Priority 1 Feasibility Research: Focus Group Summary

Incremental Credentialing

CREDENTIAL AS YOU GO

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Introduction

This document summarizes analysis of narrative evidence collected through focus groups for the Credential As You Go initiative's incremental credential feasibility study, named as Priority 1 for the 3-year grant project funded by the U.S. Department of Education Institute of Education Sciences (IES).

This research was developed and implemented by Evaluand LLC (Reston, VA) on a subaward by SUNY Empire State University, the IES Credential As You Go grantee and institution of the State University of New York (SUNY) system.

Analysis of responses from focus group participants addresses three research questions, defined *a priori* in the grant proposal to address the overarching question of *How feasible is the Incremental Credential (IC) Framework across higher education systems and institutions?* [1]

> ***Research Question 2:*** *What* ***factors*** *influence implementation of [incremental credentials] at, and between, the system and institutional levels of state postsecondary education?* [2]

For the purposes of addressing this question, "factors" are defined as influences external to higher education institutions and state systems. These factors may either support or confound the development and implementation of incremental credentials or credentialing models.

> ***Research Question 5:*** *Which* ***actions*** *support implementation of the [incremental credentials] and corresponding policies and processes across different levels of state postsecondary education system stakeholder groups, and in what ways?*

For this study, "actions" are defined as activities aiming to influence implementation of incremental credentialing, at both the state system and institution levels, considering both external factors (Research Question 2) and internal conditions (Research Question 7) that bear on such efforts.

> ***Research Question 7:*** *What* ***conditions*** *(e.g., existing student information and degree auditing systems) enable or constrain development and execution of ICs at the academic area level (within institutions), particularly for similar content at different institutions? At the institutional level? At the state (and system) level?*

"Conditions" are defined for this study as influences in credentialing actions internal to higher education institutions. They may be thought of as either supporting or confounding an institution's ability to implement innovations in incremental credentialing, influencing and framing "readiness" as defined for the Priority 1 study.

By design, Priority 1 data collection used two additional prompts to specifically examine domains of **technology** and **communication** as being of particular interest within the *factors-conditions-actions* schema defined by the above research questions (Figure 1, following page).

[1] Other evaluation questions will be addressed through additional data collection and analysis designed for the broader feasibility study.

[2] Evaluation questions as initially proposed referred to the Credential As You Go Incremental Credential "Framework." As the study progressed, informants were better able to talk about incremental credentials or credentialing processes in terms not so specific to the Credential As You Go model.

