Education by design

Innovation with purpose in schools and systems

Collective impact

Before we were Sun Devils.
Before the pitchforks. Before Sparky. Before ASU became known for leading the way in innovation, there was the Tempe Normal School of Arizona, where, in 1886, 33 students prepared to become teachers.

Those roots inspire us today as we look for partners in reimagining education as part of Campaign ASU 2020, the university's comprehensive effort to accelerate its mission and raise support for its educational priorities.

Innovation with purpose

Through creative intrapreneurship and character education, we bring people and ideas together to increase the innovation capabilities of individual educators, schools and organizations, districts, and communities.

Creative Intrapreneurship

Creative intrapreneurs drive change within institutions and systems. They ask the right questions, navigate uncertainty, and work in teams to design solutions to tough challenges.
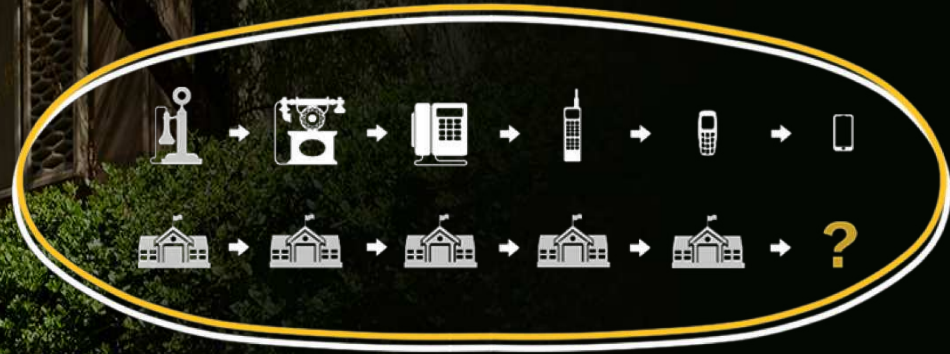
Character education

Character adds purpose to the creative energy of innovation. Our approach to character education is inclusive, open-minded, and informed by the conviction that one of the purposes of education is to nurture civil society.

Reimagining education

We are aligning our college's broad array of programs in support of strategic initiatives designed to address **four** of the most pressing challenges we face in education.

One
How should we develop and deploy 21st-century educators?

Two
How can we work with schools and communities to tackle a wide range of challenges?

Three
How can we prototype effective systems?

Four
How can we connect our research to schools and other places where teaching and learning happen?
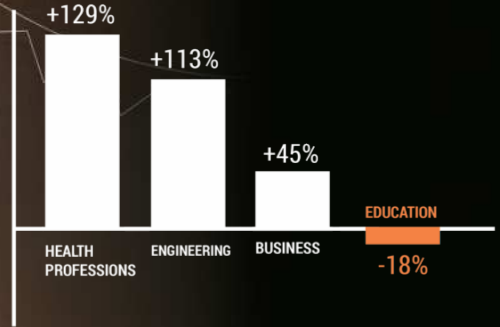
Reimagining the Education Workforce

To prepare P-12 students for the future, we need an education workforce that has **distributed expertise**, is **team-based**, and prioritizes **personalization** for both the student and the educator.

Education workforce imperative

How should we develop and deploy 21st-century educators?

If we're not getting the education workforce we want, we need to redesign the profession, the workplace, and how we prepare people for both.

2008-2016 change in number of undergraduate and graduate degrees by major in Arizona's three public universities

+129% HEALTH PROFESSIONS
+113% ENGINEERING
+45% BUSINESS
-18% EDUCATION

We can't expect every educator to be all things to all people all the time.

