

Project Status Report

MARCH 2020

PROJECT YEAR ONE, Q3

This report covers Q3, during which we created early drafts of Module One, building a cast of characters and story arc to convey the skills and content of the module. We are preparing to share the results for comment with the Core Committee. We completed hiring core members of our project team, conducted a number of meetings with key stakeholders and subject matter experts, secured the equipment needed for media production, polished our production budget, aligned literature reviews and qualitative data collection for research lab contexts, and continued to move forward on determining a brand-specific design for media and project materials. In early March, we cancelled scheduled travel and moved all staff to remote work, developing new timelines and workflow to accommodate changed circumstances.

Progress Overview

Tasks advanced or completed this period include:

- Content development for Module One; cast of characters, narrative scenarios, and curriculum
- Administrative/project management: alignment of the roles and responsibilities of team members
- HHMI relationship building:
 - Site visits to HHMI HQ and Janelia Research Center
 - Meeting with HHMI Medical Advisory Board
 - Structured interviews with HHMI researchers and investigators
 - Meetings with Science Officer Managers
 - Ongoing interviews with Gilliam Fellows
- Work initiated with consultants; continuing interactions with collaborators at Carl R. Woese Institute for Genomic Biology (IGB)
- Ongoing research and data collection, including:
 - Literature reviews to align data collection and instructional evaluation
 - Final focus group performed with lab members at partner IGB
 - Formation of Core Project Team for content review and shaping

Rounding Out Core Team

- Executive Producer of Media, Michael Dunne, started work mid-January 2020
- Graphic Designer, Julie McMahon, brought on in March 2020 - final paperwork in process
- Keylight Consulting LLC (casting and actors), brought on in March 2020 - final paperwork in process

Collaborating Partners and Consultants

- iREDS: Collaborating with Dena Plemmons of University of California, Riverside to develop data management exercise pilot sessions with two lab groups at IGB. Pilot exercise was originally scheduled for March 23. We will pilot turning these into remote/ virtual interactions in early April 2020 as a way to explore options and learn.
- Retraction Watch: Case study examples on data mismanagement and authorship from the Center for Scientific Integrity/Retraction Watch provided and work in progress for integration with iREDS exercises.

LABS THAT WORK FOR EVERYONE

An Intentional Leadership Curriculum Tailored for Researchers at HHMI and Beyond

- Project information and early drafts of Module One cast of characters and scenarios shared for review and input. Adapted cast of characters, lab collaboration projects, and story arc in response to comments, and now finalizing discussion draft of these elements for Core Committee review and discussion, when activated.
- Cross-enrichment with AGU sexual harassment project explored and advanced. Initial meeting with Erin Jones, Billy Williams (January 2020); project outline in development.

Media and eLearning Developments: Pre-Production

- Production equipment identified and purchased. Delivered March 2020. Test shoots with all equipment underway.
- Scouted potential filming locations on Illinois campus, with an emphasis on finding interesting laboratory space. IGB previewed their lab environments for us and agreed to allow us access based on availability. An NCPRE collaborator on another project offered and we scouted labs for filming at the Illinois State Water Survey; there are lab spaces there available for filming to show labs beyond IGB.
- Discussions with Tangled Bank Studios and HHMI HQ Communications team seeking assist with local media productions and to collaborate further in providing supplemental visual content.
- Thinkific LMS platform confirmed as testbed for development of LTW online program.
- Key Light Consulting LLC, in process of creating database of actors and crew for media productions.
- New graphic design direction identified; transition under way and work in progress
- Revisions to LTW website with further enhancements pending

Internal Reflection, Learning, Adjustment

- Successes
 - Achieved full staffing with interdisciplinary and diverse expertise
 - Orienting and educating non-scientist team members about research lab environments
 - On track with budget
 - Developing a shared mental model, vision for Module One among the team and with collaborators
 - Refining use of technology and tools for communicating in current environment
 - Integrating outside collaborators into module development
- Challenges
 - Cancelled trips, postponed interview and filming opportunities; delays in information-gathering and relationship-building and activation of Core Committee
 - Coordinating work environments and approaches; managing different perspectives
 - Calibrating feedback from a diverse range of collaborators and contributors
 - Navigating ongoing limitations in production due to stay-in-place requirements
- Planned adjustments
 - Ongoing development of more detailed team work flow processes and role documentation, in light of virtual work
 - Instituted online daily office hours for check-ins; daily online 'tea break' for social connection, support
 - Targeted prototypes and piloting
 - Further integration of content and online LMS tools - prototyping options
 - More piloting of remote delivery of in-person elements of curriculum

RESEARCH AND DATA COLLECTION

We continued developing a foundation for instructional development through structured interviews, focus groups, literature reviews, and archival data collection to shape content rooted in realistic laboratory situations and HHMI values. All data collections is conducted under an approved University of Illinois IRB protocol.

