Our approach involves an annual narrative (2012-2013)

Staff and Personnel

- Principal Investigator: Karen Klomparens, Professor of Plant Biology and Dean of the Graduate School, Associate Provost for Graduate Education
- Working with Dr. Klomparens as co-leader of the activities: Doug Estry, Professor of Pathobiology and Diagnostic Investigation, Dean of Undergraduate Studies
- Working with Dr. Klomparens as day-to-day program director: Melissa McDaniels, Assistant Dean of the Graduate School & Director of the Teaching Assistant Program.
- Grant Evaluator: Ann Marie Ryan, Professor of Industrial/Organizational Psychology
- Faculty– Community of Practice Assessment Network. These are individuals that took a prominent leadership role on the project in Year One. A full list of these core faculty can be found in the Appendix [1] of this report.
- Project Advisors – A list of these individuals can be found in the Appendix [2] of the report, have assessment of student learning expertise and have agreed to serve in an advisory capacity.
- PFF-ASL Graduate Fellows – Several graduate students have taken a leadership role in running some of our assessment programming and resource development (Erik Skogsberg & Claire Yates, College of Education)
- Graduate Employees Union Pedagogy Committee – Sylvia Marques (History), Elizabeth Kenyon (Teacher Education), Claire Yates (Teacher Education).

Project Goal

The project goal of MSU’S PFF-AFL Initiative is to use our institution’s considerable infrastructure that supports professional development of teaching excellence to move purposefully towards a more cohesive University approach to the assessment of student learning by explicitly linking assessment to the disciplinary-specific preparation of graduate students as future faculty. We are well on our way to accomplishing this goal as we mark the half-way point of the grant. The project is particularly timely as MSU undergoes our institutional reaccreditation in 2015-2016 (HLC-NCA). In Year One, we began implementing a six-part strategy that would move us towards the reality of a more cohesive university approach to student learning.

This six-part strategy includes:

- Enlistment of in-depth faculty support and participation (without this no true institutional transformation can occur).
- Creation of synergies with existing teaching development programs for graduate students and postdocs.
- Cultivation of graduate student and postdoc involvement through communities of practice (led by faculty and graduate students) and initiative-specific programming. We did this by making various “on-ramps” available.
- Development of a framework to evaluate participant understanding of student learning outcome assessment.
- Partnering with the Dean of Undergraduate Education and MSU’s efforts to solidify liberal learning goals (in anticipation of 2015-16 institutional reaccreditation).
- Targeting graduate students who serve as TAs in “gateway” courses.

In YR1, our goal was to both reach graduate students and postdocs directly and through the faculty-of-record of gateway courses. As you will see in the MSU Tracking Template, we added an additional column of information about our graduate student, postdoctoral fellow and faculty participants: the identification of the level of involvement and engagement on our project as High, Medium, Lower (H, M, L), depending upon their participation in a variety of PFF-ASL activities over time. As of November 15, 2013, 517 graduate students have been involved. Of these students 406 participated in “high engagement” activities. Seventy-six (76) faculty have been involved. Of these faculty, 39 participated in “high engagement” activities. 21 postdocs have been involved to-date and of that number 19 participated in “high engagement” activities. During our first year of the PFF-ASL initiative at MSU, we engaged 614 graduate students, faculty and postdocs.
The funding for this project is supporting us in our efforts to both: (1) leverage the resources of already existing teaching development programs on campus as they related to the assessment of undergraduate student learning, helping these programs cover student learning assessment in a more robust way; and (2) create new programming. We labeled activities as high engagement (H), medium engagement (M) and lower engagement (L). The more intensive programs are listed below. Other valuable programs that require less commitment on the part of the participants are listed in the Appendix [3].

University-Wide Activities

General Education and Assessment: A Sea of Change in Learning (AACU, Boston, MA)
Eight (8) deans of academic colleges and the Grad and Undergrad Deans provided financial support for 22 individuals (21 faculty and 1 grad student) to attend this conference (www.aacu.org/generaleducation/gened2013/materials.cfm) Feb 28 – March 2, 2013. Academic colleges included: College of Natural Science, College of Social Science, Residential College for Arts & Humanities (undergrad), College of Agriculture and Natural Resources, College of Arts and Letters, Lyman Briggs College (residential undergrad science), College of Communication Arts and Sciences, James Madison College (residential undergrad social science). Attendees brought back best practices and sample assessments for use in their courses (H).