We can design teams of people that will provide the full range of expertise and services that learners require.
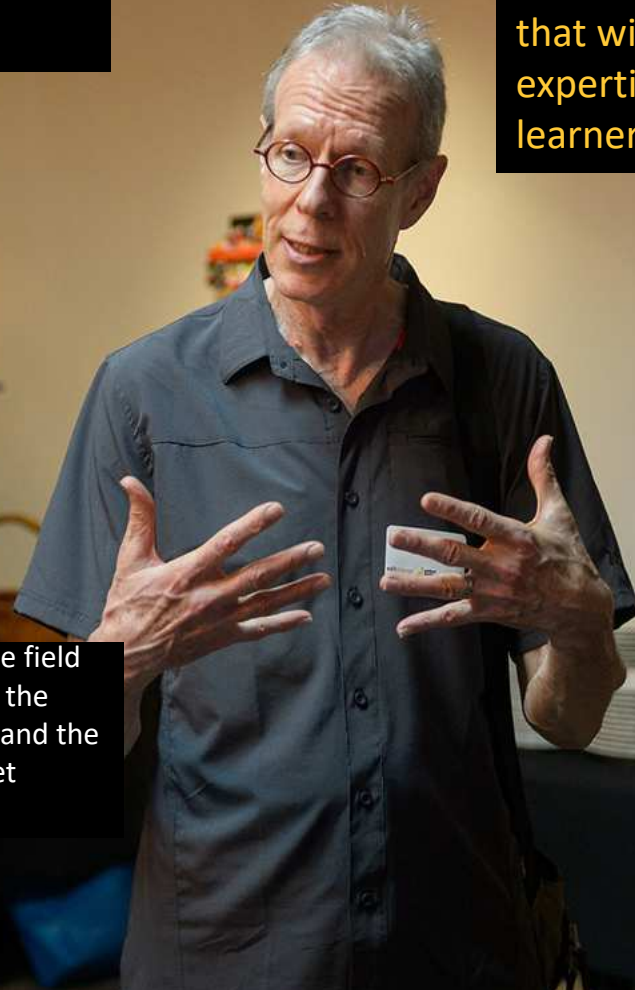
174 COMPETENCIES

1 Teacher

Professional Learning & Ethical Practice (15)
Assessment (22)
Learner Development (10)
Learning Environments (18)
Application of Content (19)
Learner Difference (15)
Instructional Strategies (19)
Leadership & Collaboration (20)
Content Knowledge (18)
Planning for Instruction (17)

We make impossible demands of teachers because the field of education has realized that not all students require the same instructional support. We have come to understand the necessity of personalized learning, but we have not yet designed the system to deliver it well.

Imagine the possibilities…

Today: One teacher one classroom

Teacher — Student, Student, Student, Student, Student, Student

Future:

Students — Pedagogical Specialists, Content Specialists, Generalists (Novice), Part-Time Content Specialists, Content Specialists, Socio-Emotional Specialists

Reimagining Teacher Preparation: Who's in My Room?

Who's in my room?

RN (Nurse)	ED Tech	Unit Secretary	ED Physician
Laboratory	Pharmacy Tech	Transportation	Respiratory Therapist
EEG Tech	Food and Nutrition	Surgical PCA	Radiology
EV Services	OR Staff	PCA (Nurses' Aide)	

Part-Time Roles → Full-Time Roles

1. TARGETED ROLES
———
Playground Monitor
•
Homework Helper
•
Laboratory Assistant

2. REAL-WORLD CONNECTORS
———
Project-Based Learning Advisor
•
Content- or Career-Mentor

3. CONTENT & DELIVERY SPECIALISTS
———
Adjunct Instructor
•
CTE Instructor
•
Curriculum Advisor
•
Online Learning Facilitator

4. COMMUNITY-SCHOOL CONNECTORS
———
Mentor
•
Tier 2+ Social-Emotional Support
•
Faculty Developer

5. NOVICE TEACHERS
———
Small-Group Reading Teacher
•
Project-Based Learning Coordinator
•
Elementary Single-Subject Educator

6. SPECIALIZED TEACHERS
———
Curriculum Designer
•
Lead Content Area Educator
•
Personalized Learning Specialist

7. MANAGING TEACHERS
———
Managing Teacher
•
Chief Student Success Officer
•
Educator Coach

8. INTRA-PRENEURIAL SCHOOL LEADERS
———
School Redesign Innovator
•
Chief Talent Operator

And lots of other roles that make sense *in context*

Reimagining Teacher Preparation: Highlights

- **Of 135 school districts and charter schools in AZ, they began the year with more than 7,000 vacancies. This means that they could not find qualified applicants for close to 1 position out of every 5**.