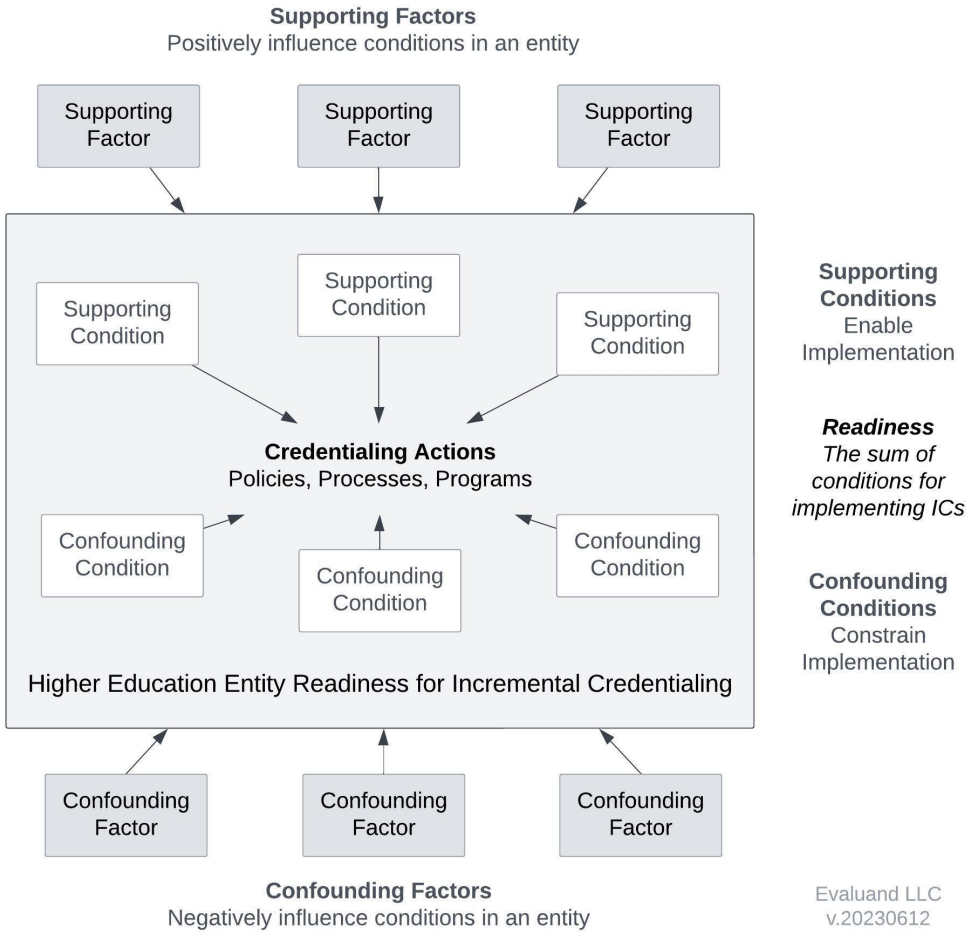

Figure 1: Credential As You Go Incremental Credential Readiness Model

The findings presented in this report do not attempt to fully parse distinctions among factors, conditions, and actions one from another. Rather, they frame the substance of phenomena raised by focus group participants as bearing particularly on incremental credentialing efforts. Note also that findings are not presented in terms of comparisons by informant group or at the individual state or institution level; rather, they represent prevailing ideas shared by Credential As You Go stakeholder focus group participants from across the United States.

Focus Group Data Collection

Definition of the Study Population and Subgroups

Focus group participants were recruited from among individuals actively engaged in the Credential As You Go initiative, from across the roles defined for the grant-funded initiative:

- Advisory Board members
- State-level steering committees (in Colorado, New York, and North Carolina)
- Institutional and state system data contacts
- State higher education leads responsible for steering incremental credentialing efforts central to the project

Credential As You Go project staff—including Principal Investigators (PIs), project managers, State Coordinators, and research team members—were defined as not being study informants. Individuals in these groups must have been actively involved in the project at the time focus group recruiting began to be considered for participation. A small number of informants were added as the study progressed; in all cases these were colleagues invited to contribute by individuals recruited from the above groups.

Potential participants were divided into five categories to allow focus group sessions to be convened in professional role-alike groups. This decision was guided by two considerations: (1) the need to structure questioning protocols to accommodate different perspectives on issues relating to the feasibility of incremental credentialing models and strategies, and (2) to decrease the likelihood of power differentials (e.g., a university data manager in a group with her provost) that might influence either information sharing or participant safety. Project researchers established the following categories based on individuals' locations in the "learn-and-work ecosystem," irrespective of their role in the Credential As You Go initiative, in collaboration with the project PI and Project Coordinator and with input from project State Coordinators:

- **Learn and Work Professionals**: Individuals affiliated with community-based, philanthropic, research, policy, or advocacy organizations, and other entities defined as being in the learn-and-work ecosystem[3]
- **Employers**: Representatives of industry and affiliated professional associations
- **System Administrators**: Administrative staff members employed by state higher education systems
- **Institution Administrators**: Administrators at individual universities or colleges
- **Institution Faculty and Professional Staff**: Higher education institution staff most closely connected with learners, including teaching faculty and those in program, department, and office leadership roles

Data collection and analysis were based on the proposition that individuals in the five different subgroups would tend to be involved in the development and deployment of new incremental credentials in ways that were consistent within their subgroup, but would differ group-to-group as members viewed credentialing through different experience and priority lenses.

Approximately 240 individuals were invited from the Credential As You Go project contact list to participate in focus groups, across the five subgroups. Evidence suggests, however, that some email messages did not reach their intended recipient despite the research team's efforts (e.g., due to interception by junk mail filters).

[3] Most Learn and Work Professionals had higher education institution or state agency experience.

Recruiting, Consent, and Scheduling Processes

The research team managed focus group session recruiting and consent processes, scheduling of Zoom-facilitated sessions, and collection of recorded audio content, keeping participants in the subgroups described above. The Priority 1 research manager sent an initial outreach email message to all potential participants. These were broken into small batches and sent from his address (rather than through system-generated mass mailings) in an effort to help avoid email spam filters. This message introduced the study and framed informed consent protections as approved by the SUNY Empire University Institutional Review Board (IRB) overseeing the research. It also checked respondents' preferred email address and provided guidance to head off spam filters intercepting future email messages from the online system used to manage consents.

Initial outreach was followed by automated distribution of invitations to complete the IRB-approved consent form—a first invitation plus two reminders to individuals who had not completed the form. The project PI, Priority 1 research manager, and other project leaders also reached out to potential participants by multiple means, reminding them of the role of the Priority 1 research in the broader Credential As You Go effort.

