Office of Scholarship and Innovation & PI Team

2019 Report

"Big picture tree" created by the OofSI/PI team at annual retreat representing our shared values, norms and anticipated outcomes

http://education.asu.edu/oofsi/

Arizona State University

Mary Lou Fulton Teachers College

Introduction

As *Associate Dean of Scholarship and Innovation*, I can map the past 3.5 years I have been at ASU as falling in four distinct phases.

August – December 2016: As I started in my new role these months were exploratory as I got to know the organization and the people. Having a new dean with lots of ideas about changing the direction of the college and its role both within and outside the university added to the excitement.

January – December 2017: This was a year of transition focused on identifying and expanding the portfolio of work of the *Office of Scholarship and Innovation* (OofSI). While continuing the work of supporting faculty scholarship, OofSI would lead the college's community design and technology initiatives.

January 2018 – July 2019: These 18 months were focused on consolidation and growth, with key new hires, rethinking existing positions, and developing projects, with the OofSI team providing leadership at multiple levels, within and outside of the college. Of particular significance was the opening of the SPARK school in Kyrene, setting up of the IgnitED labs, expansion of internal grants programs and initial forays into *Learning Futures*.

August 2019 – December 2019: The biggest recent shift to happen in 2019 for OofSI was the development of the *learning futures* initiative and launching a collaboration with the *PI team*. A lot has happened in the past 5 months, including some expected (and unexpected) staff turn-over. Of particular importance going forward is developing this relationship between the two teams in productive ways—to designing products, experiences, and services as well as connecting to the workforce and teacher education redesign initiatives.

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The Team (OofSI & PI)

This report includes five sections; the first three describe the work done by key OofSI initiatives: *design, scholarship* (including *scholarly publications*) and *technology*. This is followed by a section on *PI*, and finally a section on the intersection of *learning futures and PI*. Each section starts with an infographic that captures, in broad terms, the achievements of each team followed by a deeper textual description. Finally, I provide some information on my scholarly work over the past year.

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2019 DESIGN INITIATIVES

In 2019...

✓ We lit the **SPARK**.
✓ We rolled the dice and climbed the (Carnegie) **Summit**.
✓ We moved mountains in Miami.
✓ We **catalyzed** change in MLFTC.
✓ We began to lead for the **futures of learning**.
✏ ...and we're bringing a principled **vision for leadership** to 2020!

By the numbers:

34 Sessions planned & led

610 Humans reached

4 K-12 partners
5 MLFTC & ASU collaborations

DESIGN PARTNERSHIPS
KYRENE | MIAMI | CORONADO
AZSOC NETWORK

STRATEGIC FACILITATION
UCSD | CFA | CHS | AVONDALE
MLFTC MATH REDESIGN

GIFTS / GRANTS
HERBERGER STUDIOS SOLICITATION
NSF STEM FUTURES

CONFERENCES
CARNEGIE SUMMIT
OSU INNOVATE
OLC INNOVATE | AZ ED

PI-INTEGRATION
STAFF CATALYSTS
KFF VISIT | INNOVATION DAY
LEARNING FUTURES
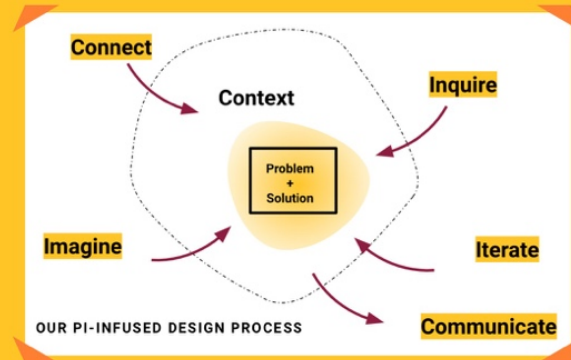
Say hello!
CASSANDRA | KYLE

Wave goodbye!
JENNIFER | CLAIRE | LISA | CHRISTINA | EMILI | JAKE

PRINCIPLED INNOVATION BY DESIGN: OUR GUIDING PRINCIPLES

- We value individuals and account for the uniqueness of social and educational contexts.
- We collaboratively care for and are considerate of the well-being of individuals, communities, and society.
- We create positive change by designing creative solutions to pressing educational problems.

Connect

Context

Inquire

Problem + Solution

Imagine

Iterate

Communicate

OUR PI-INFUSED DESIGN PROCESS

Design Initiatives

In 2019, the *Design Initiatives* team went through another year of tremendous growth and change, with an overhaul of our Design Strategists and a change in the team leadership. Our fearless leader, Jennifer Stein, moved over into the role of *Director for Learning Futures Strategy*, with Ben Scragg waltzing in Jennifer's large shoes! Building off the significant contributions of Lisa Wyatt and Christina Ngo, the team transitioned OofSI coordinator Cassandra Kellaris into a Design Strategist role in September, along with the addition of Kyle Wagner in November. The team also saw media strategist Claire Gilbert move over to the Technology Initiatives team within the office, while doctoral student Melissa Warr proved an invaluable addition as a Design Fellow. Whew!

Over the course of the year, the team continued its strong record of service to schools and education service organizations, including with several other ASU and external higher ed partners.

School Partnerships
- *Kyrene*: The SPARK program launched its inaugural prototype year in August! Seeking to reimagine the standard classroom structure by combining innovative practices in learning environments, methods, and staffing, the program is housed on the campus of *Kyrene de las Manitas*. The learning space is open and dynamic, equipped with furniture designed for flexibility and collaboration. This new model is the culmination of two years of effort that involved more than 100 Kyrene stakeholders participating in a design process facilitated by us.
  - Jeanne Powers also joined the team as a Faculty Fellow in the Spring of 2019 to lead research work on SPARK, which is ongoing.
- *Coronado High School*: During the 2018-2019 school year, the Design Initiatives team led Coronado's Teacher Instructional Leaders (TILs) through iterative design cycles on problems of practice identified through a design process. From a prominent 25th anniversary celebration of *Bill and Ted's Excellent Adventure* (filmed at Coronado High School) to the launch of game clubs and acapella clubs that garnered more than 100 students, the TILs projects demonstrated the power of asking the right questions and working iteratively to impact learners and the surrounding community in positive ways.
- *Miami Junior Senior High School*: We continued working with junior high teachers to support their interdisciplinary curriculum redesign.
- *Avondale*: Over the summer and fall, the Design team continued to support Avondale's identify work and its strategic planning.

