

CALIFORNIA COMMISSION ON TEACHER CREDENTIALING | AUGUST 2020

# MICRO-CREDENTIALS

WHAT ARE THEY, WHERE ARE THEY BEING USED, AND IN WHAT WAYS?

Lisa Lachlan, Ed.D., Principal Researcher

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MAKING  
RESEARCH  
RELEVANT

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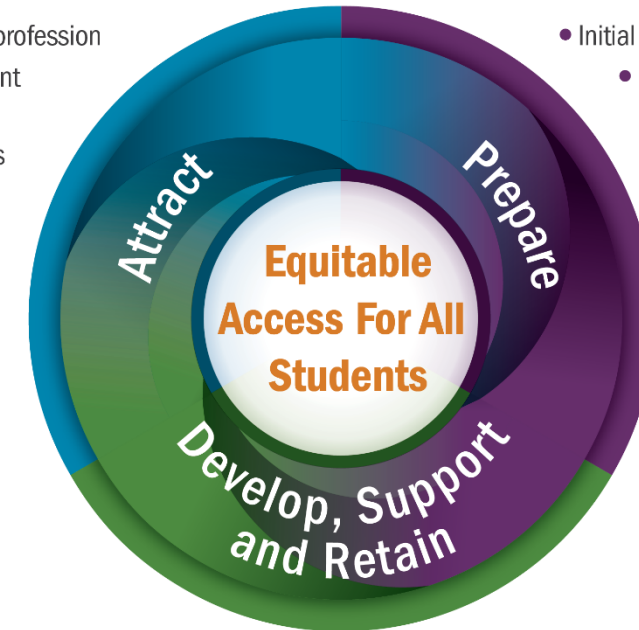
# Agenda

1. Getting on the Same Page: Micro-Credentials 101
2. Relevant Examples: Career Technology: Computer Science, Anti-Bias Education, and Virtual Teaching
3. Micro-Credentials in Action
  - a. Documentation of professional learning
  - b. Broader educator talent management
  - c. License renewal requirements
4. Policy considerations related to micro-credentials

# American Institutes for Research (AIR)

1. Our mission is to generate and use rigorous evidence that contributes to a better, more equitable world.
2. A strong education system is built upon effective teachers. Effective teachers must be supported by effective policies and practices across their entire career, beginning with preparation and recruitment, and continuing through professional growth, evaluation, environment, and compensation through teacher leadership.

- Pathways into the profession
- Data-informed talent development
- Elevating the status of the profession



- Initial certification and licensure
- Program approval and accreditation

- Initial certification and licensure
- Recruitment, selection, and hiring
- Career advancement and tiered licensure
- Evaluation and professional learning
- Recertification and-continued licensure
- Induction and mentoring
- Educator working conditions
- Assignment and transfer
- Compensation

# Getting on the Same Page: Micro-Credentials 101

# Micro-credentials and Teachers: An Excerpt; Ms. Brown

Let's talk through these elements using a hypothetical example.

**M**s. Brown is participating in the “Morning Meeting for SEL” MC—an elementary MC. This MC focuses on the “**micro**” competency of leading productive classroom meetings to maximize students’ social and emotional learning (SEL).

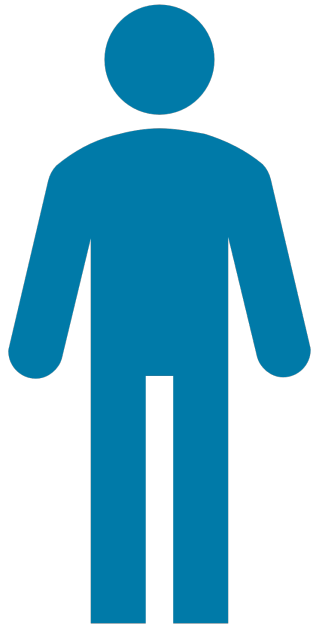
The MC “lives” on a digital platform hosted by a local university. Ms. Brown is already leading morning meetings in her classroom. As part of her school’s new focus on SEL, she also participates in regular grade-level meetings to share SEL resources with her colleagues. She is signing up for the MC because she wants some feedback on how to connect her existing morning meetings to SEL opportunities for students. Ms. Brown would also like to show her administrators that she is actively building expertise in a priority area. As part of the MC, Ms. Brown submits evidence from her classroom morning meetings, including a series of three videos, a set of activity plans, a short justification statement detailing Ms. Brown’s understanding of the purpose of the morning meeting and its connection to student SEL, and a morning meeting structure design. The university MC issuer reviews the submitted evidence. The issuer determines that Ms. Brown is meeting the standard for many of the required elements, but her meetings do not always provide students with a chance to share their thoughts and receive peer feedback individually. The issuer provides the first round of feedback, and Ms. Brown submits



She is signing up for the MC because she wants some feedback on how to connect her existing morning meetings to SEL opportunities for students.

a revised set of activity plans and one new sample video. This time, the issuer determines that Ms. Brown has met the standard and certifies her competence in “Morning Meetings for SEL” with a digital badge. Based on her MC feedback, Ms. Brown adjusts her morning meetings to better incorporate student voice and peer interactions. Ms. Brown also sends the digital badge and the details to her administrators, who save the information as part of her professional learning portfolio. Over the next year, Ms. Brown plans to participate in the entire “Class Structures to Support SEL” stack of MCs, which qualifies as a full five-credit college course.

# Problems With Professional Learning for Teachers



one size  
fits all

6%–9% of  
school budgets  
spent on  
professional  
development (PD)

20%  
satisfaction



\$50B  
spent annually



100M hours on PD

“The Mirage,” TNT, 2015; “Learning Is Not a Spectator Sport”; Carnegie Mellon University, 2015; “Teachers Know Best: Teachers’ Views on Professional Development,” Bill & Melinda Gates Foundation, 2015.