- **One quarter of new teachers leave the profession within one year, and nearly half leave within three years.**

- **1 out of 3 Arizona teachers have been in the classroom for four years or less.**

- **Arizona is losing more teachers each year than it is producing from bachelor of education programs at its three state universities.**

Reimagining Teacher Preparation: Highlights

5. TEACHERS-IN-TRAINING & NOVICE SPECIALISTS

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1. Students are part of the reimagined workforce taking on new roles as integrated staff in the school.

2. Moving out of traditional credit hour units to allow for flexible and spiraled programming with a focus on retention, lowering the indebtedness of students and paid internships in their sophomore, junior, and senior years.

3. Facilitated and supported content delivery—hybrid and on-line coupled with video and real-time coaching.

4. At the core is: (a) developing a creative and intrapreneurial mindset through work in community design laboratories and (b) the building of a character framework and map that leads to positive learning outcomes for teacher candidates and P-12 students.

Reimagining Teacher Preparation: Highlights

5.
TEACHERS-IN-TRAINING & NOVICE SPECIALISTS
————

5. Personalization & specialization of programming.

6. Building teams of faculty in regions instead of 1:30 university courses delivering content (practicing what we preach).

7. Moving away from the 1:1:30 model in schools and into broader teams enabling candidates to learn from multiple experts and engage with a wider range of students

8. Contextually-based & inclusive partnerships that allow for regional, "boutique" type programs to address rural and tribal needs.
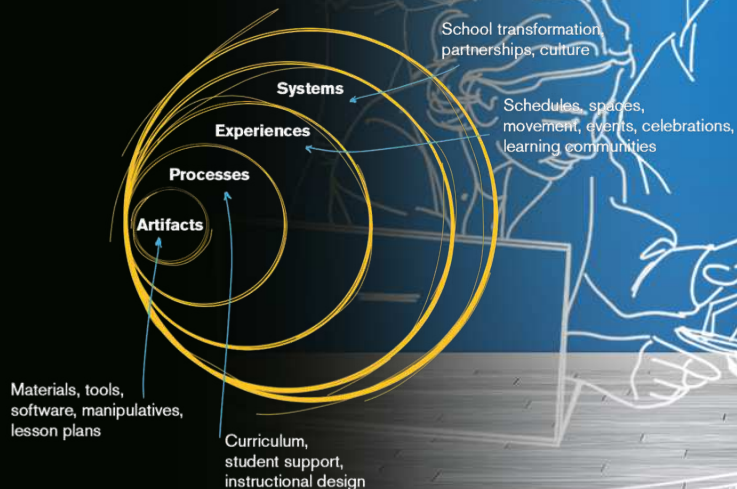
SAVE THE SEASON

We are planning a national conference on the reimagined educator workforce in Spring 2019

Community design labs

How can we work with schools and communities to tackle a wide range of problems?

"You're doing it wrong." Educators don't need to hear that.

They need a wide range of partners committed to asking the right questions, defining problems, and prototyping solutions.