Assessment of Student Learning Spring Institute 2013 (MSU)
Sixty-six people (46 graduate students, 2 postdocs and 18 faculty participated in MSU’s inaugural Assessment of Student Learning Spring Institute from May 6 - May 8, 2013. An agenda for this institute is in Appendix [4]. We compiled a complete record of the institute (over 300 pages) that contains institute session goal sheets, PPTs, breakout group guides and program evaluations. We can supply this document upon request. All attendees were asked to bring either: (a) a syllabus to revise; or (b) a course for which they needed to develop a syllabus. The entire institute included sessions that alternated between plenary sessions and meetings of three Communities of Practice (STEM, Social Sciences, Humanities) emerged in which participants were able to “workshop” the syllabi they were working on. We made video recordings of each Institute plenary and these can be found on MSU’s Graduate School YouTube Channel: http://www.youtube.com/playlist?list=PLYCqHuRtn7cipZ7OnZLeixbABO16zmCXO (full length) or http://www.youtube.com/watch?v=V4UjOQePuY4&list=PLYCqHuRtn7chiMtPEarKyD3clxWH8eSk4 (topical clips) (H).

Assessment of Student Learning Colloquium (MSU)
On October 5, 2013, forty-three (43) graduate students attended a graduate student-facilitated and Graduate School organized (McDaniels) assessment of student learning colloquium. Three Community of Practice grant faculty were in attendance. The goal of the Institute was to bring together students who either attended the Assessment of Student Learning Spring Institute, the Certification in College Teaching May Institute, or the 2013 TA Seminar to talk about “next steps” in student learning assessment. Two PFF-ASL Graduate Fellows (Erik Skogsberg and Claire Yates) ran the colloquium. The facilitator’s guide and slides used by these Fellows can be found in the Appendix [5]. The result was a robust list of graduate student-generated assessment questions that we will use in YR2 of the grant to guide both our distribution of resources and program planning. After the program, Skogsberg, Yates and McDaniels used concept-mapping software (popplet.com) to analyze what broad areas of student learning assessment were of most interest to the participants in this colloquium. A screenshot of this document can be found in the Participant Feedback and/or Activity Assessment of this report (below). (H)

Teaching Assistant Seminar (MSU)
With support of the PFF-ASL grant, Drs. Melissa McDaniels (Grad School) and Diane Ebert-May (Plant Biology) completely revamped MSU’s “TA Seminar” – the multi-day workshop held each August to prepare new TAs to enter the classroom in Fall. On August 19, 20, and 21, 2013, approximately 300 TAs participated in a seminar focused on student learning outcomes assessment and inquiry-based learning. Slides from these seminars are in the Appendix [6]. (H)

Certification in College Teaching Institute (MSU)
May 9-10, 2013 the Grad School hosted a Certification in College Teaching Institute. This annual intensive two-day program covered topics including teaching with technology, assessment of student learning outcomes, creating effective learning environments through writing, and developing career portfolios. Students who complete the program (in partnership with 8 colleges) earn a transcriptable notation. An agenda from the 2013 institute can be found in the Appendix [7]. (M)

On-line Training Modules
MSU purchased a license for this set of on-line courses developed by Epigeum (www.epigeum.com) to help graduate students and postdocs get ‘just in time’ support for their teaching. A number of the modules contain best practices in student learning assessment including grading, creating rubrics that are aligned with student learning outcomes, and feedback strategies. As this is a proprietary product, we cannot provide the rest of the PFF-ASL Network with access. However, some of the assessment modules are on topics such as: matching learning outcomes, instruction and assessment, using rubrics, qualities
of good feedback, and peer-to-peer feedback. In 2014, MSU graduate students and postdocs will also have access to on-line modules on assessment through www.magnapubs.com. Modules on assessment cover such topics as: concept-mapping, standard/benchmark setting, building a culture of assessment, summarizing and using assessment results. These modules are being made available through MSU’s Office of Faculty and Organizational Development. The on-line training modules can be engaged as low, medium, or high engagement activity.