# Why Micro-Credentials?

Grounded in the authentic application of skills/competencies

Fosters evidence-based professional learning

Focuses on specific skills for each educator, facilitating differentiation and personalization for teachers

Supports self-paced professional learning system

Reduces cost

# Professional Learning Grounded in Practice

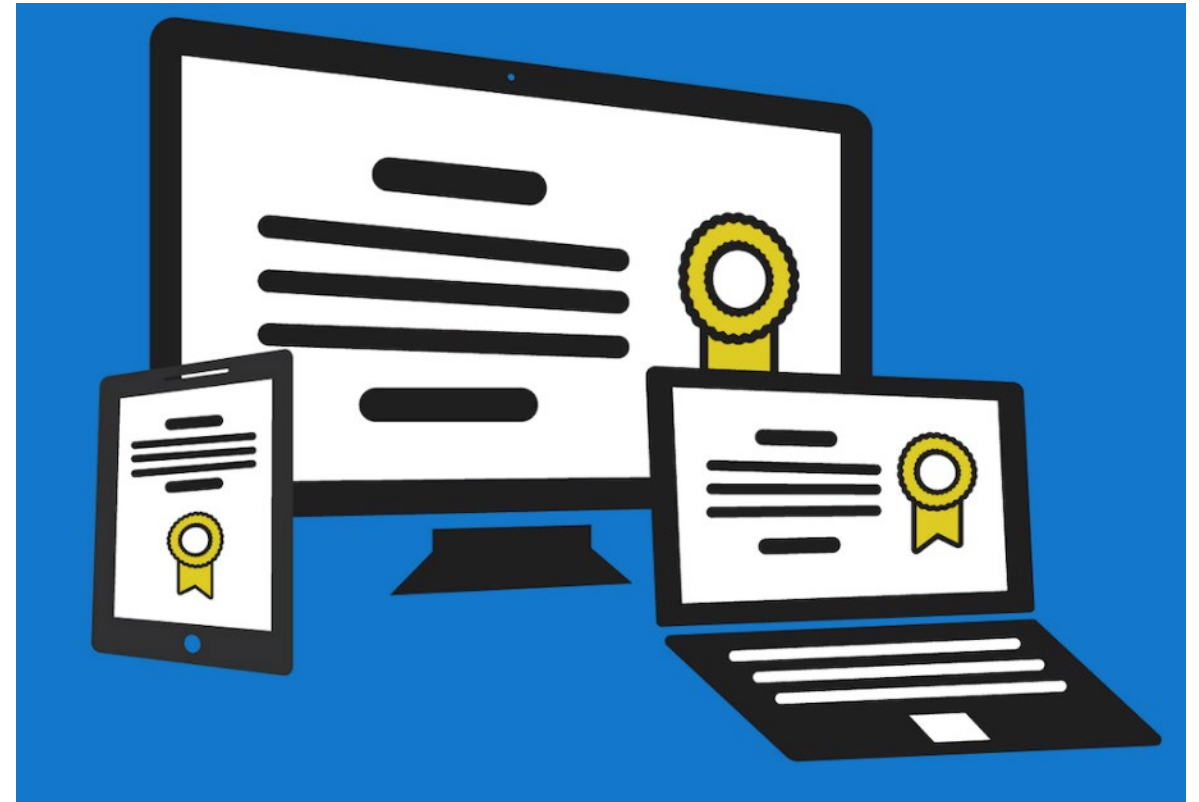
**In an ever-changing world where classrooms are evolving, new instructional tools are emerging, student demographics are changing, and community contexts matter more than ever, we must think . . . about how to make the learning experiences of teachers more grounded in their classroom practice and steeped in active inquiry and improvement cycles.**

- Raspberry, Weber, and Wilson, 2019



# What Are Micro-Credentials?

A *micro* form of certification indicating that that an educator has *demonstrated application* of a specific *competency*.



# What Are Micro-Credentials?

## What they are:

- ✓ Competency-based
- ✓ Personalized, self-directed
- ✓ Demonstration of new or existing expertise
- ✓ Available on demand
- ✓ Job embedded
- ✓ Learning by doing and applying

## What they are NOT:

- ✗ Seat-time based
- ✗ One size fits all
- ✗ Separate from teachers' classroom contexts
- ✗ Available only at set times
- ✗ Traditional online course or class
- ✗ Learning by absorbing information

# Structural Components of Micro-Credentials

Structural Component	Description
Developers	The organization(s) or individuals that identify and establish the expected knowledge and skills to be recognized through the micro-credential
Deliverers	The organization(s) or individuals that provide earners with learning opportunities and supports designed to help them gain knowledge and skills, and prepare them to earn the micro-credential
Evaluators	The organization(s) or individuals that review evidence submitted by earners, and apply criteria to assess and determine each earner's proficiency
Issuers	The organization(s) or institution(s) that formally issue the micro-credential to earners who have successfully met the proficiency criteria
Recognizers	The organization(s) or institution(s) that recognize and give currency or value to the micro-credentials, and allow them to be used by earners for various purposes

Source: (Great Lakes Comprehensive Center and Midwest Comprehensive Center, 2019, p. 3).

# Foundations of Micro-Credentials in Research

Micro-credentials include:

## Job-Embedded Professional Learning:

When learning is embedded, teachers are invested, and meaningful instructional change happens.

High-quality PD is **individualized, relevant and self-directed**, and has active learning opportunities to try new strategies in context.

*Chung, 2008; National Staff Development Council, 2010; Sato, Wei, & Darling Hammond, 2008*

## A Cycle of Inquiry:

The discipline of analyzing, reflecting, and documenting is the key to change.

High-quality PD is **problem centered and interactive**, helps teachers use data to inform their practice via plan-to-study-act, and has follow-up and continuous feedback.

*Bryk et al., 2011; Cushman, 1999; Tichnor-Wagner et al., 2017*

## Rigorous Evaluation and Assessment:

Mastery of a topic, not seat time, is evaluated and assessed.

High-quality PD **includes teachers examining and responding** to their own performance data, is based on mastery and demonstration of specific content and practice, and has a valid and rigorous review process.

*Garet et al., 2001; Institute of Education Sciences, 2010; LeBreton & Senator, 2008; Nunnally & Bernstein, 1994*

## Job-Embedded Supports and Collaboration:

Teachers develop expertise as members of collaborative, interdisciplinary teams with common goals for student learning.

High-quality PD **provides opportunities for collaboration** among teachers, is delivered by someone who understands and respects teachers, and has embedded coaching, follow-up and feedback.

*Harwell, D'Amico, Stein, & Gatti, 2000; Hill et al, 2010; National Comprehensive Center for Teacher Quality, 2011; Putnam & Borko, 2000*

# Research on Micro-Credentials: Teacher Perceptions

Teachers like using micro-credentials, they thought the skills they had to learn to earn a micro-credential were important, and they believed that their learning would lead to greater student learning (Teaching Matters, 2016).

Teachers liked the approach and felt that their practice had improved through earning them (Digital Promise, 2016a).

Teachers earning micro-credentials use what they have learned in their teaching, and the design and online platform have an effect on the experience of users (Acree, 2016).