MLFTC-based work
- Supported facilitation and planning for *Educator Workforce Initiatives* May 2019 convening
- *PI Catalyst*: Cohort 1 in Autumn 2019
- TEL 101: trained peer leaders who taught the course using *Designing Your Life*
- Facilitated curriculum design sessions for MLFTC math faculty
- Teacher prep redesign contribution
- *Character initiatives*: Participating in Steering Committee planning and facilitation; worked to align design process with character framework
- *Herberger Studios for Learning Futures*: Developed concept and products/services that have been adopted as strategic initiatives for ongoing Learning Futures/PI work.

Learning Futures work
- Currently planning June 2020 *Summer Leadership Institute convening*
- Currently planning February 2020 drive-in leadership convening
- Design studio kit (currently under development)

Paid consulting
- UC San Diego
  - Social Mobility and First Gen Student Conference (February 2019)
- Center for the Future of Arizona
  - 2019 Staff Retreat (August 2019)
  - 2019 Arizona We Want Progress Meters Strategic Retreat (November 2019)

Conference presentations and invited symposia
- Design Thinking in Education symposium (Center for Secondary School Redesign & UC San Diego Design School)
- 2019 OSU Innovate (The Ohio State University)
- 2019 Leading Change Conference (Arizona Department of Education)
- 2019 Carnegie Foundation Summit (Carnegie Foundation for the Advancement of Teaching)
- Kern Family Foundation partner summit
- Ben served as conference co-chair and campfire keynote for OLC Innovate

Grants received / facilitation / participation
- NSF STEM Equity in Makerspaces
  - Punya on steering committee, Ben participant
- NSF Future Substance of STEM Education (Punya is Co-PI): $100,000
  - Punya and Ben leading design/facilitation – to be held at ASU in Washington, DC, April 2020
- India GEI
  - Punya and Ben leading design/facilitation – to be held in India, May 2020
- Gates Foundation NSI grant (EOSS & Be a Leader)
  - Supported facilitation for initial convening
  - Currently exploring contracting scope of work for providing grant support

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SCHOLARLY INITIATIVES

2019

COORDINATED COLLABORATION

Faculty Support Website	Strategic, coordinated faculty support workshops and events
Updated Faculty Scholarship Profile Information	Interdisciplinary seed funding grant opportunities with HIDA
Doctoral Programs using data for decision making	Supported institutional nominations for faculty scholarly work
Inaugural doctoral student research mini-grants awarded	Strengthened internal grant budget reconciliations and communications

Scholarly Initiatives

In 2019, *Scholarly Initiatives* focused on strengthening and building collaborations within the college to provide more streamlined research and scholarship supports to faculty and doctoral students. A culminating product which highlights the collaborations, is the *Faculty Support* website, which was launched at the start of the Fall 2019 semester. This website contains resources from *Academic Systems, Research Opportunity Development and Advancement, Scholarly Initiatives* and holds places for business forms and information to be added. This website represents what we as individuals and teams have been working to do more seamlessly: present information and resources in one place, reducing the number of different people, offices and links that faculty need to remember in order to access information. The marketing team's design and support was essential in this website becoming a reality. Additionally, the individuals and teams mentioned above have been meeting on a more regular basis to keep one another informed of plans, to coordinate events and calendars, and to collaborate on plans when appropriate.

The internal grants program has continued to expand and support faculty scholarship; the varying options validate and recognize the breadth of research MLFTC faculty are engaged in, from projects that are likely to expand and develop into externally funded projects, to others in need of only a few hundred dollars of support which they can leverage into manuscripts and other scholarly products to support their professional career development. Most exciting in 2019 was 1) expanding the mini-research grants to support doctoral student research, and 2) a successful education research mixer and seed funding competition with the *Herberger Institute for Design and the Arts* (HIDA).

Scholarly Initiatives partnered with the *Teachers College Doctoral Council* (TCDC) annual *Education Research Conference* in 2019 to have the prior years' faculty internal grant recipients share their research in a public forum. In addition, the recipients of the doctoral student research mini-grants were announced at the conference, with two students receiving $400 grant awards out of the 17 proposals. Given the success of that partnership, we are scheduled to join TCDC for their conference in February 2020 for both the faculty poster session and a second year of doctoral student research grant support.

The education mixer event with HIDA included 30+ faculty who were intentionally invited from both HIDA and MLFTC given their research intersectionality combining some form of arts, design, and education. Both colleges contributed $20,000 for a seed grant competition to support up to 4 projects which had to include at least one faculty member from HIDA and MLFTC, and identify external funding opportunities to expand their projects after the year of seed funding. We received 7 proposals and 4 were selected via peer review; the projects will commence in 2020. Pending the apparent success of this partnership, MLFTC looks forward to collaborating with HIDA again, as well as other colleges at ASU to broaden the connections, collaboration and diversity of research our faculty are engaged in.

In addition 2019 was also a year for continued growth and opportunity to strengthen communication with the business and finance team in regard to the internal grant program budget. While we take pride in how we have been able to expand and diversify the funding opportunities while maintaining the same $95,000 budget, we realized that *Scholarly Initiatives* was operating in the academic year calendar while the business team operates in the fiscal year (FY) calendar. Through conversations and planning meetings, we have tightened our no-cost extension period and strengthened communication with faculty to ensure budgets are expended within reasonable time periods, and we have made plans for next year in regard to expending funds to newly awarded faculty so it aligns with the FY calendar.

Also new in 2019, Scholarly Initiatives provided support to the *Director of Doctoral Programs*, Mirka Koro. As the Director of Doctoral Programs is a new role for MLFTC, Clarin provided support by working with Mirka to create and administer a survey to doctoral students and faculty to gather their perspectives and thoughts on MLFTC doctoral programs. This data was used to guide conversations and planning at the first MLFTC *Doctoral Program Retreat* in Fall 2019, and will be used by each of the doctoral program committees as they make plans and decisions for the future of the programs.

