Thinking About Quality for Digital Credentials

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Heather McKay

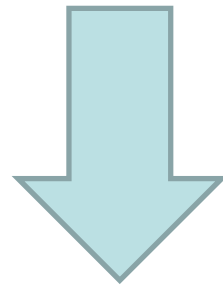Education & Employment Research Center

Rutgers, The State University of New Jersey

Josh Johnson

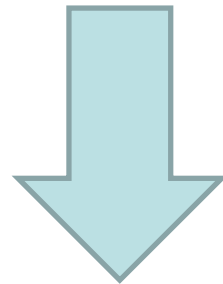Sr. Director, Learning Product Owner

Walmart

Rutgers, The State University of New Jersey

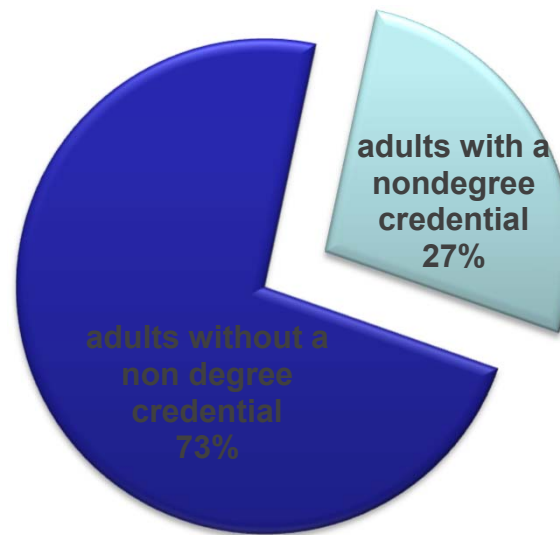# The Rise of Non-Degree Credentials

Rapidly changing labor market

Increased need for lifelong learning, just in time training

Proliferation of different types of NDCs

Many Adults Hold NDCs

In 2016, a total of 27 percent of adults reported having a nondegree credential—a postsecondary certificate, a certification, or a license. (NCES 2017)

adults with a nondegree credential 27%

adults without a non degree credential 73%

☐ adults with a nondegree credential   ☐ adults without a non degree credential

Types and Definitions of Non-Degree Credentials

Type	Definition
Sub baccalaureate credit certificates	Credential awarded by an educational institution for completion of a subbaccalaureate credit educational program, usually less than one year in length (short-term and long-term credit)
Non-credit certificates	Credential awarded by an institution (educational or workplace) for completion of a noncredit educational program
Apprenticeship	Credential awarded after completion of structured educational and workplace program based on industry and occupational standards.
Industry certification	Credential awarded by an industry body or governmental agency for demonstration of skills typically via examination based on industry or occupational standards.
Occupational or professional licensure	Credential awarded by a governmental agency for demonstration of skills in a specific occupation and sometimes also completion of an educational program; often required to work in an occupation.
Badges, microcredentials	Credential awarded for completion of a short program of study or demonstration of a targeted set of skills; these are newly emerging and are still being developed.

What Do We Know About NDCs?

- Awarded by a wide range of organizations
  - Colleges, industry groups, unions, government, etc.

- Awarded based on a variety of criteria
  - Course completion, work experience, examination, etc.

- Learning occurs in many locales
  - At school, at work, informally

- Data is located in many sources
  - State data systems, industry data, national surveys

"The Wild West"

- Understanding quality of NDCs is incredibly difficult.

- There is no single system, set of standards or mechanism to help workers, employers, policymakers, and educational institutions define quality or measure it.

- Understanding which NDCs are quality varies by:
    - Geography
    - Industry
    - Consumer

What is a "Quality" NDC?

- Quality from who's perspective
  - Credential holder vs. employer vs. educational institution vs. policymaker
  - Potential tension in goals
  - Equity implications

- Potential variation based on context, e.g. industry, occupation, labor market, organization

- Conceptual framework can be a guide and a diagnostic tool

Key Elements of Non-Degree Credential Quality

- *Credential design*. This element includes numerous features, usually decided on by the credential grantor, that define what a credential represents in terms of the competencies it marks and how it seeks to do so.

- *Competencies.* These are the skills and knowledge that the credential aims to represent.

- *Market Processes*. This term refers to the ways that a credential comes to be recognized and have currency in the world.

- *Outcomes.* The accumulation of competencies represented by credentials are expected to generate outcomes of value, typically in terms of the educational, employment, and social advancement of individuals, employers, and society.

Conceptual Model of Non-Degree Credential Quality

FIGURE 1: CONCEPTUAL MODEL OF NON-DEGREE CREDENTIAL QUALITY

CREDENTIAL DESIGN
- Content relevance
- Instructional process
- Assessment process
- Stackability and portability
- Transparency
- Accessibility and affordability

COMPETENCIES
- Demonstrated competencies including general knowledge, specialized skills, personal skills and social skills

MARKET PROCESSES
- Transparency initiatives
- Awareness of credential and/or credential granter
- Endorsements and validations
- State regulations
- Employer hiring policies and practices
- Educational institutions' recognition of learning

OUTCOMES

INDIVIDUAL

EMPLOYMENT
- Job attainment
- Wage gains
- Promotion
- Retention

EDUCATIONAL
- Stacking of additional credentials
- Completion of academic degree(s)

SOCIAL
- Improved health and well-being
- Greater civic Involvement
- Intergenerational benefits

SOCIETAL

EMPLOYER
- Employee pipeline
- Better retention
- Higher skills and productivity
- Increased diversity

SOCIETY
- Better public safety
- Increased efficiency
- Reduced inequality
- More civic engagement