Participant Feedback and/or Activity Assessment

In YR1 of the MSU PFF-ASL Initiative, the administrators and faculty took a leadership role in producing the programs and resources related to assessment of student learning, many of which were discussed in the previous section. As we entered the Fall and approached the end of YR1, we believed it was time to pause to think about how we might create the circumstances under which graduate students and postdocs would take initiative to tell us (faculty) what topics related to student learning assessment interested them, and how we (as administrators and faculty) might support them in pursuing these interests. We provided the financial support for the aforementioned Assessment of Student Learning Colloquium. This event was a highlight because the colloquium itself was led by two senior doctoral students in our College of Education – Erik Skogsberg & Claire Yates. Both of these individuals are also involved in the Graduate Employees Union pedagogy committee and wanted to take the initiative to energize graduate students and postdocs to have a significant impact on the development PFF-ASL Initiative in YR2. They were provided these two students with small fellowships from The Graduate School in appreciation for the leadership role they played. The Appendix [8] contains a more thorough description of the Colloquium and its outcomes.

College & Department Activity

It is also important to report upon our accomplishments using the lens of the individual college and/or department. These units are implementing activity in support of their faculty, graduate students and postdocs as they start to take a leadership role in more deeply engaging the topic of student learning outcomes assessment. In addition, these units are encouraging their graduate students and postdocs to participate in some of the aforementioned university-wide activities. This section contains a brief unit profile for each participating department or college. These profiles will contain the total number of participants (faculty, graduate students, and postdocs) in the PFF-ASL Initiative from that college or department – this will include participants in both college/department related activity as well as university-wide activity. As relevant, the unit profile will also contain information on the gateway courses in with TAs are receiving professional development (in many cases these descriptions were edited versions of those submitted by our faculty partners) and/or a list and description of discipline-based pedagogy courses that exist in that unit (and cover topics related to student learning outcome assessment).

Engineering

The College of Engineering had a total of 80 participants in the first year of the grant. Of those participants, 72 were graduate students and 8 were faculty. Participants came from all departments including mechanical, electrical, chemical, civil and agricultural engineering. The College of Engineering wanted to take advantage of the momentum of the PFF-ASL Initiative to reform its training of its teaching assistants in the engineering gateway course (ENG 100, Introduction to Engineering Design). Engineering graduate students are also active participants in our Certification in College Teaching Program. To fulfill the requirements of that program, students must take ENG 811 (Foundations of Engineering Education). This course covers a variety of pedagogical topics including student learning outcomes assessment. The Appendix [9] contains a breakdown of participants by department, a description of the reforms our colleagues made to their TA preparation program, and a description of the discipline-based pedagogy course offered by the College.

Natural Science

The College of Natural Science is one of the largest colleges on campus. The College also has one of the largest number of postdoctoral fellows at the University. Due to the size of the College, we report on this college’s participation in by department, with specific details appearing in the Appendix.

Chemistry

Many departments of Chemistry across the country, including MSU, are experiencing curricular and related cultural change. The department at MSU has three very engaged faculty and academic staff who are trying to set the stage for changes in the General Chemistry lectures and labs. “Reformed” sections of Introductory Chemistry courses are in progress this semester with the goal of comparing learning outcomes to “unreformed” sections. A description of the robust reform activity happening in Chemistry can be found in the Appendix [10].
Mathematics & Mathematics Education

Similar to departments of chemistry, many departments of mathematics, including MSU, are experiencing curricular and related cultural change. Eleven faculty from the Departments of Mathematics and from Mathematics Education participated in this initiative to date. As of November today, we do not yet have specific numbers to include in the reporting template, although Math staff is gathering these data for us. These numbers will be reflected in the next report. Since the Initiative began, Drs. Vince Melfi and Pavel Sikorski and their colleagues have focused on developing individual TA's understanding of assessment. Their approach has included providing TAs with literature about different forms of assessment and discussing alternative assessment approaches (with discussions including new TAs, experienced TAs, postdocs, and experienced faculty members). They established an optional (but well-attended) weekly workshop focused on creation of effective lesson plans and assessments, in addition to the main bi-weekly mentoring meetings. Literature on assessment was distributed among the TAs in most introductory math courses (MTH 124, MTH 103, MTH 116). All of these courses have regular course meetings focused on assessments and lesson plans. They recognize that there isn't a "one size fits all" approach to assessment and are focused on providing individual instructors with a variety of tools and methods. This fall, sixteen (16) graduate student TAs of MTH 132 (Calculus I) are meeting every other week and are receiving intensive mentoring on student learning outcomes assessment.