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SCHOLARLY PUBS 2019

EDITING – PUBLISHING – PROMOTING

230 PUBLICATIONS

160 ARTICLES
64 BOOK REVIEWS
3 ACQUIRED WISDOM ESSAYS
8 SPECIAL ISSUES

COLLABORATORS 19,000+

18,300 SUBSCRIBERS
45 EDITORS
454 AUTHORS
3K FOLLOWERS

3 JOURNALS WITH GLOBAL REACH

EPAA TOP OA EDPOLICY PUB
22 COUNTRIES
3 LANGUAGES
FAIR OPEN ACCESS

ACCOMPLISHMENTS

1st Quartile QUALIS and SCIMAGO
WEB of SCIENCE ESCI
DOAJ SEAL
ABOUT THE JOURNALS @ MLFTC

TEAM = STEPHANIE + SARAH + JULIA

Scholarly Publications

This was a year of review, recognition, and renewal for the three MLFTC open access scholarly journals of education.

Education Policy Analysis Archives (EPAA) began 2019 with the responses of a Qualtrics customer satisfaction survey distributed in December 2018, with the goal of continuing to do what we do well and changing what we do not. The survey spurred, among other items:

- A significant expansion of the Associate Editor teams in English and Spanish to manage the growth in manuscripts in a timelier manner and to reduce the load of the current editors
- Replacing the Creative Commons (CC) copyright license with a more inclusive International Share Alike license to encourage the uninhibited sharing and translation of EPAA articles.

In 2019, EPAA published 160 articles, including 8 special issues, and remains the #1 open access journal in education policy. Publishing in three languages (English, Spanish, and Portuguese) with over 12,000 contributors from over 20 countries, this year, EPAA had several important recognitions. The journal moved to the 1st Quartile in the rankings of *SCIMAGO* and *Qualis*, was invited to join the *Web of Science Emerging Scholarship Citation Index* (ECSI), and is in the process of achieving the Seal from *Directory of Open Access Journals*, who monitors the quality and integrity of open access journals worldwide. Although working through some technical setbacks, EPAA is positioning itself to upgrade electronic publishing platforms so it can begin to publish in XML and gain further visibility.

Education Review published 64 book reviews and 3 *Acquired Wisdom* Essays by leading educational researchers. Also publishing in English, Spanish, and Portuguese, Education Review expanded its global reach by instituting a publishing partnership with ANPEd, the top educational research association in Brazil, to publish Portuguese language book reviews on timely topics. In 2019, the journal published 15 Portuguese language reviews in accordance with this partnership, and added to Brazilian Associate Editors to the team. The *Acquired Wisdom* Series, instituted in 2016, continues to recruit esteemed authors to contributed to the series, and three new Editors took the helm this year and began publishing the second volume.

Current Issues in Education (CIE) was still in hiatus during 2019; however, several activities occurred to restore the journal and set it up for success in 2020:

- The journal successfully upgraded ed to *Open Journals System* (OJS) 3, and received a facelift courtesy of Daniel Brasic and the *Technology Initiatives* team.
- The journal opened a Special Issue call for *Shaping the Futures of Learning in the Digital Age*, spearheaded by OofSI team leaders, Sean Leahy and Ben Scragg.
- New faculty advisors, Leigh Wolf and Josephine Marsh, came on board to help recruit new student editors (in process) and assist in reigniting the journal.
- A College-wide review-a-thon brought together faculty, students, and staff to successfully review almost 50 manuscripts, which will jumpstart several new issues for CIE in 2020.

Finally, a few significant items of note took place this calendar year. First, the sole team of one journal manager expanded to include three *Coverdell* fellows, beginning in the summer of 2019. The journals also have a static feature in the MLFTC news, *From our Journals*, which highlights the activities of the journal and significant articles and book reviews, many of which include the works by MLFTC scholars.

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⊟ TECHNOLOGY INITIATIVES

2019 ACCOMPLISHMENTS AND PROJECTS

IgnitED Labs
Mary Lou Fulton
ASU Teachers College
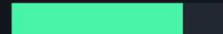Arizona State University

IgnitED Lab
Officially Opened Fall 2019 (16 weeks)

- 205+ individual student visits
- 12 Class Tours Fall 2019
- 36 Faculty Tours / visits
- 14 Hosted Events
- 163 Lab Survey Responses

Progress on Goals AY 2019/202

📅 09 December 2019

Professional Team

4
Director
Lead Technology Strategist
Multimedia Specialist
Web Developer

10
Educational Technology Champions
Lead - Business Intern
ETC Leads (each location)
ETCs

2
Additional Staff (2020)
Multimedia Specialist
Technology Strategist

3
Locations
Tempe
Poly
West

Faculty Support
By the numbers

11 Ed Tech Workshops

15 Digital Content Resources

46 Sections developed / digital citizen modules

90 Faculty 1-on-1 Trainings

Web Development
education.edu | ignited labs

Major Code Commits **19**

Content Pages **26**

Blog Posts **58**

</​/​> **1000+**
Lines of code

Multimedia Projects
Audio | Video | Online

800 ▷ **55**
Recorded Minutes   Published Minutes

72 Interviews Recorded

Social Media Posts **77**

34,500 🐦
Twitter Impressions

0 Equipment failures
Damage
Loss

New Dev Ventures
Other Development Highlights

- Launched ignitedlabs.education.asu.edu
- Redesigned iTeachELLs pages
- All College Calendar on education.asu.edu
- launched new theme on cie.asu.edu
- Faculty Newsletter on my.education.asu.edu

http://

Scholarship

14 ▷ **08**
Conference Proposals   Presentations

Course Redesign

EDT 180

350 Students in Fall MLFTC Cohort

750 Students Impacted by Digital Citizenship Modules

Other Highlights
- UAE STrEAM Mini Masters Program

💲 **2M**

Company Partnerships
- Microsoft Education Team
- Bamboo Learning
- Sphero

Technology Initiatives

The *Technology Initiatives Team* was engaged in yet another year of growth and development during 2019. One of the largest milestones of 2019 was the official launch of the *IgnitED Labs* across all three campus locations (Tempe, Poly, and West) at the beginning of the Fall semester. The *Technology Initiatives Team* has also greatly increased our services to the college through professional development, faculty support, website development, and multimedia production.