# Relevant Examples

# Micro-Credential Example: Career and Technical Education; Computer Science

## BloomBoard/AIR: Computer Science Instruction/ Computational Thinking

1. Creating Computational Artifacts
2. Developing and Using Abstractions
3. Recognizing and Defining Computational Problems
4. Testing and Refining Computational Artifacts

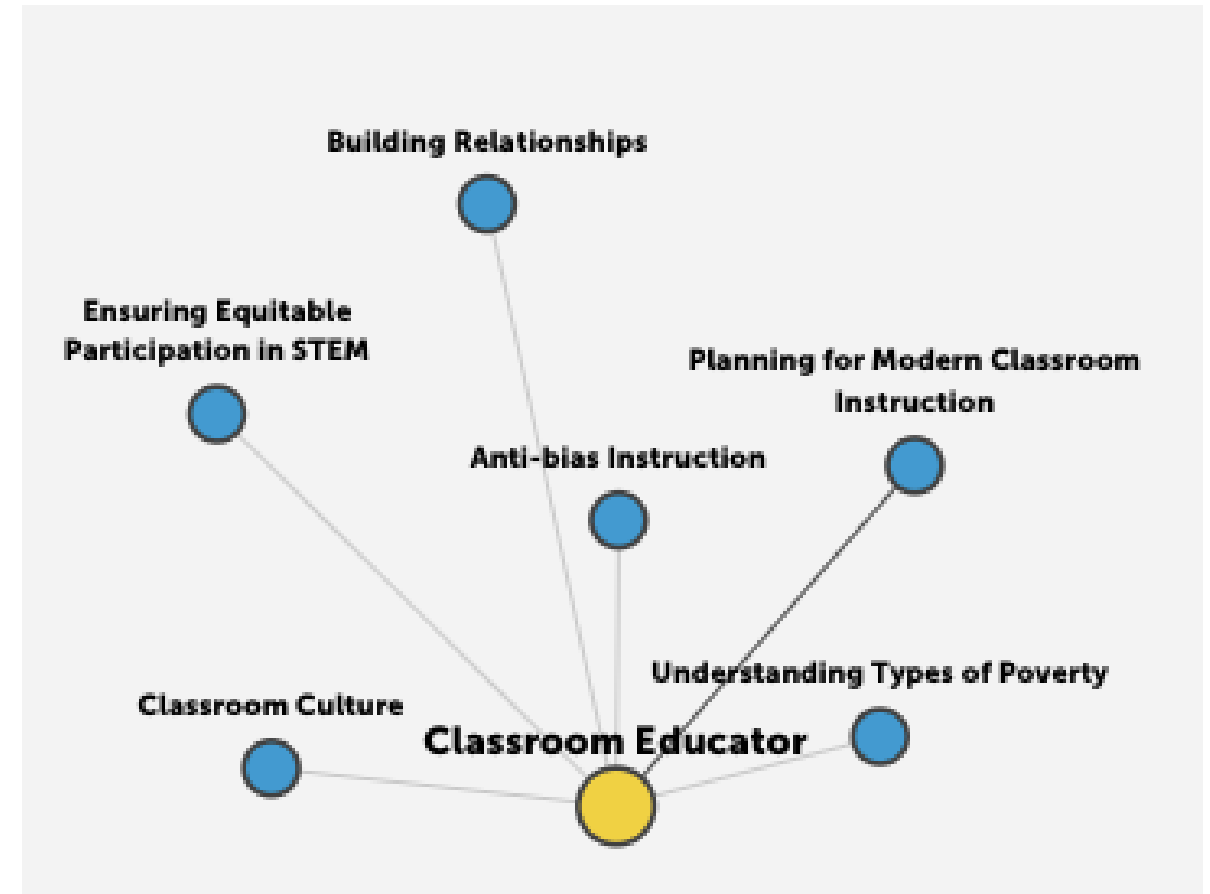


# Micro-Credential Example: Equity Cluster

Digital Promise – [Micro-credential Explorer](#)

Topic: Equity

Audience: Classroom Teacher





# Micro-Credential Example: Equity Cluster; Anti-bias Instruction

- Based on five critical components of anti-bias instruction identified in *Teaching Tolerance*, a research-based project of the Southern Poverty Law Center
  - Critical Component #1: Critical Engagement with Material
  - Critical Component #2: Differentiated Instruction
  - Critical Component #3: Cooperative and Collaborative Learning
  - Critical Component #4: Real-World Connections
  - Critical Component #5: Values-Based Assessment, Evaluation, and Grading

[Digital Promise, Anti-bias Instruction, 2020.](#)

## Anti-bias Instruction



\$35.00

Apply

The rising educator analyzes the underlying strategies and active practices of anti-bias instruction that skilled educators implement and sustain.

[Educators Rising](#)

[Beginning to Teach](#)

# Micro-Credential Example: Equity Cluster; Anti-bias Instruction

- Review material and observe practice:
  - Informally observe their own learning spaces for anti-bias instructional practices and discuss and analyze their findings with peers
  - Visit a new learning environment as an observer at least two times for at least 40 minutes per visit
  - Take detailed notes through the lens of the five critical components of anti-bias instruction
- Compose a 500-word essay reflecting on the observations
- Compose a 500-word reflective essay applying anti-bias instruction



[Digital Promise, Anti-bias Instruction, 2020.](#)

# Micro-Credential Example: Virtual Teaching

Digital Promise – [Micro-credential Explorer](#)