Qualitative Research - Focus Groups and Interviews

- On-Site structured interviews with Investigators, Group Leaders, staff and Senior Leadership at HHMI headquarters and Janelia Research campus (January 8-10, 2020) (itinerary attached)
- On-site focus groups (4) with lab members at Janelia Research Campus (January 9-10, 2020)
- Telephone interview, Gilliam Fellow (January 13)
- Final focus group with members of Katy Heath's lab at Woese Institute for Genomic Biology (January 21, 2020)
- Gilliam Fellows (Boston, January 23, 2020)
- Science Officers Managers M (2 in Boston; group meeting via Zoom, January 23, 2020)
- Medical Advisory Board Meeting (C.K. Gunsalus, January 27, 2020)
- Janelia Research Campus follow up conversations with Luke Lavis and Vivek Jayaraman (February 2020)
- Introductory online meeting between Erin Jones, C.K. Gunsalus and Ron Vale (February 28, 2020)

Additional Data Collection

- Archival approaches: initiated collection of lab manual examples
- iREDS collaboration: creating lab culture communication including ethical discourse (Dena K. Plemmons, Erica N. Baranski, Kyle Harp, David D. Lo, Courtney K. Soderberg, Timothy M. Errington, Brian A. Nosek, Kevin M. Esterling. Proceedings of the National Academy of Sciences Jan 2020, 117 (3) 1389-1394; DOI: 10.1073/pnas.1917848117)
- The Center for Scientific Integrity (CSI) collaboration to identify scenarios of relevant research environment challenges: 13 cases from Retraction Watch data base identified and summarized this period
- Discussions with HHMI Education leaders (Sonia Zarate, David Asai) on leadership program content developed for Gilliam Fellows
- Reviewed resources, attended external meetings, lectures, seminars (*See complete list below*)

CURRICULUM DEVELOPMENT

The Module One theme (Culture of Excellence), Cast of Characters, and the overall story arc were further developed and refined in this period. The next step will be review, feedback, and discussion with the Core Committee.

General Curriculum Development

- Cast of Characters, designed with some characters who could carry over to Module Two
- Preliminary scenario list, pilot reviews, in preparation for Core Committee interactions
- iReds adaptation for Module One in progress; pilot discussion on data management with collaborating laboratory postponed due to pandemic

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- Retraction Watch identification of base case studies for interactive exercises; development of approach for interrelating
- Aligning story arc to support skills introduction and practice, expert interviews, exercises
- Developed potential synergistic approach for AGU/Sloan Project (sexual harassment focus) with Labs That Work

Module One Development

- Cast of characters shared with consultants and IGB pilot PI; preparing for core committee review
 - Created dedicated Trello board for visual display of interactions between scenes and module skills, content
 - Created draft slide deck to convey interaction of cast of characters, scene list with module content; shared with collaborators for feedback and refinement
- Preliminary scenes shared with collaborators in March/April 2020 with ongoing development and adaptation of both scientific and dramatic elements

Module Two Development

- Possible topic exploration: “Starting Your Own Lab”
- Characters from Module One carry-over: senior grad student in Module One becomes an assistant professor (after postdoc period)
- Possible synergy with Making the Right Moves revision (TBD)
- Early assembly of resources and possible scenes, including imaging what might be useful for flashbacks in Module Two so can be filmed with Module One scenes

NEXT PERIOD GOALS

1. Continue Module One Development
2. Complete website
3. Finalize LMS Platform decision
4. Establish evaluation strategy

ONGOING/NEXT STEPS

YEAR ONE MAJOR PROJECT GOALS

Research and Data Collection

- iReds data management adaptation piloted with IGB lab members; further development
- Retraction Watch exercises - selecting case studies and piloting integration with iReds protocol, adapting interactive activities
- Further site visits and structured HHMI interviews scheduled (TBD)

Literature Reviews

- Instructional evaluation aligned with project objectives
- Instructional motivation and engagement including technology/user interface engagement
- Lab manuals to inform participant portfolios and instructional design

Curriculum Development

- Initial review of cast of characters, story arc and discussion with Core Committee; adaptation
- Further testing of potential platform (Thinkific)
- Populate a draft Module with content in Thinkific and pilot with selected individuals
- Module One development: full scripts, casting, table reads
- Film Module One segments if possible; pilot
- Seek reactions to scenarios and exercises in additional focus groups/interviews
- IGB pilots as well as select Janelia groups and/or close-by HHMI Investigator laboratories

Pilot Testing and Formative Evaluation

- Initial review by Core Committee, then select Janelia participants
- In process of conducting formal Training Needs Analysis tracking to inform content, design, delivery, and training evaluation selection
- Continue focus groups and site visits to establish relationships, evaluation objectives
- Meeting with third party evaluator: Dr. Rodney Hopkins, University of Illinois College of Education
- Incorporate feedback into Module One development

Ongoing

- Website and branding to advance and stabilize
- Refinements to work plans, processes as required to maintain physical distancing

RELATED INFORMATION

Program and Resource Reviews

To assure that we are identifying and leveraging existing resources, we have been systematically reviewing similar or related resources, programs, and offerings.