Biological Sciences

Almost one-fifth of the participants in YR1 workshops and activities came from one of 21 biological sciences departments at MSU (122 - 93 graduate students, 15 postdocs, 14 faculty). Appendix [11] contains a breakdown of participants by department and/or program. While no specific gateway course was targeted in YR1 of the grant, a discipline-based pedagogy course, PLB 802 (Pathways to Scientific Teaching in Biology) is taught every year by PFF-ASL initiative partner Dr. Diane Ebert May. This course is intended for graduate and post-doctoral students who would like to learn more about instructional materials development and want to learn how to build and implement their own instructional materials (i.e. teachable units) for introductory biology courses at MSU. This course helps students integrate into the research laboratory model pathways and processes for understanding teaching and strategies for improving students' understanding of science. Students focused initially on the fundamental scientific concepts underpinning their research and were asked to justify why this science is important for undergraduates to learn. A syllabus for this course can be found at the end of the Appendix [11]. In Fall 2013, the course had 36 graduate student and postdocs enrolled. Many of the bioscience departmental TAs participated in Intro Biology and Integrative Studies courses that are focusing on assessment. We plan to engage some faculty in PFF ASL this coming year.

Other Departments & Interdisciplinary Sciences

An additional 64 participants came from other departments in the College of Natural Science and/or interdisciplinary science programs (49 graduate students, 5 postdocs, 10 faculty). Appendix [12] contains a breakdown of participants by department. All undergraduates at MSU are required to take a set of large interdisciplinary general science courses to satisfy the general education requirements of the institution. The Center for the Integrative Studies in General Science (CISGS) administers this program, and several thousand undergraduate students enroll each year. For the first time in August 2013, CISGS revamped its TA training to include a cross-course component for all TAs teaching general science courses to non-majors. In this four-hour training, graduate students discussed the nature of teaching and learning of science for non-majors, and learned about alignment of student learning goals, assessments and pedagogical activity. The agenda from this training can be found in the Appendix [12]. In addition to the discipline-based pedagogy courses in mathematics and biology (mentioned above), two additional courses exist in the College of Natural Science, providing additional opportunities for graduate students and postdocs to learn more about student learning outcomes assessment and fulfill the requirements, if desired, for the Certification in College Teaching. The course descriptions can be found in the Appendix [12].

Social Science

The College of Social Science, like the College of Natural Science, is a very large College at MSU. In total, 112 participants in the PFF-ASL initiative came from departments in this college (98 graduate students & 13 faculty 1 postdoc). A breakdown of participants by department is in the Appendix [13]. The Departments of Political Science, Economics and Psychology are playing a leadership role in preparing their graduate students for undergraduate student learning assessment.

Political Science

In the Department of Political Science, one of our project's faculty leaders, Dr. Ryan Black, has deepened the knowledge of student learning assessment among TAs in PLS 200 (Introduction to Political Science) this Fall. The department also holds a one-of-a-kind (at MSU) four-day-long teaching workshop for all of its first year graduate students in August of each year. Finally, the department offers a discipline-based pedagogy course to those students interested in refining their theoretical and practical skills in postsecondary teaching. The Department of Political Science's efforts are detailed in the Appendix [14].
An impressive number of faculty and graduate students (26, 22 graduate students and four faculty members) from the Department of Economics have participated in the PFF-ASL Initiative to-date. All undergraduates at MSU are required to take a set of large interdisciplinary social science courses to satisfy the general education requirements of the institution. A similar integrated studies center (to the aforementioned center in natural science) provides administrative support for courses attended by hundreds of undergraduate students each year. Two economics professors, Drs. Fischer & Lindholm, are teaching one of these large gateway courses entitled, The Social Science of Sports. The details of this work can be found in the Appendix [15].

Undergraduate Residential Colleges – James Madison (Social Science) and RCAH (Humanities)

Both James Madison College (URL) and the Residential College for Arts and Humanities (RCAH) have fellowship programs, enabling graduate students from a variety of departments, to immerse themselves in student learning assessment and scholarship of teaching and learning activity for one academic year. In many cases, graduate students can refine their skills in the undergraduate classrooms in both of these residential colleges. Both fellowship programs are supported by The Graduate School at MSU and are high engagement activities for PFF ASL. A description of each program is in the Appendix [16].