An initial calendar of 46 focus group sessions was established, to be convened between 12 December 2022 and 27 January 2023. Efforts were made to offer a variety of days and times to members of each of the five groups defined for the study, and to consider likely institution scheduling limitations around the holidays. Consent forms listed available slots on the final page of the form (visible only after consent was affirmed), for which those opting in could indicate their availability. A total of 75 individuals eventually provided affirmative consent, while three actively opted out of the study. The remainder, not formally responding to the consent invitation, were excluded from further study activities. The Priority 1 study manager coordinated with consented participants to assign them to groups, considering their scheduling preferences while balancing group sizes.

Table 1 (below) shows how subgroups translated into sessions and active contributors over the whole of the focus group effort, illustrating the size of each subgroup within the target population of Credential As You Go contributors, the number of sessions initially calendared (based on a target average of five informants per session), the number of sessions successfully convened, and the number and percentage of eventual contributors by subgroup.

Table 1: Focus Group Analytic Sample

Population Subgroups	**Learn and Work Professionals**	**Employers**	**System Administrators**	**Institution Administrators**	**Institution Faculty and Professional Staff**
Subgroup Size	103	21	26	27	64
Sessions Initially Scheduled	19	5	5	5	12
Sessions Convened	10	3	4	6 [4]	7
Active Contributors (% of subgroup)	23 (22%)	3 (14%)	11 (42%)	11 (40%)	12 (19%)

[4] Two additional sessions were scheduled to accommodate participants' schedules.

No-shows for focus groups were common. When this occurred, the study manager contacted missing informants by email, acknowledging the demands of their schedules and listing dates and times for future sessions established for their subgroup. Of those affirming consent, 15 individuals either did not schedule a group date and time, or did but failed to attend and subsequently did not reschedule for a later focus group on the calendar.

All told, a total of 60 individuals actively contributed in 30 separate focus group or interview sessions for this study, ranging in size from one to six individuals. Considering the states actively engaged in the IES-funded Credential As You Go project—among participants in the three higher education affiliated groups—14 participants were from Colorado, 7 from North Carolina, and 9 from New York State. The remaining four were Credential As You Go board members affiliated with higher education systems or institutions in other states not formally partnering in the IES project. The focus groups ultimately generated more than 25 hours of recorded audio narrative.

Importantly, findings from analysis of narrative provided by focus group participants must not be mistaken as describing the thinking of the group initially invited to participate (i.e., informants are not a representative sample of the pool from which they were drawn).

Questioning Protocols

An initial framework for questioning protocols to collect that information was submitted to and approved by the IRB. Prompts and probing questions were designed to encourage participants to share their thoughts regarding innovative credentialing—particularly related to external factors and internal conditions influencing their development and execution of incremental credentials.

The initial design was resolved into two distinct protocols: one for participants external to higher education systems (in the Learn and Work Professionals and Employers subgroups); and the second for higher education institution and state agency representatives(in the remaining three subgroups). These two semi-structured questioning guides differed primarily in the opening question, designed to establish the foundation on which questioning could frame inquiry into factors and conditions influencing the feasibility of new incremental credentials:

> **For those external to higher ed systems:** *From a national perspective, what kinds of [incremental credentials] would be most beneficial to learners, in terms of content and/or type of credential?* (The word “type” was elaborated to include models, features, credit structure, or any other attribute the respondent felt might be important.)
>
> **For those in higher education systems or institutions:** *What kinds of incremental credentials are being implemented within your sphere of influence and, to the extent the answer might be different, what kinds should be developed?*

The balance of both questioning protocols then prompted participants to talk about influences (internal and external, positive or negative) that they believe bear on developing and deploying innovative incremental credentials. As time allowed, the topics of communication and technology were the subject of additional probing questions. In closing, participants were encouraged to share any information that the facilitator had not asked about but that they believed might be informative.

One foundational aspect of the protocol framework as originally conceived was modified following the first four focus group meetings. From those initial sessions, study participants seemed not to be familiar enough with the six approaches within the Credential As You Go *Incremental Credentialing Framework* to be able to relate them to the credentials they introduced in response to the framing questions above. This led to some confusion and discomfort among participants (e.g., one searched online for the framework to reference it in their response), so the Priority 1 study manager decided to stop asking that question.

Showcase and Technology Interview Content

A number of Credential As You Go contributors were interviewed to provide video for edited, pre-recorded informational content to be shared within the community growing up around the initiative. The research team later contacted the individuals interviewed for these segments to secure their permission (and informed consent if they were not already in the focus group pool) to add their interview content to the Priority 1 analysis. For the eight contributors who granted consent, and for whom information shared aligned substantively with the guiding questions for the focus groups, audio files were transcribed and added to the cumulative narrative record for analysis.

Analysis

Audio recordings made through Zoom-facilitated web meetings were saved to secure cloud storage and transcribed using an AI-based speech-to-text web application. The resulting textual records were cleaned through review by the study manager, and narrative content was tagged with group participants' names to aid in analysis.