School transformation, partnerships, culture

Schedules, spaces, movement, events, celebrations, learning communities

Systems

Experiences

Processes

Artifacts

Materials, tools, software, manipulatives, lesson plans

Curriculum, student support, instructional design

The Design Process

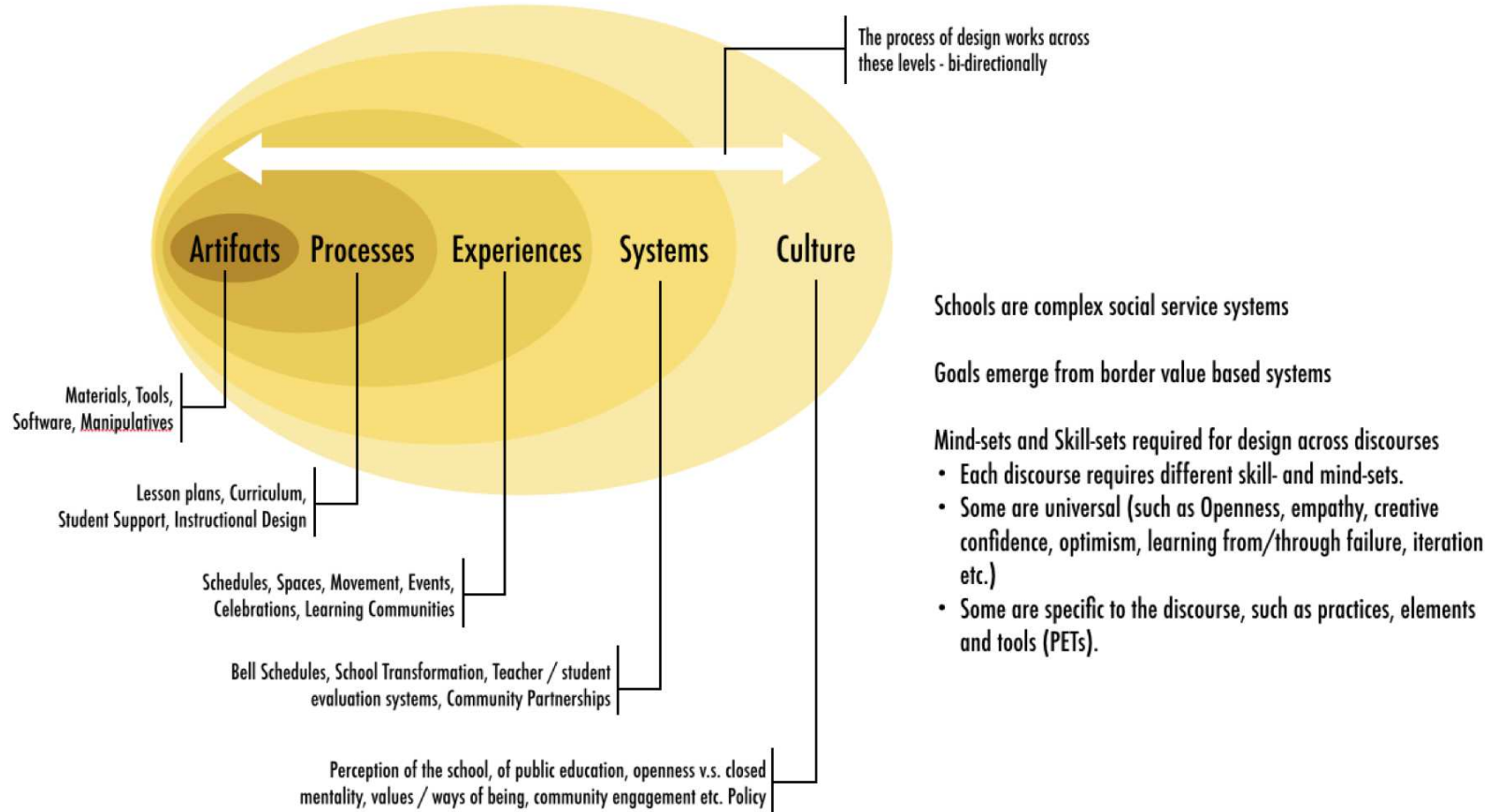With our ability to convene people and ideas, a great college of education can lead an open-ended design process that values context, diverse perspectives, and continuous improvement.
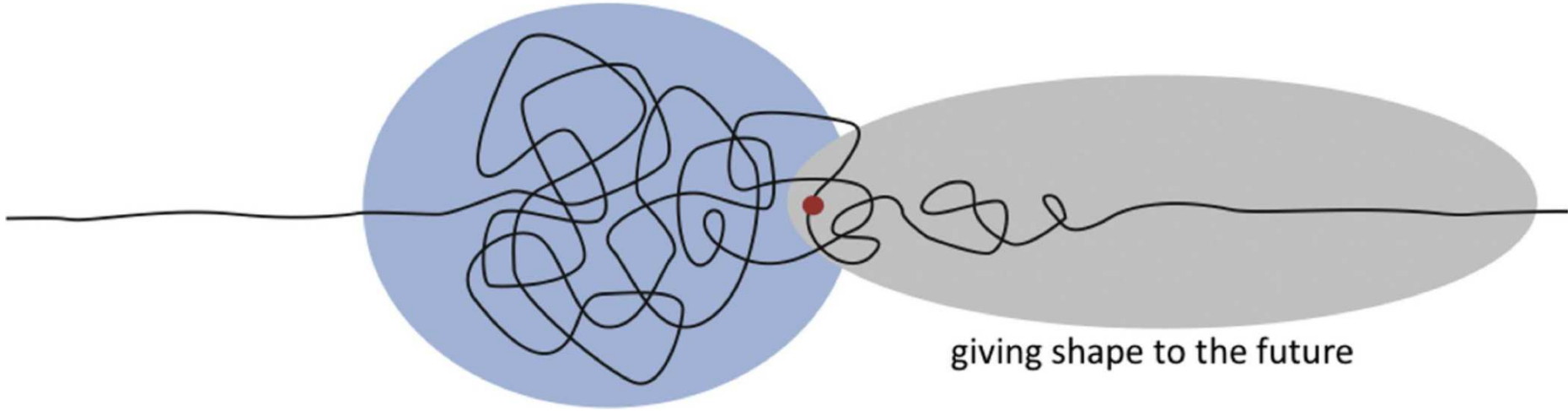
Build Relationships