Future Academic Scholars in Training (FAST Fellows) – An NSF CIRTL (www.cirtl.net) Program

Another year-long teaching fellowship program offered to graduate students in STEM and social science fields at MSU is FAST – Future Academic Scholars in Training. Fellows come from the Colleges of Natural Science, Social Science, Engineering, and Agriculture and Natural Resources. The primary goals of the FAST Fellowship Program are to provide opportunities for a diverse group of graduate students to have mentored teaching experiences and to gain familiarity with materials on teaching and student learning assessment techniques. A description of this fellowship program can also be found in the Appendix [17], including a copy of the 2013-2014 syllabus.

College of Arts and Letters

Graduate students from the College of Arts and Letters were active in YR1 of the Initiative. Most notably, a Community of Practice on writing (~ 20 students) was formed during the 2013 Spring Assessment Institute. Both during and after the institute, the group met to help graduate students in the College (plus the Department of History, which is in the College of Social Science at MSU) to become familiar with and apply the MSU Undergraduate Institutional Learning Goals in their course planning. Graduate students in the College were immersed in student learning outcomes assessment in two additional contexts – both as Teaching Assistants in First-Year Writing and as a part of the College’s High Impact Teaching Fellows Program. Additional details about the assessment experience graduate students gained in these settings are in the Appendix [18]. Two faculty in the college experimented this past summer with a MOOC for assessment of writing.

General Education Across Social Sciences, Humanities and Natural Sciences

In addition to Centers for Integrative Studies in General Science (CISGS) and Social Science (CISSS), a Center for the Integrative Studies in Arts and Humanities exists at MSU. The three centers are currently working together to assess undergraduate student learning expectations and perceptions of general education through use of validated Likert-type instruments, and learning outcomes through embedded course assessments. Further details about this work can be found in the Appendix [19]. A comprehensive website on Learning Goals and Assessment Rubrics will be launched by the Undergrad Dean in January.

IMPLEMENTATION

General Undergraduate Assessment Approaches Identified

In both the 2013 Spring Assessment Institute and 2013 TA Seminar, the graduate students were exposed to a variety of assessment tools, and techniques they can use to build an assessment-friendly environment – a learner-centered environment. A description of these tools can be found in the Appendix [20] and include:

- Creating the Foundation for a Culture of Assessment in the First Day of Class – Active Strategies to Maximize Learning.
- Backward Design
- Writing of Measurable Learning Objectives – “Termites” (yes, the “creepy crawlies”!) Exercise
- Modeling and Argumentation
- Alignment of Course, Program and Institutional Learning Goals
Assessment Skills and Methods – STEM & Economics

A few assessment skills and methods that are more broadly applicable were introduced using examples of application in STEM courses in both the Spring Assessment Institute and the TA Seminar. A description of these tools can be found in the Appendix [21] and include:

• Backward Design in Cell Biology
• Alignment of Institutional, Programmatic and Course Goals – An Example from a Physical Science Course
• Termites Exercise
• The “Radish” Problem – Identifying Student Misconceptions. It is in the presentation that introduced this assessment tool that Bloom’s Taxonomy – and the different levels (low-high) of learning were discussed.

Assessment Skills and Methods – Social Sciences and Humanities

A few assessment skills and methods that are more broadly applicable were introduced using examples of application in Humanities and Social Science courses in both the Spring Assessment Institute and the TA Seminar. We look forward to gathering more examples from our Social Science and Humanities colleagues in 2014. A description of these tools can be found in the Appendix [22] and include:

• Eli Review  (ELI is a technology tool developed at MSU http://www.elireview.com/ Part of the Writing in Digital Environments initiative).
• Alignment of Course, Programmatic, and Institutional Goals – An Example – Writing Program
• Alignment of Course, Programmatic, and Institutional Goals – An Example, Integrative Humanities

REFLECTION

In many ways, the approach of the MSU PFF-ASL Initiative is to convene an Assessment of Student Learning “Commons” on our campus. The resources of the grant from the Council of Graduate Schools, the Teagle and Sloan Foundations are allowing us to not only develop new resources and programs, but to identify undergraduate assessment models already being implemented in courses and disseminate those models more broadly to our graduate students, postdocs and faculty. It is in this section where we were asked to address what successes and/or challenges we have encountered in implementing this project.