The issues of technology and communications were considered to be *a priori* topical domains for consideration of factors and conditions influencing credentialing. Beyond that, the research team used an *emergent scheme* approach to develop and organize domains framing factors, conditions, and actions described by focus group contributors as pertinent to incremental credentialing.

While focus group participants often described how effective they believed their current actions might be—or posited actions that might be pursued—assertions relating to learner outcomes or other benefits are not considered in this report of content analysis. That will be the purview of Priority 2 outcome analyses considering measures of learners' academic success. Additional data collection, from the core group of focus group participants and from other stakeholders, will address other questions guiding the research and expand on findings for the three questions addressed here.

Transcripts will be stripped of all identifying information (names, institutions, states, program titles, etc.) and archived consistent with IES requirements for future analysis by other researchers interested in the subject of credentials.

Focus Group Findings

Based on what study participants shared in their focus group, findings did not emerge with clear distinctions separating external factors from internal conditions, as they bear on institutions' implementation of incremental

credentials. Topical domains do, however, fall out in this report into something roughly like a continuum from "more external factor" to "more internal dimension," from the perspective of staff working in colleges and universities. Findings that follow are organized in that order, the ones in the middle of the list being hardest to categorize as primarily external or internal at this point in the project's ongoing research.

Broader Economic Forces

Economic forces establish conditions in the U.S. labor market that in turn drive what postsecondary education systems offer to learners, and what learners want from higher education institutions. Higher education enrollment has traditionally been countercyclical; as the economy gets stronger, incentives to pursue education over employment decrease; if hiring is down, enrollment goes up. Any time the labor market suffers substantial shocks (COVID, a shift from brick-and-mortar to online shopping), workers may be more likely to seek programs to reskill or upskill in response. However, current prevailing forces are hurting enrollment. In times of high employment (a tight labor market), employers become more motivated to change their hiring practices, or to pursue new training pipelines. Some industries are experiencing particular shortages (e.g., childcare, early childhood education). Spiking demand in some high-priority fields (e.g., policies creating universal pre-Kindergarten programs increasing demand in early childhood education) drives introduction of new credentials to serve those sectors. An increasingly dangerous cybersecurity threat environment, combined with greater reliance on data systems in almost all business sectors, is pushing demand for cybersecurity training. Given current demands for labor, learners on incremental credential pathways might well be tempted to choose work over other options such as apprenticeships, if they are enticed by higher wages in the near term despite longer term earning prospects if they stick with a program. A different decision-making dynamic may be in play if a learner faces the loss of benefits if they return to school, leaving them less well-off in the short term and discouraged from choosing the option of additional education. That, however, is mostly about whether (or how much) higher education is in demand. Those forces, along with a large number of other factors, influence what kind of education learners prefer.

Postsecondary Education Sticker Shock

Cost and aversion to debt are influencing demand for shorter term credentials. Public reactions to increasing costs of higher education, and a growing reluctance among learners to take on large debt, seem to be increasing public acceptance of incremental credentials.

Demand for Workplace Skills

Employers increasingly view workplace skills as important. Employers seem to be asking for what focus group participants consistently referred to as "soft skills" (non-technical skills relating to how one interacts with others in the workplace), as well as dispositions (e.g., growth mindset) and other workplace competencies like communication, problem solving, creativity, and design thinking. Some believe that a bachelor's degree is a reliable indicator that an applicant possesses these skills, even if they are not well articulated in course syllabi or reflected on a transcript. Others promote adoption of frameworks like the Career Readiness model promulgated by the National Association of Colleges and Employers (NACE), arguing that these outcomes are measurable and

that credential programs employing project- or work-based learning could help develop these abilities. Related to these competencies in the workplace, employers are also increasingly interested in diversifying their labor forces.

Employer Hiring Processes

Human resource staff tend to be reluctant to change practices relating to evaluating applicants. As more employers remove degree requirements, shifting to an emphasis on competencies, higher education may well become more pressured toward competencies. Employers are increasingly paying lip service to the need for applicants to have specific, demonstrable proficiencies but a shift to skills-based hiring has been slow. And systems commonly used by human resources offices tend to prefer easy-to-identify considerations like degree titles, and are not designed to readily ingest digital badges. Though some are changing their practices, many hiring managers have not removed requirements for college degrees from job qualifications or shifted toward acceptance of work experience in lieu of a degree. Some may cite federal equal employment guidelines for employment testing as preventing change in their practices. Given all of that, traditional credentials—particularly from name-brand institutions—are still viewed as key indicators of applicant quality. Furthermore, requirements for similar positions might differ substantially among employers, potentially confounding acceptance of incremental credentials as evidence of proficiency.