Topic: Digital & Media Literacy

Audience: Classroom Teacher



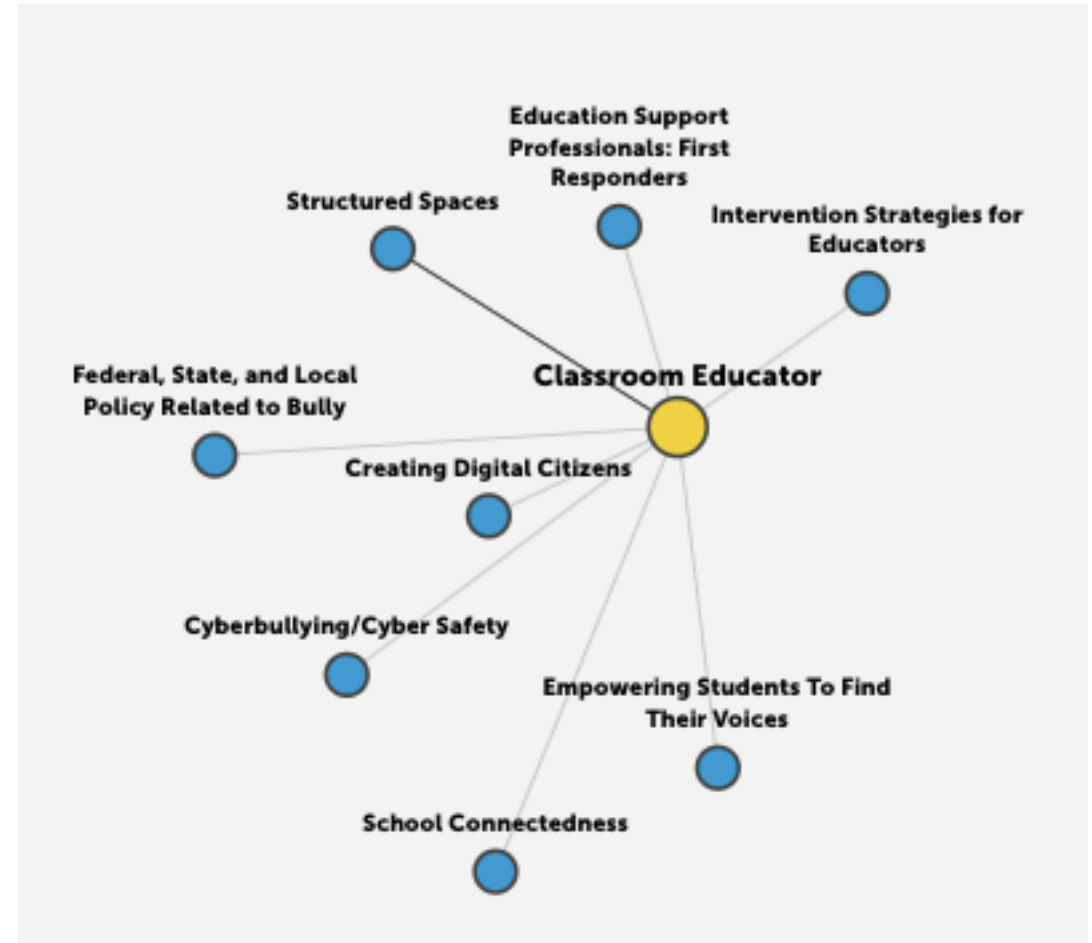
[Digital Promise: Digital Learning, 2020.](#)

# Micro-Credential Example: Virtual Teaching

Digital Promise – [Micro-credential Explorer](#)

Topic: Digital Citizenship

Audience: Classroom Teacher



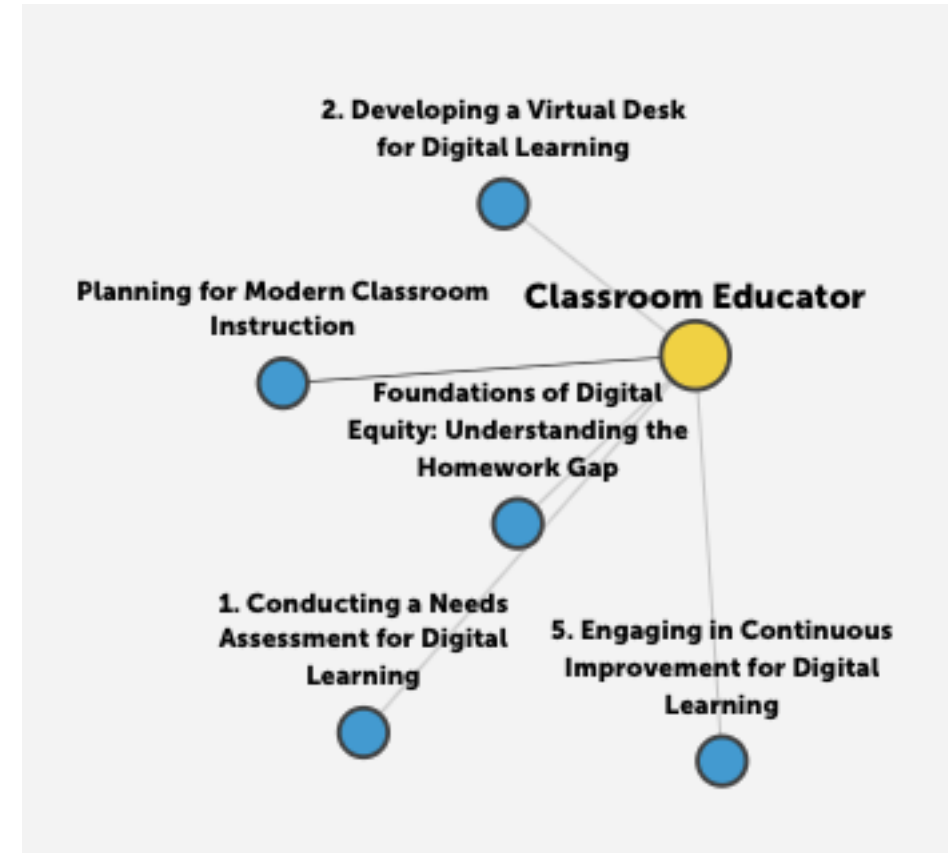
[Digital Promise: Digital Learning, 2020.](#)

# Micro-Credential Example: Virtual Teaching

Digital Promise – [Micro-credential Explorer](#)

Topic: Digital Divide

Audience: Classroom Teacher



[Digital Promise: Digital Learning, 2020.](#)

# Micro-Credential Example: Virtual Teaching

[Developing a Virtual Desk for Digital Learning](#)


[Engaging in Continuous Improvement for Digital Learning](#)

[Conducting a Needs Assessment for Digital Learning](#)

[Designing Synchronous and Asynchronous Instruction for Digital Learning](#)

[Communicating with Learners and Families to Support Digital Learning](#)

– Transitioning to Digital Learning



*No student work required.*

2. Developing a Virtual Desk for Digital Learning

5. Engaging in Continuous Improvement for Digital Learning

*Student work requires no face-to-face interaction.*

1. Conducting a Needs Assessment for Digital Learning

3. Designing Synchronous and Asynchronous Instruction for Digital Learning

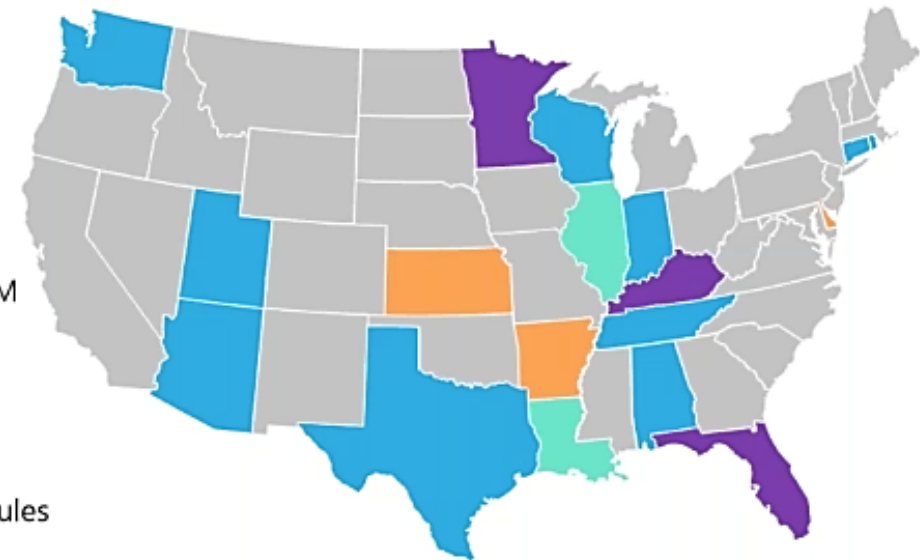
4. Communicating with Learners and Families to Support Digital Learning