Understand Context

Frame the Right Questions

Find New Perspectives

Generate Ideas -No Solutions Yet!

Engage Wisdom Council

Prototype Possible Solutions

Test Prototypes

Build and Implement

The Many Discourses of Design (in Education)

The process of design works across these levels - bi-directionally

Artifacts   Processes   Experiences   Systems   Culture

Materials, Tools, Software, Manipulatives

Lesson plans, Curriculum, Student Support, Instructional Design

Schedules, Spaces, Movement, Events, Celebrations, Learning Communities

Bell Schedules, School Transformation, Teacher / student evaluation systems, Community Partnerships

Perception of the school, of public education, openness v.s. closed mentality, values / ways of being, community engagement etc. Policy

Schools are complex social service systems

Goals emerge from border value based systems

Mind-sets and Skill-sets required for design across discourses
- Each discourse requires different skill- and mind-sets.
- Some are universal (such as Openness, empathy, creative confidence, optimism, learning from/through failure, iteration etc.)
- Some are specific to the discourse, such as practices, elements and tools (PETs).

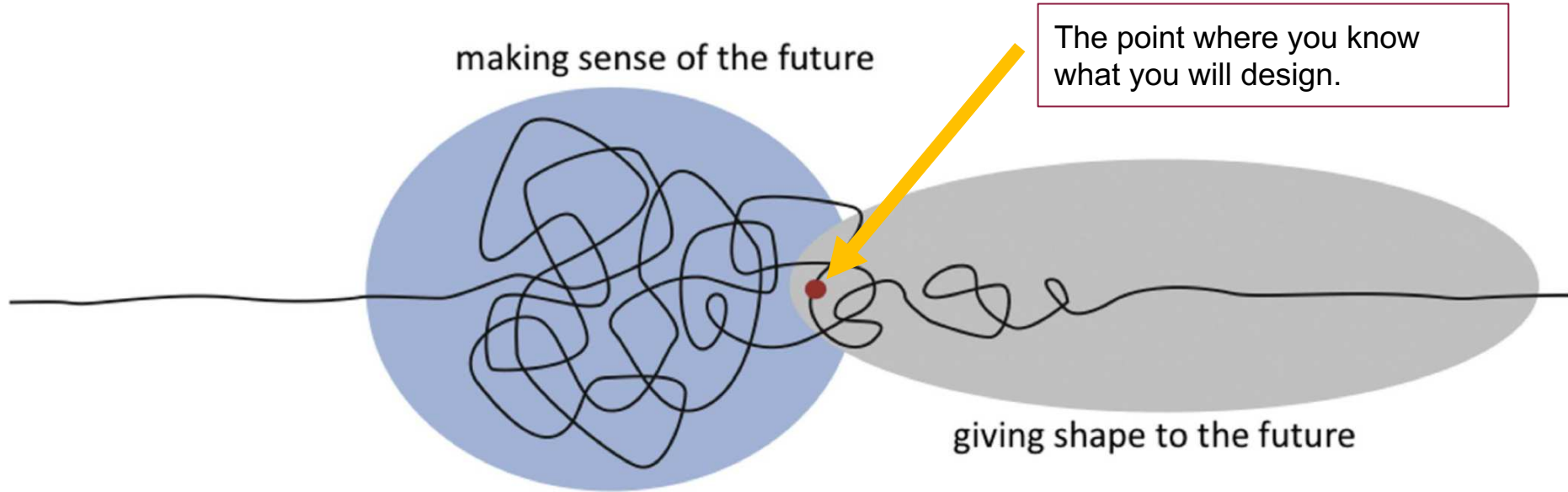# ...An alternate view of our work:

making sense of the future

giving shape to the future

Source: Sanders, E.B-N. (2017). Design Research at the Crossroads of Education and Practice. *She Ji: The Journal of Design, Economics, and Innovation,* Volume 3, Issue 1, p. 3-15.

...An alternate view of this work:

making sense of the future

The point where you know what you will design.

giving shape to the future

Design Initiatives: Community Design Labs

- ==Partnerships== between MLFTC and school districts or community organizations, based at district/community sites

- ==Collaborative efforts to design innovative solutions== to wicked problems in education by using ==open-ended design processes== that value local context, diverse perspectives, intrapreneurial thinking and iterative testing of solutions

- ==Professional learning opportunities for educators== that build capacity in schools and communities to bring a creative design lens to problem-solving and incorporate this approach into the district culture

Kyrene School District
Creating a new school model for the future

Kyrene: Creating a new school model for the future

Design Challenge: How might we design a school of and for the future?

- Goals are to design a new school model that:
    - Engages students in a dynamic learning environment that promotes academic excellence and prepares them to be innovators and leaders of tomorrow, and
    - Deploys educators in new ways by creating new roles and staffing structures that will attract high-quality staff and reinvigorate the teaching profession

- Started with a visioning session and identifying a core design team

- The district envisions implementing the plans in Fall 2019

Kyrene: Building a future school

Madison School District
Leadership team project

Madison: Leadership team project

Design Challenge: How might the district's leadership team become more innovative in its approach to problem-solving?

- MLFTC is leading workshops for the district's Administrative Leadership Team every month, as part of their regular PD series

- The group has formed five design teams to focus on these challenge areas:
  - The student experience
  - Creating a culture of innovation
  - Changing the perception of public education
  - Active learning environments
  - Teacher retention

Madison: Leadership team project
Team design challenge, 7.25.17

Miami School District

Junior high redesign

Miami: Junior high redesign

Design Challenge: How might a small, rural district redesign its junior high to embrace 21st century learning and staffing needs?

- MLFTC is leading workshops with the junior and senior high staff to design a new curricular model for Miami High School's junior high that:

    1. Better engages students and aims to improve academic achievement, and

    1. Provides a professional learning opportunity for Miami High School's educators such that they experience and explore new approaches to innovation and problem-solving.