Persistent reluctance to change hiring practices poses a central challenge to changing the status quo for acceptance of incremental credentials. Competency-based learning will not become common in higher education until employers commit to skills-driven hiring (e.g., job descriptions defined in terms of required competencies rather than degrees and years of experience). Higher education systems cannot push competency-based approaches on employers but they can respond to the labor market if needs are defined in terms of true proficiencies. However, whether hiring managers actually know what competencies their firms need remains unclear. Higher education should do a better job of getting input from employers about their needs, while simultaneously helping them clarify their career ladders and better understand their workers' capacities and needs. Small businesses make up a sizable proportion of U.S. jobs, and most do not typically have dedicated human resources departments or staff. These employers face hiring challenges not encountered by large businesses. How they will accommodate changing practices that bear on the acceptance of nontraditional credentials is unknown at this time.

Higher Education Funding

Incremental credential implementation faces a very complex mix of issues related to funding and financial aid. Financial aid enrollment minimums can easily be a disincentive to a learner choosing a shorter-term credential over a program that fits those funding assumptions. Limitations of federal Pell grants were cited by focus group participants as a specific challenge. Funding or financial aid challenges may be exacerbated by other policies (e.g., number of credits mandated for an incremental credential, that potentially conflicts with definitions of "part time" or "full time" enrollment and so impacts availability of financial aid). However, if short-term credentials are a factor in funding systems, that could arguably create a perverse incentive to increase the number of credentials beyond what might be truly useful to learners and the labor market. Expectations are that funding challenges will increase as the stimulus money tap is closed. Policies that do not count incremental

credentials as positive consideration for funding formulas likely disincentivize institutions from supporting such offerings, or potentially from seeking creative solutions to do so. Employers might pay for learners to pursue credentials—arguably, they should do so—and institutions or systems may collaborate with them to make this happen. However, for learners who are not yet employed, or have recently become unemployed, relative costs to them might be higher absent the subsidy (or discount) to employed learners. Grants may be used to decrease costs to learners (and employers) pursuing a credential but that approach requires the capacity of an institution or agency to pursue such funding. State funding models may prefer full time or for-credit enrollment, discouraging promotion and learner uptake of smaller incremental credentials.

Fees and service charges add additional financial drag for low-resource learners. While potentially less than tuition costs, institutions' service charges and fees—not least costs associated with third-party certifications—pose an additional financial hurdle for learners. This is a policy area where equity becomes a concern for groups typically underrepresented in higher education. Charging for resources that an incremental credential enrollee does not need or cannot use (e.g., libraries, on-campus technology) adds insult to injury, particularly as institutions may actually increase fees to cover costs while maintaining lower tuition prices (e.g., if tuition is capped by policy).

Higher Education System Policies

Specific requirements from state systems can empower institution-level actions to further incremental credential development and deployment. Innovation in incremental credentialing can be activated by policies that allow institutions to approve new offerings without system review. Consistent policies and practices regarding incremental credentials among institutions serving shared populations (e.g., by geography) can empower incremental credentialing efforts. However, the existence of traditional institution service areas defined by geography can impose limitations on offerings unless policies are reconciled.

Proliferation of Credentials and Providers

A proliferation of credentials—and credential providers—presents substantial problems in and of itself. Perhaps perversely, the rapid growth and resulting proliferation of incremental credentials (and their providers) are creating problems along with the multiplying opportunities afforded to learners. Revenue—in whatever form—is a motivator for any entity operating in this market to be creative and to carve out competitive advantages where they can. This is likely contributing to the explosive growth among credential offerings. Retro-award or noncredit-to-credit policies might be attractive to institutions because of their positive impact on financial bottom lines. Conversely, securing a new job on the strength of one or two credentials in a degree pathway might be viewed as a win for a learner, but count as a failure if an institution only counts degree completions. When completion is a measure of institutional success, the duration of the learning being completed (so counted) becomes an important consideration. Innovations driven by competitive forces, however, must be scalable in order to be sustainable, particularly as the volume of new high school graduates seeking additional education is shrinking. Proliferation intersects with (or likely influences) challenges of communicating effectively about incremental credentials, as competition drives institutions to ramp up external communications to help learners and employers understand and value credentials with which they are not familiar. This issue may be amplified in states with multiple agencies operating in the education/workforce

development arena. Ultimately, however, credential proliferation requires greater attention to figuring out how to measure and document quality—the power of a credential to realize outcomes for learners. Offering more credentials, or cataloging those that are available, do not in and of themselves add value from which learners can benefit.

Accreditation

Accreditors (and accreditation requirements) are not a particular impediment to incremental credentialing. A few focus group contributors cited accreditors or accrediting bodies as potentially confounding efforts to develop and execute incremental credentials. Notable, however, is that more respondents actively offered—without being prompted—that this was a perception more than an actual influence on actions. Others argued that workarounds to avoid challenges with accreditors reluctant about incremental credentials might well be possible.