Professional Team
The *Technology Initiatives Team* consists of four core members and one intern; Dr. Sean M. Leahy (Director), Jodie Donner (Lead Technology Strategist), Daniel Brasic (Website Technician), Claire Gilbert (Multimedia Specialist), and Caitlin Jorgensen (Management Intern. Additionally we have nine student employees known as *Educational Technology Champions* (ETCs) that staff the *IgnitED Labs* on all three campus locations. In further collaboration with the *PI Team* we are planning to expand two additional full-time grant-funded staff positions: *Technology Strategist*, and another *Multimedia Specialist*. These new positions are in response to the increased project load of the joint *Learning Futures* development.

IgnitED Labs
With the launch of the *IgnitED Labs* in fall 2019 we have (to date of publication) reached more than 80% of our first-year goals for the lab. Some additional achievements of the *IgnitED Labs* are as follows:
- Over 205 individual student visits
- 12 Class tours (Fall 2019)
- 36 faculty tour-visits
- 14 hosted events
- Over 160+ lab use surveys collected

Faculty Support
Over the past year the *Technology Initiatives Team* has increased our support to faculty through pedagogical support, workshops, and professional development.
- 11 Educational technology workshops
- 15 Digital content resources developed
- 46 Sections of digital citizen modules created
- 90 Faculty 1-on-1 trainings

Scholarship
In addition to the ongoing work in the IgnitED Labs and the faculty support our team also undertook the complete redesign of *EDT 180* course. The curriculum for this course was designed to be tool-agnostic and focus on the interaction between technology and learning. A few key highlights in this area was the showcase of students demonstrating PI through a live podcast recording during the *Innovation Day* events in which our team demonstrated the power of the new EDT 180 curriculum, the *IgnitED Labs*, and the use of the *PI* framework. Another highlight was showcasing these achievements through the *Educators Rising Conference* held on Campus in October. Other key indicators from 2019:
- 14 Submitted conference proposals to which 8 were actually presented
- Full redesign of EDT 180
- 350 First semester students were enrolled in *EDT 180* this fall 2019 semester
- Over 750 students were impacted through the *Digital Citizenship* modules

Multimedia Production

In 2019 our team expanded with the role of multimedia production, and staff. As noted previously this area of our portfolio will increase both in staff (x1) and in scope with new *Learning Futures* projects. 2019 was literally an award-winning year, that included a video project for Betty Gee and the *NSF STEM For All Video Showcase* that was awarded the *Facilitators' Choice Recognition* award. Additionally, the first episode for a podcast showcasing the use of *PI* in the college was published, as well as a series of videos for the *Kyrene Governing Board* and Kyrene community that explained what SPARK School would ultimately bring to the community, and how it would benefit students. Additional indicators from 2019:

- Over 800+ minutes of recorded media
- 55 Minutes of published content (aggregated)
- 72 Interviews recorded
- 77 Social media posts
- 34,500 Twitter impressions

Web Development

2019 was an increasingly active year for the design and development of new web-properties as well as increased support for existing web infrastructures. Most notably this past year we launched a state-of-the-art site for the *IgnitED Labs* (*ignitedlabs.education.asu.edu*), redesigned the *iTeachELL* site, and launched the new *All College Calendar* on *education.asu.edu*. The open access student led journal *Current Issues in Education* underwent a visual update with a new custom theme, and the faculty newsletter is in the final stages of development before it is launched. Additional web development indicators for 2019:

- 19 Major code commits submitted to various web platforms
- 26 New content page types were developed to expedite the web authoring experience
- 58 Blog posts were created and posted
- Over 1,000+ lines of code have been written and deployed to enhance the user-web experience

Other Highlights

In addition, there has been a continued focus on working with outside organizations and partners. Most notably, the creation of the *UAE STEM Mini-Masters Program* that has been developed for the *United Arab Emirates Ministry of Education*. The program is still in the proposal stage but we anticipate moving forward with the creation of the program in early 2020. Additionally, we have been engaged with external corporate partners on various projects and initiatives that include, *Microsoft Education Team*, *Bamboo Learning*, and *Sphero*.

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PRINCIPLED INNOVATION

A YEAR OF ACCOMPLISHMENTS

1 DEFINE

???

"Tell me about Principled Innovation in one sentence."

???

The ability to imagine new concepts, catalyze ideas and form new solutions guided by principles that create positive change for humanity.

2 REFINE

- Provided learning experiences and received feedback from faculty, staff, students, and community
- Completed a scoping review of literature (over 8,000 articles read!)
- Finalized PI definition and framework (after fourteen iterations and revisions!)
- Identified and defined eight practices
- Ensured consistency of language across all written products

3 DESIGN

Framework being infused & embedded in:
- Teacher Prep
- Ed Leadership
- Ed Studies

Socializing and catalyzing in...
- Student Success
- CASGE
- Business & Finance
- Admission Services
- Marketing
- Other grant projects

4 ALIGN

Continued learning and spreading the word
- Attending/presenting at conferences
- Hosting events and workshops
- Collaborating with outside partners and universities
- Joining forces with the OofSI team to create products and learning experiences

Principled Innovation

"Tell me about Principled Innovation in one sentence."

During a December 2018 Division 1 meeting, a faculty member posed the question, "Can you explain *Principled Innovation* in one sentence?" At the time the concept was fairly new to our college, and we were unable to concisely define it for our context. This was the catalyst to our work during the first half of 2019, which entailed defining PI and building a framework for PI as an extension of our existing character development work. Between January and July we continued to engage in discussions, provide learning experiences, and receive feedback from faculty, staff, students, district partners, community members and experts in character development and innovation.

With the input and feedback of the above stakeholders, and after fourteen co-created iterations and revisions, we defined PI for our context, refined our definitions of moral, civic, intellectual, and performance character, fully developed our guiding principles, identified and defined eight practices of PI, and ensured consistency of language across all written products.