# Ways That Micro-Credentials Have Been Used to Date

# Sampling of the National Micro-Credentialing Landscape

- ARKANSAS  
Teacher Induction, Teacher Leader, & Master Teacher Endorsements
- KANSAS  
Induction & Response to Intervention (RtI)
- DELAWARE  
Teacher Induction
- MINNESOTA  
CTE Alternative Certification
- KENTUCKY  
CTE / Workforce Development
- FLORIDA  
Clinical Educators & CTE / Workforce Development Pathways
- ★ DEPARTMENT OF LABOR  
Apprenticeship Employability Skills
- ILLINOIS  
Leadership for Equity
- LOUISIANA  
Teacher Leader & Principal Licensure
- ★ AASA (The Superintendent's Association)  
Superintendent Certification

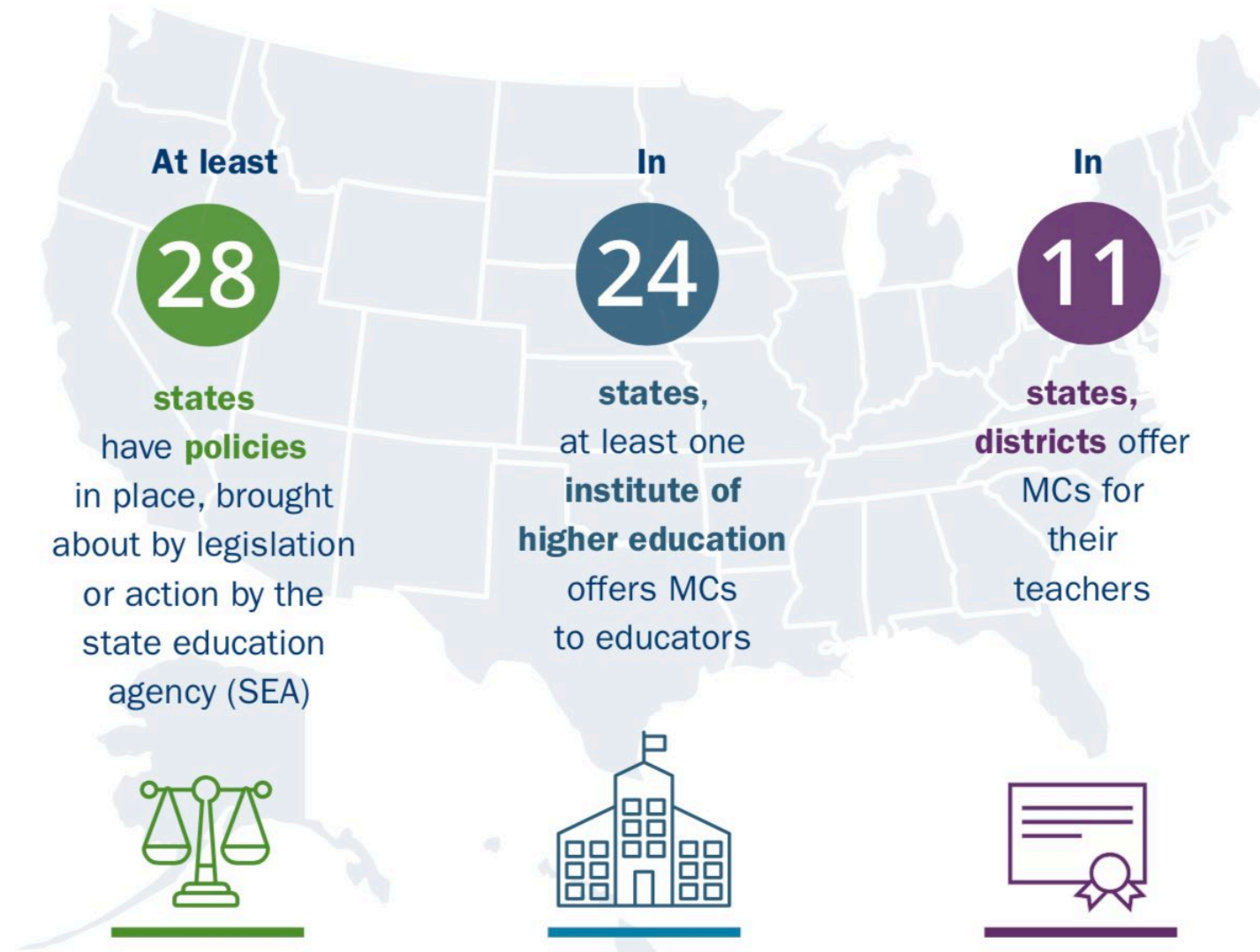
- RHODE ISLAND  
Computer Science Endorsements
- ARIZONA  
Computer Science Endorsements
- UTAH  
Financial Literacy
- TENNESSEE  
Social Emotional Learning & STEM
- ALABAMA  
Gifted & Talented, ESL, & National Board Pre-Candidacy
- WISCONSIN  
Competency-Based Salary Schedules
- TEXAS  
Micro-Credential Licensure Pathways (HB2424)
- CONNECTICUT  
English as a Second Language (ESL) & Diversity, Equity, and Inclusion
- WASHINGTON  
Computer Science & Cultural Responsiveness
- INDIANA  
Teacher Leadership & Social Emotional Learning



- New Teacher Induction
- Specific Endorsements / Add-ons
- CTE / Workforce Development
- Leadership