Avondale School District

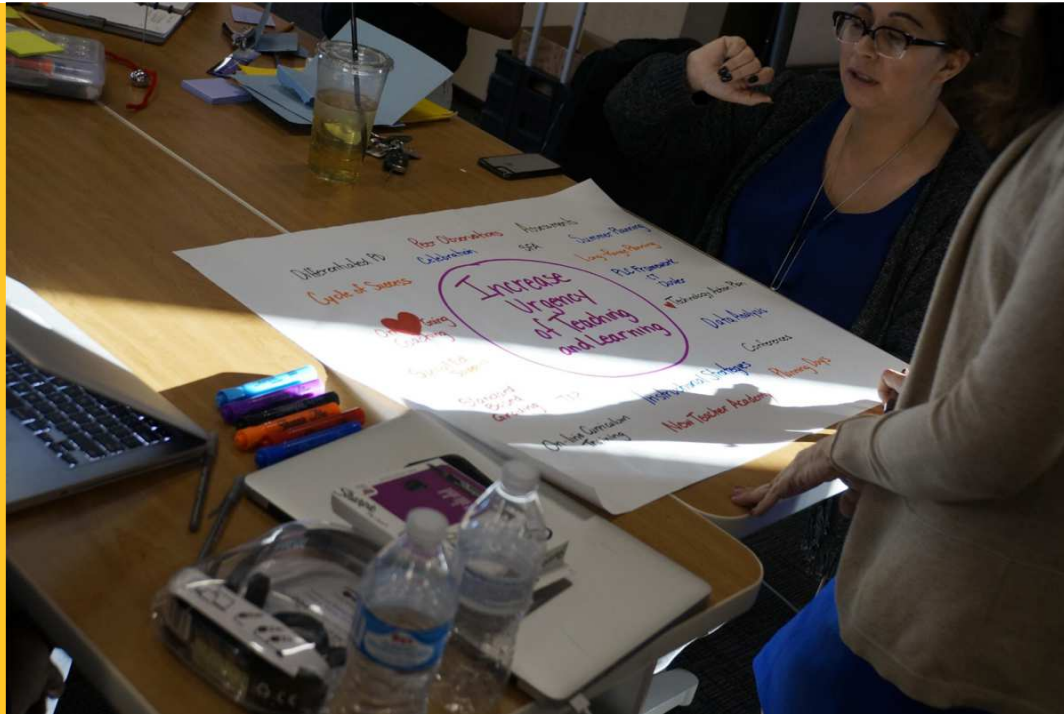*Developing unique school identities*

Avondale: Developing unique school identities

Design Challenge: How might each of the district's schools design a unique identity for themselves?

- MLFTC is leading design teams from each school through a series of design workshops to address this challenge

- Design teams include administrators, teachers, students, parents and community members

- The process at AESD requires the teams to engage a variety of stakeholders and perspectives as they do research and test new ideas

Avondale: Creating unique identities

Contextual Models

How can we prototype effective systems?

Just as every learner is different, every community is different. So, as we innovate solutions to the challenges schools face, we should do so in a contextually responsive manner.
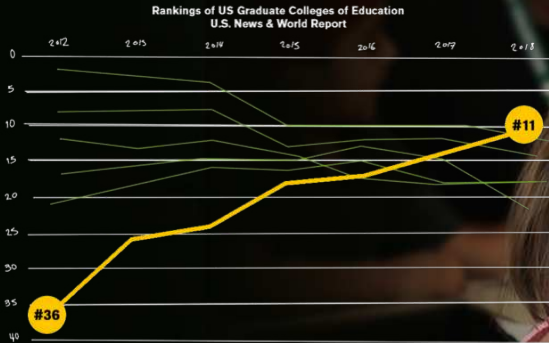
As an anchor institution, ASU has the resources, the culture, and the social embeddedness to advance this work.