Credential Design

- Competency relevance

- Instructional process

- Assessment process – initial and ongoing

- Stackability and portability

- Transparency

- Accessibility and affordability

Competencies

- Demonstrated competencies
  - Including general knowledge, specialized skills, personal skills, and social skills

Market Processes

- Transparency initiatives

- Awareness of the credential and/or the credential grantor

- Endorsements or validations

- State regulation

- Employer hiring practice and politics

- Educational institutions recognition of learning

Outcomes

- Individual economic outcomes
- Individual educational outcomes
- Individual social outcomes
- Employer outcomes
- Societal outcomes

Implications for Policy and Practice

- Need to….
  - Create awareness of non-degree credential quality and how to measure it.
  - Collect better information on non-degree credential quality and outcomes.
  - Develop and promote systems to assess non-degree credential quality.
  - Promote and understand the use of data on non-degree credential quality.

- States are currently developing quality measures that draw from elements of this framework

Existing Systems for Assessing NDC Quality

- Educational Institutions
  - Prior learning assessment
  - Competency-based learning
  - Beta Credential Framework
  - Quality Assurance Commons for Higher and Postsecondary Education

- States
  - Quality standards
  - Eligible Training Provider List (ETPL)
  - Sector Strategies
  - State-Wide Longitudinal Data Systems (SLDS)

- National efforts
  - Credential Engine
  - ANSI standards for certificate programs, continuing education

- Accreditation

Digital Credentials
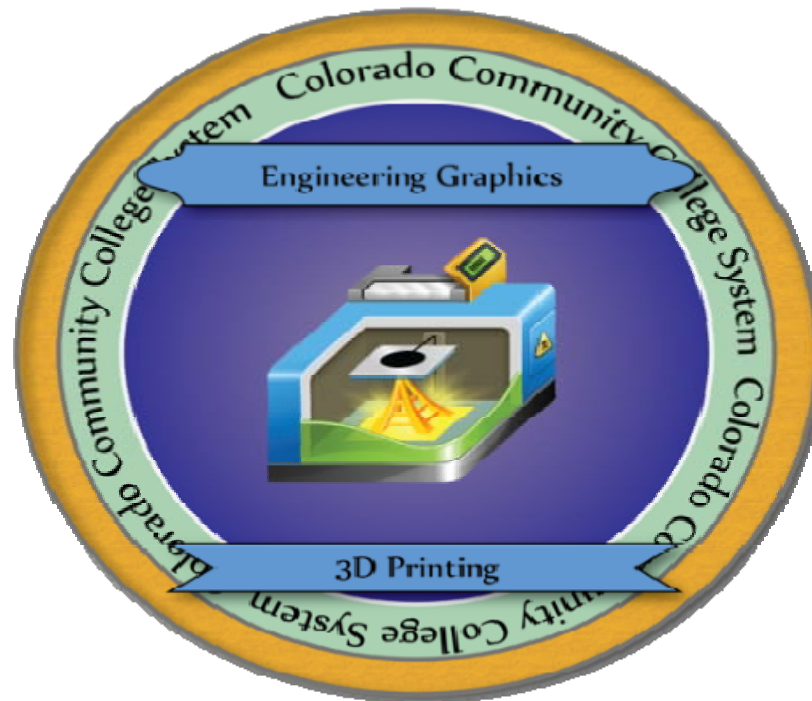
CCCS Technical Math Badges

Essential Geometry Mastery
Essential Statistics Mastery
Systems of Equations Skills
Math- Angles & Triangle and Geometric Concepts Skills Badge
Math- Essential Trigonometry Mastery
Formulas and Variation Skills
Math-Algebraic Functions Skills Badge
Math-Circles & Polygons Perimeter & Circumference and Area Skills Badge
Equations and Formulas Skills
Math-Essential Finance Mastery
Essential Math Mastery
Math-Exponential and Logarithmic Functions Skills Badge
Math-Exponents, Roots, Powers of 10 & Scientific Notation Skills Badge
Math-Finance, Simple and Compound Interest Skills Badge
Math-Fundamental Concepts and Operations of Algebra Mastery
Graphing Skills
Ratio, Proportion & Percent Mastery
Ratio, Proportions, and Percent Skills
Solving Quadratic Equations Skills
Statistics Mean, Median, Mode and Probabilities Skills
Math-Trig Functions, Sine, Cosine & Tangent Skills Badge
Math-Units & Systems of Measurement Skills Badge
Vectors Skills
Math-Volume of Geometric Solids Skills Badge

Quality in Badging: Using the Framework

- Making the credential
  - Variety of players, higher ed, industry and others
  - Are they industry relevant?
  - Are they stackable and portability?
  - What is the instructional process?
  - How are skills and competencies assessed?
  - Are they accessible and affordable?

- Competencies

  "*verification data and evidence of skill attainment to the badge image file, hard-coding the metadata*"

  (Perea, Chieppo, and Woodmansee, n.d.)

Quality in Badging: Using the Framework

- Market Processes
  - Awarding institution or body
  - Design of the badge
  - Awareness in higher ed, among employers among earners
  - Spread of the badge
  - Endorsement   Outcomes
  - Recognition of learning in higher education pathways
  - Employer interest and hiring, retention, promotion
  - Integration of the badge in comprehensive learner records – future

Quality in Badging: Using the Framework

- Outcomes
  - How many microcredentials are there?
  - Who has them and what are people using them for?
  - Data on outcomes is a challenge – educational and labor market
  - Credentials designed to be stacked and latticed
  - Employer data could be very useful
  - Other outcomes that could be of interest – milestone, momentum point, lifelong learning.

Walmart Example

For More Information, Contact Us.

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