# Micro-Credential Use: States, Institutes of Higher Education, and Districts



# Themes of Use



Documentation of Professional Learning



Educator Talent Management



Licensure Renewal/Certification

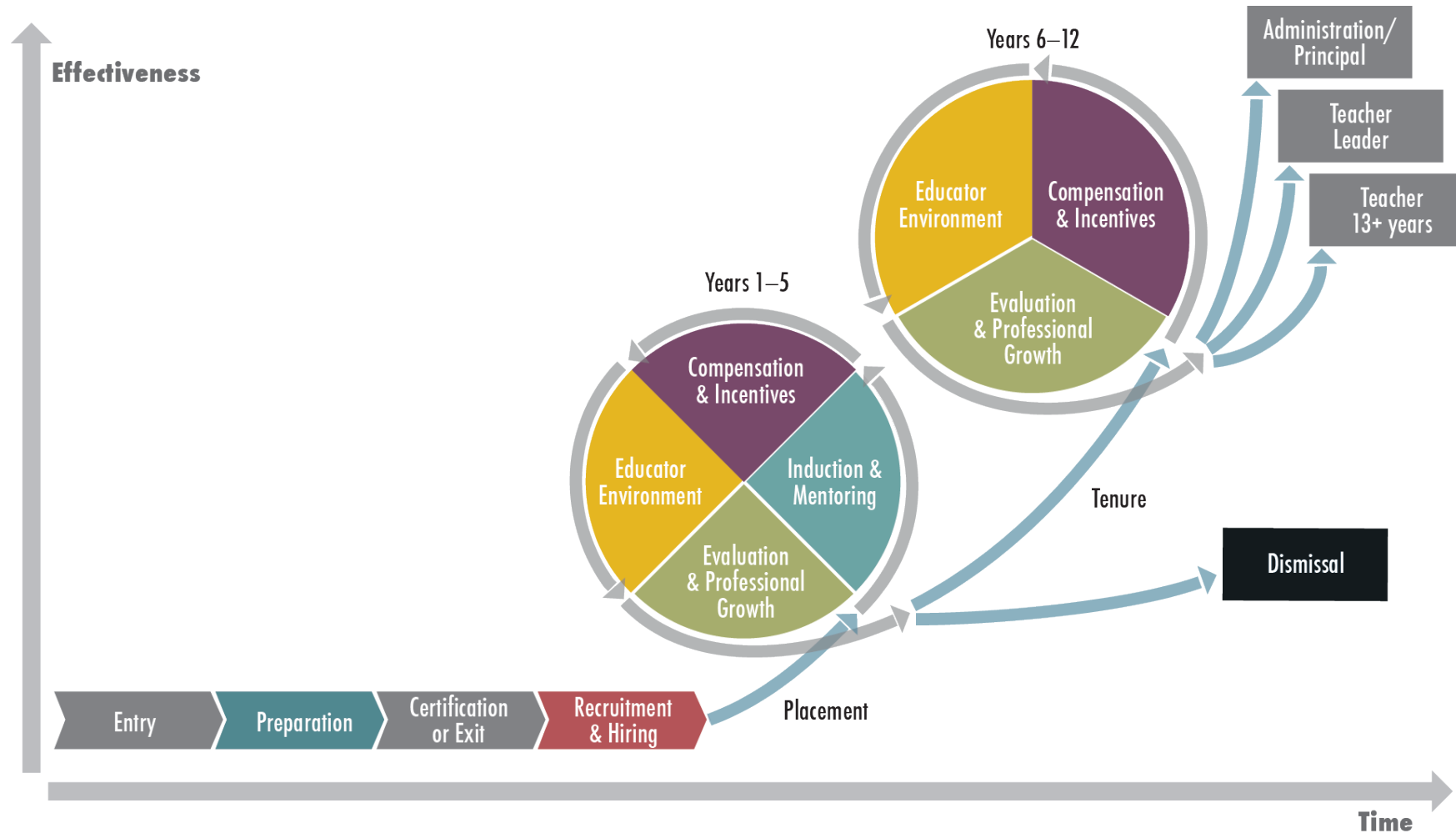


# Documentation of Professional Learning

- Baltimore County Public Schools, Maryland
- Long Beach Unified School District, California
- Michigan Elementary and Middle School Principals Association



# Educator Talent Management

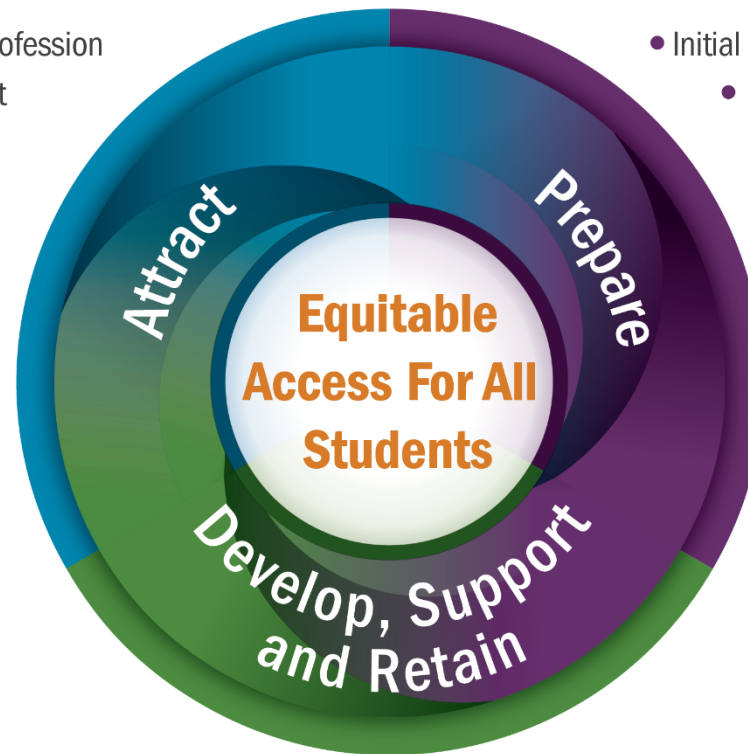


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# Micro-Credentials Can Support Talent Development

- Pathways into the profession
- Data-informed talent development
- Elevating the status of the profession



- Initial certification and licensure
- Program approval and accreditation

- Initial certification and licensure
- Recruitment, selection, and hiring
- Career advancement and tiered licensure
- Evaluation and professional learning
- Recertification and-continued licensure

- Induction and mentoring
- Educator working conditions
- Assignment and transfer
- Compensation

[https://gtlcenter.org/sites/default/files/14-2591\\_GTL\\_Talent\\_Dev\\_Framework-ed\\_110714.pdf](https://gtlcenter.org/sites/default/files/14-2591_GTL_Talent_Dev_Framework-ed_110714.pdf)

# Micro-Credentials Across the Educator Talent Pipeline



Integrated into:

- Preservice preparation and offered as an option in credentialing/licensure
- Teacher induction programs (micro-credentials for new teachers and mentors)
- Professional learning to fill in gaps (e.g., computer science, growth mindsets, culturally responsive pedagogy)
- Professional learning communities and coaching
- Evaluation and/or salary schedule advancement
- Selection into leadership programs



# License Renewal Requirements

- Alternative licensure/lateral entry
- Renewal licensure
- Specialized endorsements
- Teacher leaders





# Licensure Example: Career Technology

- Minnesota's Lakes Country Service Cooperative provides a new licensure program that uses micro-credentialing for technical education instructors and teachers:
  - Allows candidates to meet certification and licensure standards that demonstrate their content knowledge, classroom experience, and pedagogical practices and qualifications based on a combination of occupational testing, professional certification or licensure, and long-standing work experience.
  - As candidates progress, they will submit artifacts to be reviewed (by content experts) in relation to the specific micro-credential. If the candidate provides enough evidence of competency, then the micro-credential will be granted; once the candidate obtains each required micro-credential, then their program is considered complete.