Following our January 2020 visit to HHMI headquarters, the Learning and Development team shared HHMI Leadership and Development materials and offerings that with us. We reviewed:

- Workplace Harassment Prevention Training for Employees & Managers (online)
- [Making the Right Moves](#): A practical guide to scientific management for postdocs and new faculty
- iLEAD workbook and 5 session program learning approaches and objectives
- [Fierce Conversations](#) book, workbook, and workshop materials
- Additional L & D program reference books
 - [Emotional Intelligence 2.0](#)
 - [Navigating Polarities](#)
 - [The Five Dysfunctions of a Team](#)

Each of the following programs have been initially reviewed. We are continuing to assess and explore some for additional potential value additions or collaboration opportunities.

- EMBO Laboratory Management Courses (complete review summary available)
- NIH - Office of Intramural Training and Education
- UCSF Kavli Center and UCSF Office of Career and Professional Development
- Dreenan Research and Education Laboratory - a collection of resources from work with MIT and HHMI
- Center for the Study of Ethics in the Professions - Illinois Institute of Technology
- University of Michigan's Intergroup Relations Program
- Nature - Masterclasses in scientific research, collaboration, writing and publishing
- CIMER - Center for the Improvement of Mentored Experiences in Research a program offered by the University of Wisconsin
- University of Wisconsin Center for Education Research - CIRTL Network, LEAD Center, WISELI, Geoscience Diversity Training
- The National Center for Faculty Development & Diversity
- National Academies - Graduate STEM Education
- National Academies - Re-Envisioning Promotion and Advancement
- National Academies - The Science of Effective Mentoring in Science, Technology, Engineering, Medicine, and Mathematics (STEMM)
- National Academies - The Next Generation of Biomedical and Behavioral Science Researchers
- University of Washington - Picking a Lab website offerings
- University of Nebraska - Research compliance related videos

In pairs and groups, team members reviewed and/or read a range of books, for background information, insights, and to consider as possible resources for those seeking further review after Module elements.

- [Radical Candor](#) (Scott)
- [Thanks for the Feedback](#) (Stone, Heen)
- [The Coaching Habit](#) (Stanier)
- [Designing Your Life](#) (Burnett & Evans)
- [Rituals for Work](#) (Ozenc and Hagan)
- [An Inclusive Academy](#) (Stewart, Valian)

External Events, Meetings, Lectures, Seminars

- “Practicing Interdisciplinary Teamwork”, IGB Science of Team Science Seminar, Jonathan Kramer, PhD, Director for Interdisciplinary Science, National Socio-Environmental Synthesis Center (SESYNC), University of Maryland, Carl R. Woese Institute for Genomic Biology, February 18, 2020
- “Leading an Inclusive, Productive Lab”, Facilitated by Kate Clancy and Ripan Malhi, Inclusive Lab Leaders Session, The Beckman Institute, February 18, 2020
- “Teamwork, Communication, and Research Integrity”, Beckman Institute for Advanced Science and Technology, Responsible Conduct of Research seminar, Patty Jones, Beckman’s Associate Director for Research. Beckman Institute for Advanced Science and Technology, February 18, 2020
- Racial Justice Allies 2.0 Training, Asian American Cultural Center, Office of Inclusion and Intercultural Relations, February 21, 2020
- Infusion 2020 Series, which includes:
 - Implicit Bias Workshop, Engineering Council & Women’s Resources Center, Grainger College of Engineering, Everitt Laboratory, February 24, 2020
 - Diversity in the Workplace, Engineering Council, Grainger College of Engineering, Material Science and Engineering Building, February 25, 2020
 - Lean-In Discussion, Engineering Council, Grainger College of Engineering, Everitt Laboratory, February 26, 2020
 - Dr. Esther Ngumbi, Engineering Council, Grainger College of Engineering, Material Science and Engineering Building, February 27, 2020
- StrengthsFinder: My Strengths Grow with your Help, Illinois Leadership Center and Bruce D. Nesbitt African American Cultural Center, Office of Inclusion & Intercultural Affairs, March 5, 2020.
- “Transforming Conflict into Collaboration,” Facilitated by Mikhail Lyubansky, Inclusive Lab Leaders Session, The Beckman Institute, March 6, 2020