Successes

We have tapped into a deep interest among graduate students, postdocs and faculty on this campus. The number of participants that officially engaged in direct delivery and/or consumption of student learning assessment conversations exceeded 600 people. Much of this commitment and interest stems in part from the fiscal and intellectual support provided by eight college deans and their faculties to support graduate students and postdocs in their engagement with issues of undergraduate learning assessment. Each of the new activities we supported produced PRODUCTS – video recordings, on-line resources, print resources – that will be able to be used well past the lifetime of the grant.

Challenges

In YR1 of this project, we negotiated the breadth/depth divide. How could we both engage the most people in our communities of practice while providing support to already-engaged participants to reach the next level of proficiency in the development of assessments aligned with their course goals and activities? The Assessment of Student Learning Colloquium held in October 2013 (and described in detail in the Appendix [5]) was an attempt to deepen the interest and provide challenge to those participants already engaged in this work. We experienced a logistical challenge of engaging TAs currently teaching or about to teach gateway courses. TAs are assigned by semester, to different classes (thus having less of an opportunity to alter syllabi and goals over time). TAs are often not assigned to a course until days before the semester – this makes it challenging to communicate with them ahead of time and get them interested in the Initiative. However, many MSU graduate students and postdocs who are NOT TAs (in gateway courses) are interested and generate excitement and improve diversity within communities of practice.

PRODUCTS

As was reported above, one of the strengths of our Initiative is the vast array of products we have produced that faculty, postdocs and students will be able to use to learn more about, and implement, student learning assessments in their classrooms. In the parts of the Appendix where additional documentation about and resources from different activities were shared (Appendix [3]-[24]), we attached many links to PPTs used at these events – many of which contained models of assessment tools and models that may be used by instructors in any discipline.
Our primary products include electronic resources and print resources. Each of these have been disseminated at both on-campus and off campus venues (including the annual meeting of the Professional and Organizational Development Network, Pittsburgh, PA on November 7-9, 2013). A comprehensive listing of our products can be found in the Appendix [23].

**NEXT STEPS**

We have ambitious goals for YR2 of the PFF-ASL Initiative at Michigan State University.

In the next year we will:

- Use the graduate-student-generated ideas from the October 2013 Assessment of Student Learning Colloquium to plan programs, disseminate resources, and provide support for independent graduate student projects.

- Disseminate the products already developed more broadly in the form of a more robust resource center to support the Assessment of Student Learning Commons at Michigan State. It is a high priority to ensure these resources are available in an open-access format (thus being accessible to all CGS PFF-ASL grantees).

- Use our evaluator to help us “drill down” — get more details about the tools and methods be used in gateway course teaching assistant training.

- Bring nationally recognized thought-leaders in student learning assessment to campus to draw new participants to our initiative and excite current participants. The following events have been confirmed:
  
  o How Students Learn: A Cognitive Science Perspective
    - In 2013 we had a panel of on-campus experts in learning theory come talk, from the perspective of their discipline, about the best classroom practices and optimal delivery of college-level instruction.
    - In April 2014, (as part of the 20th birthday of the current Graduate School) we are looking forward to hosting a national panel of cognitive scientists to continue this robust scholarly conversation. The following scholars are confirmed:
      - Lindsey Richland [http://humdev.uchicago.edu/directory/lindsey-richland](http://humdev.uchicago.edu/directory/lindsey-richland)
      - Dedre Gentner [http://groups.psych.northwestern.edu/gentner/](http://groups.psych.northwestern.edu/gentner/)
      - John Dunlosky [http://www.kent.edu/cas/psychology/people/~jdunlosk/](http://www.kent.edu/cas/psychology/people/~jdunlosk/)
      - Roddy Roediger [http://psychweb.wustl.edu/roediger](http://psychweb.wustl.edu/roediger)
  
  o Assessment 101 (Jan/Feb 2014)
    Amy Driscoll, author of “Outcomes-based Assessment for Learner-Centered Education” will host a workshop.

  o The Learning Portfolio (Jan/Feb 2014)
    John Zubizarreta, Professor, Columbia College, South Carolina will host a workshop.

- Build and identify new campus leaders
  - In Spring 2014, Dr. Brian Winn is interested in running a Brown Bag seminar that will focus on serious game design and its application to assessment of learning. Games can capitalize on intrinsic motivation because they challenge learners to process information and apply it to a context that is both educational and entertaining.

- Forge new partnerships. We look forward to engaging our union of fixed-term faculty (UNTF) to both contribute to the resource base we are developing and to partake in the communities of practice we have cultivated.