Where we landed

Principled Innovation is the ability to imagine new concepts, catalyze ideas, and form new solutions guided by principles that create positive change for humanity. Through PI, we hold ourselves accountable to design and deliver excellent learning opportunities for all learners, preparing them for the next economy, to assume the responsibilities of self-government, and to participate in a thriving civil society.

The question, "We can innovate, but should we?" places values and ethical understandings - our own character - at the core of PI. Character adds purpose to innovation. By nurturing character development in our educators through PI, we ensure that the decisions we make and the solutions we enact are best meeting the needs of the students and communities we serve.

We are pleased to share below the building blocks of our framework for PI – a model that operationalizes moral, civic, intellectual, and performance character.

Principled Innovation as our Core Value…

As the framework has evolved and our concept of PI has begun to resonate with others at ASU and throughout the community, MLFTC has committed to *PI* as our college's Core Value. PI is "how" we do everything we do. It can be instantiated in multiple contexts at varying scales. As the core value, PI should guide how we approach interactions and relationships with students and with each other, how we redesign programs and curriculum, the decisions and actions we take when designing for systems change, and how we approach learning futures. If we are affecting the present or future lives and learning of other people, we commit to do so through PI.

In recognizing our own unique context and needs, we have developed guiding principles and defined character assets and practices of PI that aim to foster a culture of change within our college that will not only affect how we shape our policies, programs, curricula, and pedagogy, but, more importantly, how we approach designing for the future of education and bring about positive change for the good of humanity through the interactions, relationships, choices, and actions of our faculty, staff, students, and the communities we serve. Below is a summary of the foundation of our framework.

Three guiding principles
- We value individuals and account for the uniqueness of social and educational contexts
- We collaboratively care for and are considerate of the well-being of individuals, communities, and society
- We create positive change by designing creative solutions to pressing educational problems

Four interconnected clusters of character assets
- *Moral Assets:* Guide decision-making with open-mindedness, integrity, and justice
- *Civic Assets:* Support collaboration to address systemic problems for the public good

- *Intellectual Assets:* Inform problem-solving by combining creativity, evidence, and critical thinking
- *Performance Assets:* Enables navigation of uncertainty with initiative, courage, and resilience

Eight practices of Principled Innovation

The eight practices of PI are demonstrations of moral, civic, intellectual, and performance assets in action. While specific practices align closely with the individual character assets, (see graphic below), all four assets are interconnected and work together to inform the eight practices. In turn, engaging in the practices of PI contributes to the development of character.

Identify and Acknowledge Fundamental Values. Distinguish the values that are important to the individuals, team, community and learning environment and ensure that the process, structures, and solutions honor, appreciate, and reflect the identified values.

Utilize Moral and Ethical Decision Making. Use a values-informed reflective process to assess possibilities, navigate dilemmas, and make the best possible choice to serve the needs of the individual, team, community and learning environment.

Understand Culture and Context. Use evidence-based resources, empathy, reflective questioning, and asset-based appreciative inquiry to fully understand and assess the lived and current experiences and circumstances of individuals, communities, and learning environments.

Engage Multiple and Diverse Perspectives. Seek and champion equitable and inclusive involvement and contribution to the process, including many different voices who have a variety of lived experiences, beliefs, backgrounds, and cultural wealth.

Develop Habits of an Informed Systems Thinker. Use evidence-based resources and data to inform flexible thinking and appreciation of emerging insights and multiple perspectives, allowing one to recognize how the individual parts are influenced by their environment and interact to form a complex whole.

Reflect Critically and Compassionately. Use a growth mindset to make meaning of experiences through contemplation and consideration of one's thoughts, feelings, and actions and how they affect the growth, development, and identity of the individual, team, community, and learning environment.

Design Creative Solutions. Work collaboratively and intentionally for and with the community to define and understand the problem; then generate and catalyze purposeful, innovative ideas to achieve a desired outcome that creates positive change for humanity.

Navigate Uncertainty and Mitigate Consequences. Guide the decision-making process through observation and reflective questioning that helps to imagine and effectively respond to the possible outcomes. Allow space for meaningful action to increase the chance for desired results and reduce the risk of harm to individuals, teams, communities, and learning environments.

Operationalization of Principled Innovation:

The PI steering committee met monthly during the spring 2019 semester to continue their work to develop a theory of change while also defining and developing an operational model for PI. Subcommittees within the steering committee were created to align with the various units integrating PI within the college (student success systems, educator preparation, leader preparation, research and assessment, and design practices). Each sub-committee was led by a member of the character initiatives operations team and served as focus groups to identify specific needs for tools and support to propel the work forward throughout the college. As our work evolved during the summer of 2019, we have expanded the reach of the PI steering committee to include additional representatives from across the college. We have welcomed new committee members representing the Center for Advanced Studies in Global Education, Next Education Workforce, the Office of Scholarship and Innovation, and the Center for Science & Imagination.

With a solid framework in place and an evolving theory of change to guide our work, Summer and Fall 2019 were dedicated to operationalizing and disseminating PI with faculty, staff, students, district partners, and other networks of colleges and universities.

We have spent a great deal of time over this past year supporting faculty as they work to integrate the PI framework into their program and curriculum redesign efforts. Faculty are currently working to infuse PI into Teacher Preparation, Professional Experiences, Ed Leadership, and the Ed Studies programs. Members of our PI operations and research teams have actively participated in the redesign process through attending meetings, contributing to work groups, planning and facilitating workshops and activities, and developing resources to support faculty and staff understanding of PI. Some examples include:

- Creating a Canvas site to house resources and help align and break down the Division 1 "Key Transformation Elements" and the outcomes related to PI.
- Planning and facilitating a Habits of Systems Thinking workshop
- Planning and facilitating multiple book studies that addressed relationships, student networks, and side effects of innovation
- Presenting workshop sessions at the early childhood/special education conference
- Developing protocols for using PI reflective and generative questions in coursework, program and curriculum redesign, and with moral dilemmas.
- Supporting the professional experience team with planning for the lead teacher workshop in summer of 2019
- Participating in a Network Improvement Community with multiple colleges and universities to intentionally focus on a problem of practice related to both integrating and assessing character development practices into our ed leadership program
- Creating a matrix of leadership character assets and a reflection tool to be used in the Ed Leadership program.