We have a growing network of schools and districts working with us to develop sustainable solutions to a variety of challenges in education.
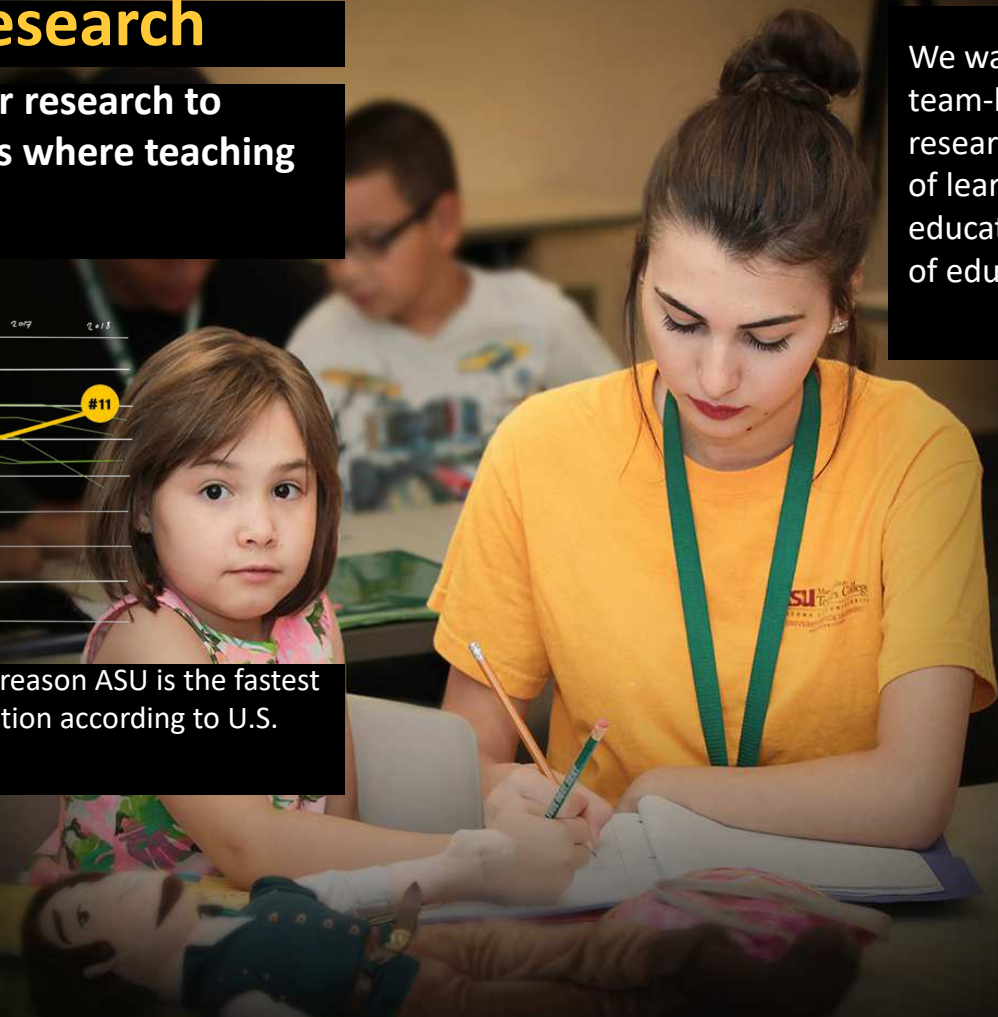
Use-inspired research

How can we connect our research to schools and other places where teaching and learning happen?

We want to generate even more team-based, cross-disciplinary research that improves the lives of learners, the impact of educators, and the performance of education systems.

Rankings of US Graduate Colleges of Education
U.S. News & World Report

#11

#36

Research productivity is a large reason ASU is the fastest rising graduate college of education according to U.S. News & World Report.

Creating knowledge, mobilizing people

and taking action to improve education
education.asu.edu

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Teachers College
Arizona State University