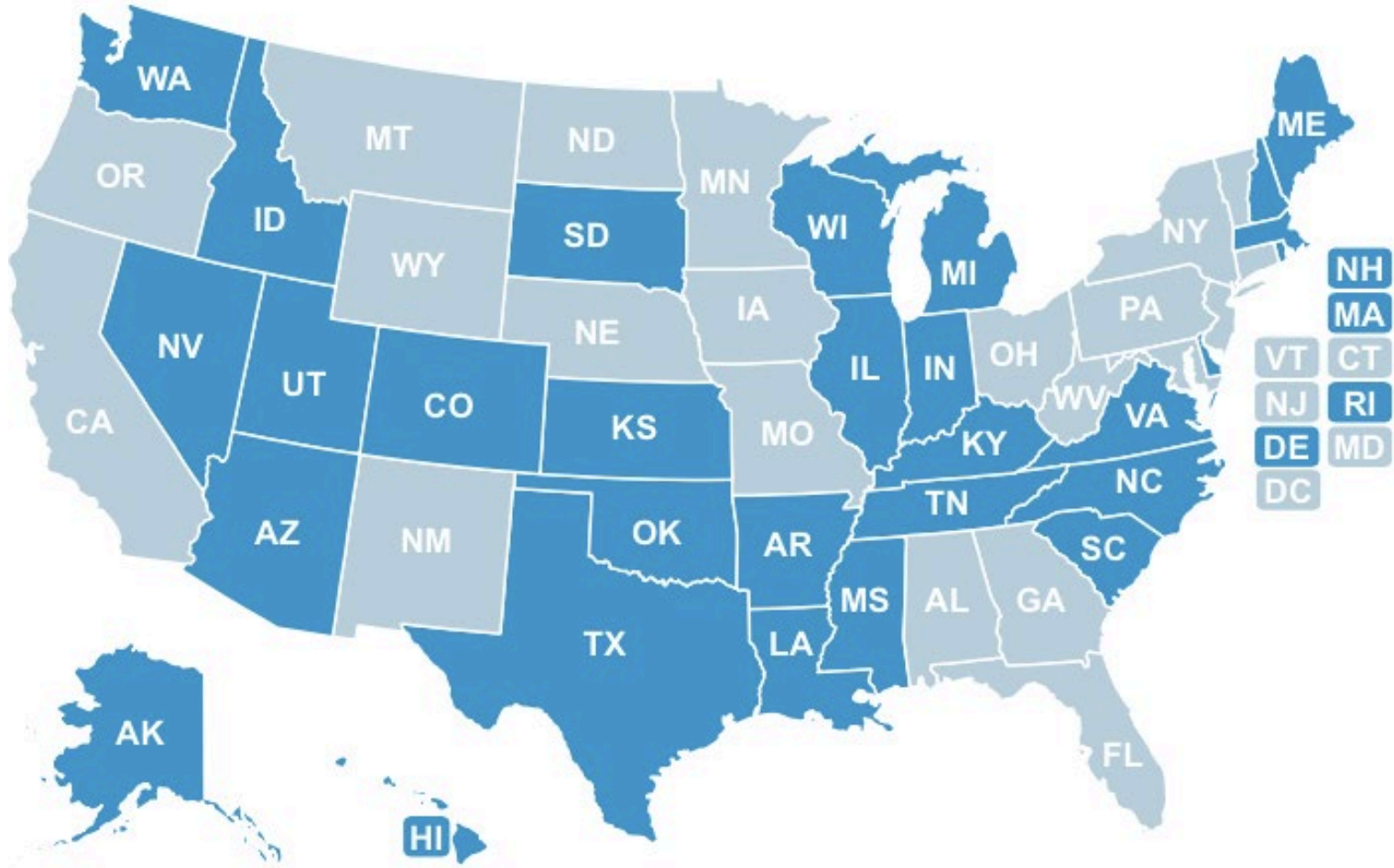
# At the End of the Day: Issuers and Recognizers Need to Examine the Purpose of the Micro-credential

What is the purpose of the micro-credential?

- Teachers may value micro-credentials as a way to earn a promotion, an endorsement, or as a way to advance or renew their license. They may appreciate portability.
- Districts may value micro-credentials for recruitment, hiring and promotion purposes or they may see an emerging professional learning need that is best addressed via micro-credential (e.g. virtual teaching).
- States may value micro-credentials because they answer a specific need in terms of professional learning or credential. The micro-credential may address specific shortages or address equitable access.

# Policy Considerations Related to Micro-Credentials

# Policy Considerations: State-level Policy



Digital Promise: Policy Map, 2020.

# Policy Considerations

- Most states are adding micro-credentials as an optional pathway to endorsements, and licensure advancement and renewal.
- Some state policy for professional learning requires a shift from prioritizing seat-time to competency-based learning.
- Many states start with a pilot in an area of need (e.g. computer science, social and emotional learning, equity)

# Kentucky – Rank II Licensure

Since 2017, Kentucky has allowed certified teachers to renew certificates or achieve advanced ranks through pathways other than university-based programs. They recently piloted micro-credentials to allow certified teachers to achieve Kentucky's second tier of professional licensure known as Rank II.

# Tennessee – Licensure advancement and renewal

Educators must earn a total of thirty (30) professional development points (PDPs) to advance or a total of sixty (60) PDPs to renew a teacher license including professional, professional occupational, and professional school services personnel licenses. Approved Micro-credentials are equivalent to five PDPs.

# Arizona - Endorsements

In 2019, The State Board of Education approved endorsements that require a combination of professional learning, academic coursework, and/or competency-based credentials.

Micro credentials can be used: Fifteen clock hours of professional learning or an analogous micro-credential is equivalent to one semester hour of college coursework, assuming the required topics are covered.