Socializing and Catalyzing with Staff:

In collaboration with the Design Initiatives team, a group of staff catalysts have been identified to take a deeper dive into the practices of PI and the PI design process. The role of the catalysts is to address problems in their own work through the approach of PI, as well as share their PI experiences with others

in their units. The anticipated outcome is the socialization and practice of PI in our daily work across the college

During Fall 2019 the catalysts attended three, ½ day learning experiences where they engaged in activities to help develop a deeper understanding of PI. In December of 2019, the catalysts identified a problem of practice to address within their own units using the practices of PI and the design process. The group will continue to meet and support each other throughout Spring 2020, as they work to address their individual problems of practice. The work of the catalysts will be presented during a showcase at the end of the Spring 2020 semester. Through the catalyst network, the practices of PI are being socialized in the following units across MLFTC: Student Services; CASGE; Business & Finance; Admission Services; Marketing and more.

Socializing and Catalyzing with Students:

Our team has worked closely with the Office of Student Services and lower division faculty throughout the year to provide opportunities to pilot PI learning experiences in service learning, lower division courses, and co-curricular activities. A collaboration is currently developing with the AmeriCorps peer mentors who will be cross-trained as PI Student Catalysts.

The "Project Formerly Known as the Exploratorium:"

To better illustrate PI from a systems perspective, we are collaborating with students at the *Herberger Institute for Design and the Arts* to produce ten films that showcase stories that address societal challenges and designs for change through PI. The multimedia website will also include a documentary about PI, and a podcast series on character development, and what it looks like in an educational context, while exploring the broader impact of that development. Preplanning and story-gathering is currently underway with production beginning in January 2020.

Research Highlights:

The PI research team conducted a systematic review of research related to character education in teacher preparation. This project began with 5,911 articles, theses, and dissertations which were determined in January to meet the team's search parameters. Over the spring, these results were screened to 2,555 items. A second screening round took place over the summer on these 2,555 items, leading to a set of 880 dissertations and articles which met the team's criteria and were marked for formal coding.

This summer, Julie Nagashima and Paul Gibbs completed a study of the emergence of the character education initiative at MLFTC. The paper, which describes the history of the initiative as a case of institutional sensemaking and sense-giving, will be presented at AERA's Moral Development and Education SIG at the 2020 conference in San Francisco.

In September, we said goodbye to post-doc Julie Nagashima who moved on to North Central College in Illinois, and welcomed research associate, Lok-Sze Wong, to the team. Lok-Sze and the rest of the research team will support the developing PI research collaborative.

Continued Learning and Dissemination:

Throughout 2019 we had several opportunities for continued learning and dissemination of our work. Conferences, convenings, and institutes attended include: ASU/GSV; Ashoka U Exchange; Waters Center for Systems Thinking Workshop; Carnegie Foundation Summit; Kern Partners Character Education for Leadership; Association for Moral Education Conference; Life Design Studio @ Stanford; ASU, Commission on the Status of Women Conference; National Service Learning Conference (student led presentations); Jubilee Center Conference—Virtues and a Flourishing Life (Planning in process for January 2020), and ICSEI (Planning in process for January 2020).
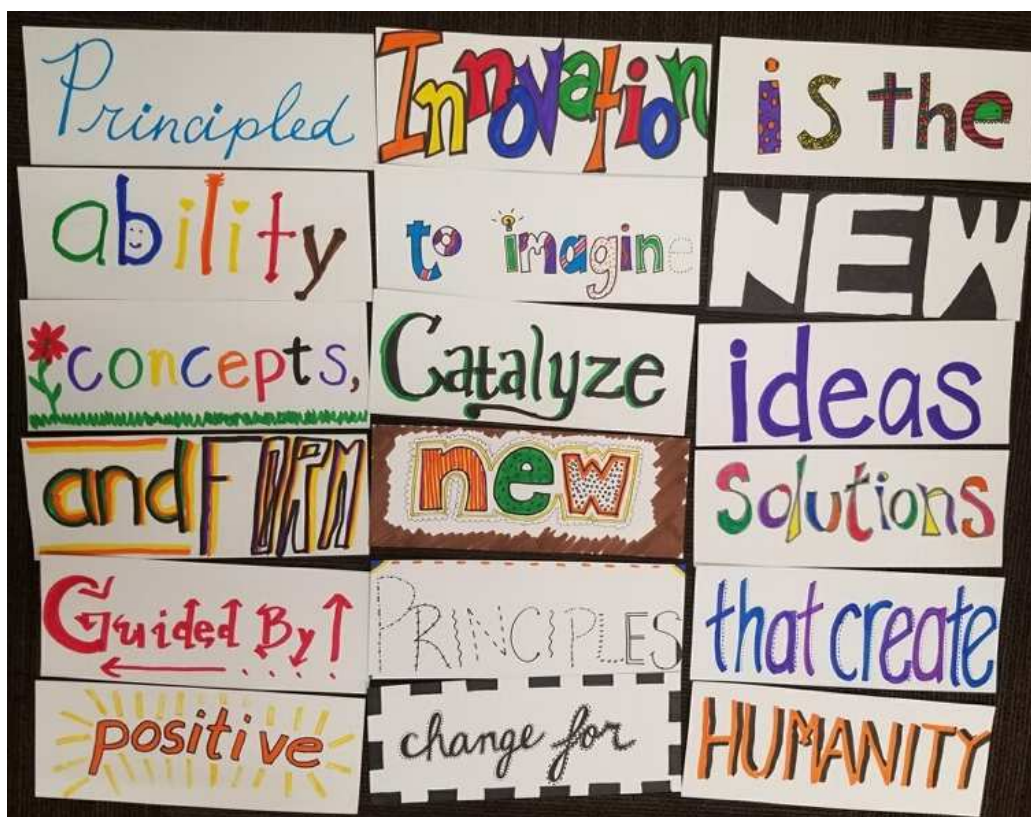
Principled Innovation Meets Learning Futures:

In order to effectively operationalize PI into systems both inside and outside of MLFTC, we recognized the need to produce products and learning experiences related to PI. In Fall of 2019, the PI team joined forces with the Office of Scholarship and Innovation to design and develop case studies, workshops, protocols, learning experiences, podcasts, etc. for faculty, staff, students, and outside partners to better understand and integrate PI into the systems of educator and leader preparation. We have also aligned the frame of PI with OofSI's Learning Futures Initiative to ensure we are guided by a values perspective as we imagine possibilities for the future of education. Additional information about this collaboration below.