Faculty Labor Markets

Staffing credential programs is a major challenge for higher education institutions. Particularly in high-demand fields (e.g., IT, healthcare), colleges and universities struggle for budgets to pay competitive wages required to attract enough instructional staff with necessary and current content skills and understandings. This may be aggravated by policies that dictate restrictive qualifications for hiring instructors (e.g., not allowing hiring more than 30 days from the beginning of a term), but be less of a problem for noncredit credentials. Where hiring is a challenge, turnover becomes an issue—and causes additional problems (e.g., lack of institutional memory). Staffing challenges may translate into less-qualified faculty teaching credential coursework, particularly for part-time staffing of continuing education programs. The same problem seems to exist for hiring instructional designers to develop new coursework.

Issues Relating to Hours, Days, and Weeks

Prevailing assumptions about credit hours and academic calendars present substantial issues relating to incremental credentials. Federal and state policies impose structure on higher education offerings by controlling time. Courses or training programs must be completed within a set number of weeks to avoid penalties. Restrictions of academic calendars limit flexibility in the delivery of credentials that are not aligned with traditional higher education programs (e.g., if a program is prevented from beginning during a December-January blackout period). Assumptions or restrictions based on numbers of credits or enrollment periods also impact financial aid for learners. Taking time as a consideration out of the delivery and assessment of postsecondary learning should be possible, and incremental credentials might do just that to the benefit of learners. Flexibility in timelines and due dates would give learners more latitude to accommodate challenges outside of their classroom, particularly for working learners potentially facing decisions about whether their job or homework is more important. The longer completion of a credential requires, the greater its opportunity cost to the learner (e.g., in terms of lost earning power or increased childcare costs).

Competency-based Assessment

Prevailing inabilities to authentically assess learners is probably the core challenge facing efforts to innovate in credentialing. The lack of consistent, reliable ways to effectively and efficiently assess dispositions, skills, and knowledge desired of learners seems to be a primary constraint on broad acceptance of innovative credentials. Typically described by informants using the word "competency," this is an orientation and the practices through which actual, persistent learning outcomes are measured, documented, and reported. For learners who are seeking credentials, competency, rather than time (or credits as an alternative measure of time) should ideally be counted toward "completion" of learning. Common assessment tools are ineffective and typical course grading schemes fall short of being effective documentation of competency, leaving employers potentially believing that learners do not have the expertise their transcripts might advertise. Energy may be expended more toward curriculum development than improving assessment practices but more fundamentally, postsecondary educators may actually not be very skilled at defining actual outcomes, potentially impacting course transfer (among other things). To be trusted, the labor market expects that a credential (irrespective of how it is shared) serves as evidence of rigorous assessment validating the skills, knowledge, and dispositions they seek. Absent this, higher education systems cannot provide the labor market with assurances of specific levels of learner proficiency unless they commit to competency-based learning and assessment of outcomes. Progress toward this approach has been a struggle; authentic assessment takes time (so money), and the prevailing view that completing courses is somehow equivalent to learning is a serious impediment to change. Given preconceived notions, competency-based assessment is even a challenging topic to effectively discuss, with constituents both internal and external to higher education (what does "outcome" really mean?), but assessment quality is a crucial issue where the success of incremental credentialing models are concerned—notably any approach applying a prior learning assessment or credit for prior learning strategy.

The Credit-Noncredit Divide

Noncredit programs may offer greater flexibility for innovation in credentials than for-credit offerings. This might result in the shifting of academic credit programs to so-called workforce development departments—an expedient, if not long term, solution. In some systems, programs might already leverage this flexibility to award noncredit credentials, then use "credit alignment" or prior learning assessment processes to convert them to credits for the learner. Challenges here intersect with technology needs, as data needs (variables and systems) can be very different between credit and noncredit programs. Also, gaps between credit and noncredit entities in an institution can be bridged by a key individual if responsibilities and contacts are managed purposefully.

Learners who might most benefit from incremental credential opportunities have substantial needs that higher education institutions are not generally prepared to meet. Learners, particularly those most likely to benefit from credentials designed to fast-track them to employment, often face difficulties out of class, including food or housing insecurity and childcare. Higher education institutions are not historically able to meet those needs (e.g., having no food service during evening course hours). Learners generally, but this group specifically, would benefit from policies and practices that acknowledge their need for flexibility (e.g., the need to stop out and restart multiple times during their education career).