# Varieties of Micro-credential Issuers and Recognizers

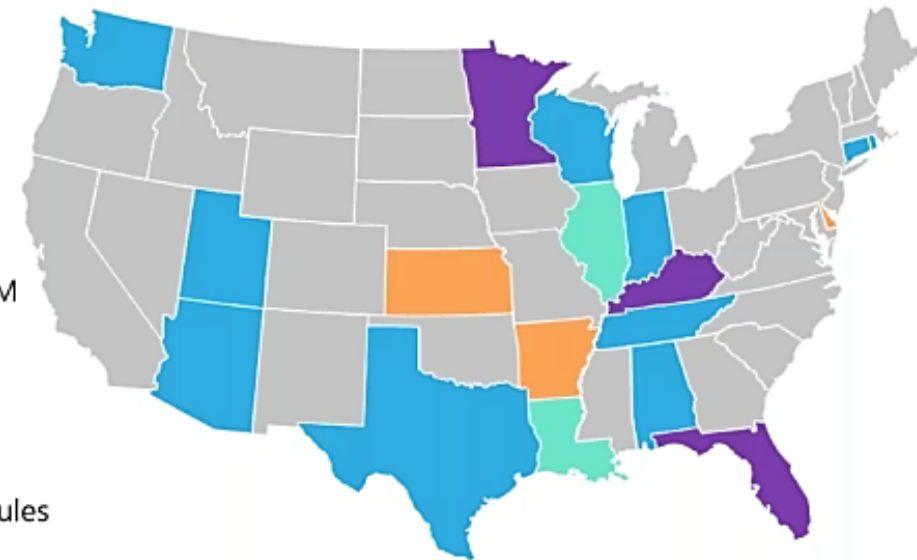
- Institutes of Higher Education – UC-Davis, GA Institute of Technology, U of Montana
- Professional Organizations – NEA, South Dakota and Louisiana Education Associations
- State Education Agencies – Kentucky, Tennessee, Arkansas, Virginia
- State Boards of Education – Illinois, Texas, Utah
- Professional Educator Standards Board – Washington
- Districts – Rancho Minerva, CA; Long Beach Unified, Baltimore, Kettle Moraine
- Regional Education Entities - Minnesota and Lakes Country Service Cooperative
- Collaboratives. – Maine State of Learning, Code.org



# Sampling of the National Micro-Credentialing Landscape

- ARKANSAS  
Teacher Induction, Teacher Leader, & Master Teacher Endorsements
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Induction & Response to Intervention (RtI)
- DELAWARE  
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Clinical Educators & CTE / Workforce Development Pathways
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Apprenticeship Employability Skills
- ILLINOIS  
Leadership for Equity
- LOUISIANA  
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Superintendent Certification

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Teacher Leadership & Social Emotional Learning



- New Teacher Induction
- Specific Endorsements / Add-ons
- CTE / Workforce Development
- Leadership

# Early Implementation Lessons Learned From Teachers


1. Teachers who earn micro-credentials want to earn more.
2. Micro-credentials encourage teachers to apply skills to classroom practice.
3. Micro-credentials scaffold teachers to engage at an increased level of rigor.
4. Teachers can demonstrate competency/mastery in a variety of ways.
5. Instructional design and online platform matter.
6. Micro-credentials should not have a one-size-fits-all approach.
7. Many questions still exist about micro-credentials.

# Resources/Lessons Learned

CROSS-STATE COLLECTIVE INQUIRY PROJECT  
**Micro-Credential Quality Criteria**

Version 1.0

SEPTEMBER 2019



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Comprehensive Center  
at American Institutes for Research

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EXPLORING MICRO-CREDENTIALS WITH  
STAKEHOLDERS:  
**A Conversation Guide**

Version 1.0

SEPTEMBER 2019



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**Micro-credentials for Teachers**  
What Three Early Adopter States Have Learned So Far

By Jenny DeMonte

**The Challenge of Teacher Professional Development**

State education agencies make it clear that professional development is critical to the success of teachers and, subsequently, their students. On its website, one state education agency stated that, "Every child in every community deserves excellent classroom teachers and building leaders who are supported in their professional growth" (Colorado Department of Education, 2017, para. 1). Another website said, "The purpose of all teacher professional development is to help teachers develop and apply the knowledge and skills necessary to help students learn" (Oregon Department of Education, 2017, para. 1).

As they acknowledge, promote, and support the importance of professional development, state education agencies continue to search for professional learning opportunities for teachers that align with their educational standards and focus on instructional skills that will result in improved teaching and learning. But these efforts are unlikely to uncover excellent resources. Research on professional development has shown that its effects on teaching and learning are uneven (TNTP 2016). Some promising and effective professional development materials and programs exist, but many do not deliver the anticipated results. Teachers know this too and are likely to discount the importance and benefits of continuing education and other professional learning offered by states and school districts (DeMonte, 2013).

According to one report (Boston Consulting Group, 2014), states and districts in the United States spend more than \$18 billion per year on professional development, and a teacher will, on average, spend about 68 hours per year in professional learning activities paid for by states and districts. For that investment, states and districts want to see results.

Teachers want to participate in professional development opportunities that are related to the work they do in their own classrooms (DeMonte, 2013). They also want professional development that extends over time, rather than one-shot, sit-and-get programs (Archibald, Cogshall, Croft, & Goo, 2011). Teachers have expressed interest in using technology in their professional learning, and they value the

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# Questions Remain

1. To what extent do stakeholders value micro-credentials?
2. For what purpose would micro-credentials be used by a state, district, IHE, or teacher?
3. How should micro-credentials measure competence and learning for teachers?
4. What is the impact of micro-credentials on teaching and learning?
5. What is the ideal structure or system for micro-credentials, given the purpose(s)?

# Questions



# Resources

# Resources

- [Digital Promise: Micro-credentials COVID-19 Library](#)
- [Digital Promise: \*\*Creating an Inclusive Environment for Computational Thinking\*\* micro-credential](#)
- [BloomBoard: What Are Micro-credentials?](#)
- [BloomBoard webinar: The Playbook for Fall: Preparing Teachers for Effective Blended Learning](#)

# Resources

- Archibald, S., Coggshall, J., Croft, A., & Goe, L. (2011). *High-quality professional development for all teachers: Effectively allocating resources*. Washington, DC: National Comprehensive Center for Teacher Quality. Retrieved from <https://gtlcenter.org/sites/default/files/docs/HighQualityProfessionalDevelopment.pdf>
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# Resources

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# Resources

Sato, M., Wei, R. C., & Darling-Hammond, L. (2008). Improving teachers' assessment practices through professional development: The case of national board certification. *American Educational Research Journal*, 45(3), 669–700.

Tichnor-Wagner, A., Wachen, J., Cannata, M., & Cohen-Vogel, L. (2017). Continuous improvement in the public school context: Understanding how educators respond to Plan–Do–Study–Act cycles. *Journal of Educational Change*, 18, 1–30.

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MAKING  
RESEARCH  
RELEVANT

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# Additional Information

# AIR's Micro-Credential Implementation Path



## Micro-Credential Implementation Path

