they memorize, then we are setting them and ourselves up for failure.” I have been presenting and publishing about methods of moving library instruction away from rote memorization, toward more fully embracing constructivist pedagogy, active learning exercises, and emphasizing critical thinking skills rather than tools-based learning. .. This will be an opportunity to extend the trajectory of that work.
I am most personally excited to apply this to my ongoing work with development reading students, who often have had curiosity drilled out of them via the institutional education process. In the fervor to teach students how to focus on “academically appropriate” research topics, we have often forgotten that the research process is iterative and frustrating by nature. Again, my theory is that being intrinsically invested in the topic you choose (by virtue of curiosity) should help sustain persistence through the normal roadblocks that one encounters during the research process.

ii. Describe how students will profit from your planned activity. (What you will do differently/better and why such change is needed).

I will be working with PCC instructor Cecelia Guinee to identify practical methods of embedding design and maker-thinking into Reading 115 information literacy instruction sessions. I have been working with the full Sylvania Reading 115 faculty for approximately three years now to continue to develop and hone our collaborative information literacy assignment and related librarian-driven instruction initiatives. Much of the educational application of design and maker thinking in the campus space builds upon familiar pedagogies: inquiry-based, project-based, design-based, and problem-based learning – it’s just that often we’ve not been thinking about using those pedagogies to support curiosity as a means to persistence.

I believe that this project will most directly involve PCC Core Outcomes tied to Critical Thinking and Problem Solving and Self-Reflection.

Additionally, this project relates directly to the CCOGs for Reading 115 at PCC:

5. Use library resources to formulate a research query and select appropriate sources of information. Use critical thinking to evaluate increasingly complex and diverse information and sources for academic and lifelong learning. Identify and make use of steps in the research process.
6. Exhibit habits and contribute to academic success, including engagement and intellectual curiosity. Employ active learning and study strategies for academic success. Use campus support services and other learning resources to help meet academic goals. Participate in a classroom learning community in a respective and responsive manner.

At the Sylvania campus, PCC Library faculty reach 100% of Reading 115 classes offered. We teach 110 minutes of lecture per class, provide an additional 20 minute “drop-in” session per class, and often invest multiple dozens of hours in individual consultations on the Reading 115 Information Literacy Project (developed in collaboration with Reading 115 faculty in support of the above CCOGs). In the 2010-2011 academic year, the Sylvania faculty librarians supported 29 Reading 115 library instruction sessions, in 2011-2012 we supported 30 Reading 115 library instruction sessions, and in 2012-2013 we supported 76 Reading 115 instruction sessions. Often we do this instruction without a clear indicator that the research skills are apprehended, in large part because students are bogged down at the topic selection phase of research. It is common to hear “I don’t care what the topic is, can you just pick one for me?” This lack of investment in the process yields diminished return on investment of faculty time and resources, as well as diminished return for the student.

This is a tremendous investment of time and human resources and it’s appropriate to look at new and innovative methods of engaging this student population. Also, frankly, I’m bored with how I am teaching some aspects of information literacy instruction. Bored faculty members do not provide the best learning environment or experience. I’ve been innovating in the classroom on my own for the entirety of my time at PCC, often with great results, but I’m ready to be more formal in my approach and to allow appropriate time for my own self-reflection.

iii. Describe what you will do to share your professional leave experiences with faculty colleagues.
I will be publishing a faculty essay to the library website, under the Library & Learning archive. Additionally, I am very willing to work with the district wide TLCS to offer this level of programming and/or presentation to faculty.

Time permitting, I would love to work with PCC Librarian Sara Seely (resident storyboarding and video creation expert) to “tell the story” of this experiment.

I fully acknowledge that my hypothesis might fail. That’s what I try to convey to students every single day – every inquiry may lead to unpredictable results. We can call that a failure, or simply consider it part of the iterative process and keep pushing. I would feel successful if I simply encouraged other PCC faculty to take well-measured and researched risks, and to be open to the idea of learning from unexpected results. Fundamentally, that’s what I am trying to teach students anyway, that curiosity can lead to unexpected results, and the unexpected might lead you anywhere.