Generalized Education Versus Skill-building

Tension—even conflict—exists between specific skills development and generalized education, where consideration of credentialing is concerned. Preconceptions about value or broader purposes of postsecondary education may be at play, but concerns differ on how these two priorities relate, to one another and to incremental credentialing initiatives. Some learners want, and will likely benefit from, short-term credentials that focus on specific skills in demand in a specific industry (or perhaps even a single employer). This is a common way that incremental credentials are conceived of, developed, and provided to learners. Some groups of learners, however, want both a traditional degree and additional credentials that recognize and communicate to potential employers what makes them unique. This argues for the value of specific, small credentials that are easily perched on top of a degree that ostensibly provides a well-rounded education (e.g., including civics, writing, or other content typically included in "general education" requirements). The separate credential could pick up specific abilities the degree does not further, build skills specific to a particular industry, or bolster competencies that translate to a wider range of workplace needs. This option—versus pursuing shorter-terms credentials focusing on skills particular to a job of interest—might be bolstered by the argument that specialization may inhibit transferability of skills, hurting longer term prospects even if short-term credentials provide a faster track to employment. The lifetime return on a degree (relative to other credentials) may also be a valid consideration. The availability of transfer and articulation options might influence a learner's thinking on this issue as well. And importantly, any given institution takes some position—expressed or not—about the relative importance of generalist versus skill-building orientations. That position will likely bear on the feasibility of incremental credentials, if or how any credentialing initiative might be implemented.

Third-party Certifications

External certifications offer opportunities for innovation in credentialing practice but may carry some risks. Where an educational program aims to prepare learners for successful completion of third-party certification, "teaching to the test" is really central to the curriculum. Certification exams should—but do not always—accurately reflect skills-based mastery (or some benchmark on the way to mastery), effectively connecting expectations in the workplace and classroom or lab. If certifications are well aligned to the needs of the industry they aim to support, they are likely to increase the confidence and a sense of value for both learners and those making hiring decisions. Some credentials make a candidate more attractive to potential employers; for positions with high-stakes requirements for demonstrated proficiency (e.g., health care or emergency medical services positions that require licensure), non-degree third-party certifications may be more than accepted; they may be effectively mandatory. However, faculty preparing learners for certifications must fully understand their content; there should be no reason that a learner satisfactorily completing certification preparation fails their exam. Tests and certification requirements can change more quickly than higher education courses are typically updated, complicating efforts to keep up with employers' and workers' needs but most fundamentally, such certifications simply do not exist for many careers.

Perceptions of Value by Credential Type

Degrees traditionally serve as a signal of a potential employee's value in the labor market; incremental credentials ignore that function at their peril. Degrees are still valued in the labor market. In comparison, short-term credentials, taken separately, may lack the perceived "heft" to serve as an effective signal to potential employers, increasing the importance of being able to effectively bundle or aggregate smaller credentials in whatever record a learner shares in the pursuit of employment. Documented evidence of a credential (increasingly in the form of a badge) has a branding function that might amplify its signal (e.g., when a university's identity is clearly conferred by badge graphics). These graphic aspects also impact the credential's communicative value. Perhaps most importantly, perceptions of value among stakeholder groups (employers, learners, and those influencing their decisions) are still likely impacted by persistent assumptions associated with particular credential types (e.g., parents may see a non-degree credential as somehow diminishing to their child as a learner).

Learner Advising

Deficiencies in advising to support learner enrollment and financial aid are a major concern where incremental credential offerings are concerned. Learners may not be getting effective guidance as they seek out, select, enroll in, and work to complete credentials. Learners, unsure of how to determine the quality and value of any given credential, would benefit from support that shifts away from a "counselor" role, to more of a "navigator" orientation, someone who could track their progress and timelines, and help them steer their way through the large volume of available information to consider and select from the many options and resources offered by a higher education institution or system. Some institutions are investing in technology solutions to bolster their learner advising processes, or implementing innovative approaches like hiring a community-based navigator who reaches out to potential learners where they live. Implementation of processes that provide enhanced coaching to learners over the duration of their education journey may be possible, but examples of such efforts seem limited to institutions that emphasize traditional degree programs. However, the provision of high-quality, responsive learner advising does not currently appear to be a priority, and the capacity and understanding among counselors of incremental credential options may be low or incomplete. Advisors may not be well prepared to deal with the needs and anxieties of adult learners returning to school. Learners can easily lose their way or to choose a credential that is not well aligned with their previous education, or to their financial, lifestyle, or professional needs—or one that is simply not well valued in the labor marketplace.