What's next?

The deliverables for the Kern grant have been refined, creating a new guideline for our work over the next two years. We will continue to work with faculty and district partners to infuse PI into programs, curriculum, and clinical experiences, and explore the possibility of scaling our work for the larger ASU context. The research collaboratives will continue to develop, and we will move forward to strengthen our collaboration with the OofSI team to create products and experiences that will support the body of our work. We will also begin planning for two upcoming convenings anticipated in Spring and Fall of 2021.

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PI definition as imagined by the OofSI/PI team.

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LEARNING FUTURES MEETS PRINCIPLED INNOVATION

In just 4 months...

JULY 30, 2:30PM: CRISTY & PUNYA MEET WITH CAROLE

AUGUST: FIGURING THINGS OUT

Many conversations among leadership
Team meetings and discussions
August 27: OofSI and PI joint meeting

SEPTEMBER: RAMPING UP

Character Steering Committee Retreat
New team organization and structure
Socializing ideas in the college
Identifying and prioritizing projects

OCTOBER: TAKING ACTION

Oct 1: First joint standup team meeting
Kern Family Foundation visit
"Exploratorium" ramps up
PI Staff Catalysts first session
First draft of concept paper completed

NOVEMBER: CONTINUING THE WORK

Nov 1: Innovation Day
AME Conference
James Arthur visit
Start use of Monday.com
Begin work on website changes
PI blog posts start

DECEMBER: REFLECTION & ITERATION

Taking stock and planning for 2020
OofSI and PI joint team retreat
Character Steering Committee retreat
PI team retreat
Executive Team retreat

Projects to Date

Experiences
Staff & Student Catalysts
Innovation Day
Leadership Institutes (Feb & Summer)

Products
Generative & reflective questions
Ed Leadership reflection tool & videos
Design Kit

Case Studies
Student Success Team
"Exploratorium"
PI Podcast
OofSI hiring process

Conceptual
PI framework
Design process & videos
Concept paper

Learning Futures meets Principled Innovation

Starting in August 2019, OofSI and PI team leadership began regular conversations and meetings to figure out what it would look like to bring our teams closer together and establish a more integrated working relationship, with a set of collaborative projects that involve people from both teams. This led to a restructuring of roles and teams within OofSI, as well as launching standing meetings that included both OofSI and PI team members. In September we focused on adjusting to this new structure, identifying and prioritizing the collaborative projects, and socializing the idea of bringing learning futures and PI together to the broader college. In October and November, we launched this joint work in earnest, with key projects including both conceptual work, case studies, and experiences (see below for a full list of projects). December has provided opportunities for reflection and iteration on the structures and projects we have put in place over the past several months.

Key achievements and projects that represent the collaboration between learning futures/OofSI and PI include:

- *PI Staff and Student Catalysts:* With input from a variety of stakeholders in the college, we launched the PI Staff Catalysts experience, selecting a cohort of nine staff members representing a range of units in MLFTC, and have held three sessions with them this fall. Plans for a Student Catalysts cohort are being put in place in collaboration with the Office of Student Services.
- *PI-infused design process and explanatory videos:* We worked with doctoral student Melissa Warr to create a new version of our design process that infuses PI throughout, and have created videos that explain and introduce the process.
- *Learning futures and PI concept paper:* We wrote a first draft of a concept paper that explains the learning futures initiative and how it relates to and intersects with PI. A revised version will be a priority in early 2020.
- *Case studies:* We've started to develop a set of multimedia case studies that give examples of PI in action, including a video on the MLFTC Student Success Team redesign; a short audio piece on the OofSI hiring process; and the beginnings of a podcast highlighting examples of PI throughout MLFTC.
- *February Ed Leadership event:* We are collaborating on planning an event in February 2020 for alumni of the MEd in Educational Leadership program, with content focused on learning futures and PI.
- *Summer Leadership Institute:* We're putting plans in place for a 3-4 day experiential, action-oriented convening for teams of educational leaders for June 2020. The institute will explore learning futures, PI, and other strategic initiatives of MLFTC.
- *Innovation Day:* Our OofSI and PI teams collaborated with the marketing team to conceive and execute a college-wide celebration of Innovation Day on November 1, highlighting the work of the college from a student perspective and using it as an opportunity to introduce and deepen the college's engagement with PI as a core value.
- *Character Initiatives Steering Committee retreats:* The OofSI team contributed to planning and programming for the two Character Steering Committee retreats that took place this fall.
- *Infrastructure and communication:* Together we put in place new standing joint meetings (which we continue to iterate on), started use of a shared project management platform (Monday.com), and began making changes to the OofSI website to include PI and shift its focus to learning futures.

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Appendix:
Punya Mishra's scholarly activities

In 2019 I had 19 different "culminations" (published articles; book chapters and conference proceedings) along with multiple conference presentations and three keynote presentations at international conferences. Below is my overall *Google Scholar / citation* profile.

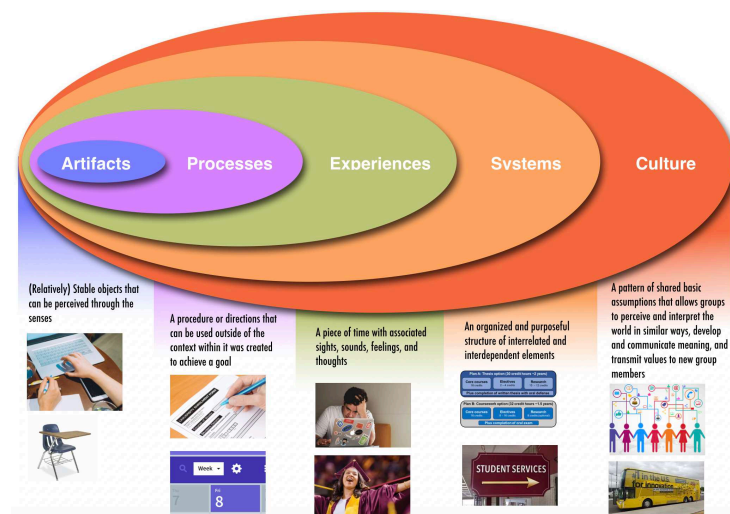| Cited by			
		All	Since 2014
Citations		28162	19554
h-index		50	40
i10-index		121	92
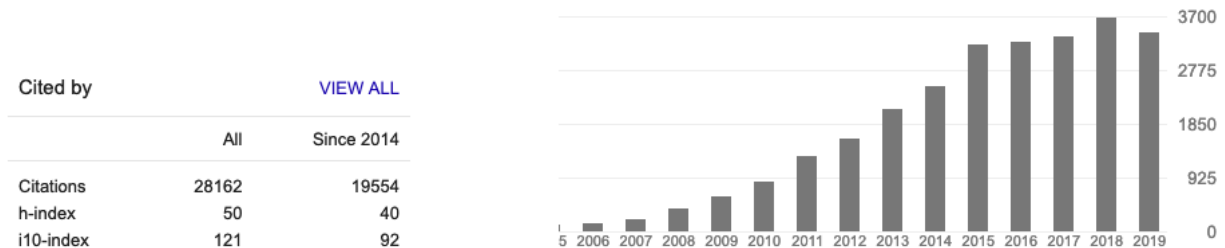
Publications/presentations in the past year include:

Evans, M. D., Henriksen, D., Mishra, P., & the Deep-Play Research Group. (2019). Using creativity and imagination to understand our algorithmic world: A conversation with Ed Finn. *TechTrends, 64.*

Henriksen, D., Jordan, M., Foulger, T., Zuiker, S., & Mishra, P. (submitted). Essential tensions in facilitating design thinking: Collective reflections. *Journal of Formative Design in Learning.*

Henriksen, D., & Mishra, P. (in press). Of metaphors and molecules: Figurative language bridging STEM and the arts in education. *Leonardo.*

Henriksen, D., & Mishra, P. (2019). Innovations in the dissemination of action research: Rhetoric, media, and communication. In C. A. Mertler (Ed.), *Wiley handbook of action research in education* (pp. 393-414). Wiley Blackwell.

Horton A., Henriksen D., Mishra P., Seals C., Shack K., & Marcotte C. (2019), Creativity and the urban teacher: A STEM-related professional development program. In: C. Mullen (Ed,) *Creativity under duress in education? Creativity theory and action in education, Vol 3.* Springer.

Mehta, R., Keenan, S., Henriksen, D., & Mishra, P. (2019). Developing a rhetoric of aesthetics: The (often) forgotten link between art and STEM. In M. S. Khine & S. Areepattamannil (Eds.). *Steam education: Theory & practice. Springer.*

Mehta, R., & Mishra, P. (2019). Book review of *Mobile learning: Perspectives on practice and policy*, by D. Herro et al. *TCRecord.*

Mishra, P. (2019). Considering contextual knowledge: The TPACK diagram gets an upgrade. *Journal of Digital Learning in Teacher Education.*

Mishra, P., & Warr, M. (in press). Preface. In A. C. Borthwick, T. S. Foulger, & K. J. Graziano (Eds.), *Championing technology infusion in teacher preparation: A framework for supporting future educators*. Portland, OR: International Society for Technology in Education.

Reimer, P., Mehta, R., & Mishra, P. (2019). Learning science with body in mind. *iWonder: Rediscovering School Science, (6),* 51-56.

Warr, M., & Mishra, P. (2019). Teachers and design: A literature review. In *Society for Information Technology & Teacher Education International Conference* (pp. 949–956). Las Vegas, NV: Association for the Advancement of Computing in Education (AACE).

Warr, M., & Mishra, P. (2019). Teachers as designers: Many threads of meaning. In *Annual Meeting of the American Educational Research Association*. Toronto, Canada.

Warr, M., & Mishra, P. (under review) Integrating the discourse on teachers and design: An analysis of ten years of scholarship. Research article.

Warr, M., Henriksen, D., Mishra, P., & the Deep-Play Research Group. (2019). Creativity and expressive arts, performance, physicality and wellness: A conversation with Dr. Paula Thomson and Dr. Victoria Jaque. *Tech Trends, 63(2), 102-107.*

Warr, M., Mishra, P., & Benjamin, S. (2019). *Design for education: Supporting creativity in studio courses.* Presented at the Association for Educational Communications and Technology National Conference, Las Vegas, NV.

Warr, M., Mishra, P., & Scragg, B. (2019). Beyond TPACK: Expanding technology and teacher education to systems and culture. In *Society for Information Technology & Teacher Education International Conference* (pp. 2233–2237). Las Vegas, NV: Association for the Advancement of Computing inEducation (AACE).

Warr, M., Mishra, P., & Scragg, B. (2019). *The five discourses of design: A model for systemic change in education. Association for Educational Communications and Technology.* Presented at the Association for Educational Communications and Technology National Conference, Las Vegas, NV.

Warr, M., Mishra, P., & Scragg, B. (accepted pending minor revisions). Designing theory. *Educational Technology Research & Development.*

Wyatt, L., Scragg, B., Stein, J., & Mishra, P. (submitted). Educational change by design: Creating a school of the future. *Journal of Cases in Educational Leadership.*

I have one doctoral advisee (Melissa Warr) who is making good progress in her program. We published on article in 2018, 2 conference presentations, with a couple of publications in the works as well as a paper accepted to present at AERA.

I taught *EDT180*, a freshman seminar (*Technology Literacy, Problem Solving using Digital Technology Applications*) in the fall of 2019. *EDT180* was designed by Sean Leahy and Jodie Donner under my broad guidance. The course was framed around Dewey's idea of the four key impulses for learning: Inquiry, Communication, Construction and Expression.

TalkingAboutDesign.com: I had taught a masters/doctoral seminar in the fall of 2018. Some students in the program continued working on the project even after the course was over and this led to a website/blog that was developed by the students, under my loose guidance. This site has been receiving some attention and continues to expand and grow.

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