Dispositions and Culture of Higher Education Faculty

Resistance among higher education faculty members to changes toward incremental credentials continues to be a very real problem. Buy-in may be a bigger challenge among more established instructors or for-credit program faculty as compared to those managing noncredit coursework. Faculty members may express the view that only they can teach their course, that other instructors or offerings of the same content are fundamentally inferior, or that new, alternative credentials are not as important. This may, however, be motivated by a fear of losing one's job or a desire to protect what they see as their own intellectual properties (syllabi, course materials, etc.). Already overworked faculty are often reluctant to take on the additional efforts required to develop and

deliver a new incremental credential, implement prior learning assessment models (perhaps perceived as threatening to enrollment or tuition), or to apply competency-based models to replace traditional grading schemes. This may be more pronounced among tenured faculty who may not feel strong motivations to worry about learner outcomes, and be less of an issue where instructors have less leverage (tenure or unions) to control exactly what and how they teach. Some faculty members believe that enrollment in incremental credential programs cannibalizes enrollment from their traditional degree programs. Conversely, faculty may see offering incremental credentials (e.g., certificates particular to their coursework) as a way to maintain enrollment—and employment. All of that having been said, another way to view the "faculty buy-in problem" might be to limit development and deployment of incremental credentials to "a coalition of the willing," and let results for learners (hopefully) influence attitudes later. Some institutions (smaller and/or rural) may have less staff capacity for such things.

Dispositions and Culture of Higher Education Administrators

College and university administrators seem to be facing mixed influences on decisions about if (and how) their institutions might implement innovative credentials. Administrators (those responsible for decisions that influence policies and practices) may face disincentives to innovation in credentialing (e.g., where uniformity across institutions or programs is a priority, or an institution's brand has to be maintained). Paradoxically, where policy (or legislation) dictates a change, the action is immediately incentivized and becomes much easier, but policies may also be overly prescriptive and confound innovation. Regulation at the system level may potentially stifle innovation or complicate implementation of emerging credentialing models, particularly if data reporting requirements (e.g., IPEDS) become more complicated. Registrars may be particularly important, as either allies or detractors of incremental credentialing efforts, but some administrators may not see value in incremental credentials, absent the collection of truly data-driven success stories or analysis of outcomes, rather than speculation or anecdotal evidence.

Technology

Challenges associated with existing higher education data systems are consistently viewed as problematic, and take many forms. Technical issues can substantially impede implementation of innovative credentialing models, as can shortages or turnover in technical staffing that impact both the time and expertise that can be applied to technology solutions. Institutions encounter difficulty building integrations where information must move among existing data systems without breaking them—or struggle simply with the proliferation of such systems on a single campus. Technology challenges are amplified by growth, and any increase in compliance reporting requirements by state agencies is going to complicate data issues (e.g., student numbers, demographic data) for credential programs.

Policies can easily exacerbate technology challenges. Some technical issues may actually be policy problems. Incremental credentials highlight how institutions' data systems should be more responsive (e.g., allowing learners to register, pay, and immediately begin pursuit of a credential, rather than potentially waiting days to validate their identity). Challenges may also arise when two-factor authentication schemes are required for registration, impacting learners without their own cell phone (another equity issue). Issues arise relating to the

assignment of student numbers and persistent, systematic distinctions between record keeping expectations for noncredit and credit programs or degree-seeking versus continuing education learners.

Digital learner records offer potential—as yet unmet—to ameliorate some student-centered data challenges. Digital documentation of credential completion or outcomes (e.g., badging systems, comprehensive learner records, and systems like inter-institution data exchanges) have substantial promise. This is particularly the case if they can demonstrate utility in effectively and efficiently documenting and sharing demonstrated learnings embedded in incremental credentials with stakeholders in those credentials. Achieving this would likely require substantially greater institutional coordination with employers (consumers of credential information) to realize the potential of such systems. Institutional technology systems, if integrated with digital credentials, may also streamline review of learner records, come time for the awarding of credentials (including by auto-award) or review of requirements or waivers to that end.

Communication

Terminology relating to incremental credentials poses major challenges in the development and implementation of incremental credentials. A number of issues exist relating to the terms used to describe incremental credentials, primarily the usage of in-group lingo and a lack of consistent definitions of key words defining credential types. A lack of guidance regarding language from agencies viewed as authoritative (e.g., accrediting bodies) might be problematic—at least insofar as they do not force consistency.

Confusion about terms impedes effective communication about credentials. A lack of common definitions can substantially impact efforts to communicate about incremental credentials with faculty (e.g., for buy-in), and communications offices might not understand new credential models well enough to market them to potential learners. Before an institution addresses with learners whether a “certificate” or a “certification” would better meet their needs, clarifying how they are similar and different is necessary. More fundamentally, terms traditionally used to organize how we think about higher education (e.g., departments named for content areas) do not align particularly well with how careers are denoted, further complicating communication. Inability to communicate effectively about incremental credentials also hampers efforts to engage faculty in fully understanding what might be required to translate traditional courses into new forms (notably using performance-based approaches) or to implement different assessment methods. Other communications challenges relating to incremental credentials include staff developing incremental credentials not having the budgets to pay for marketing and communication efforts that might be beneficial. The effective collection and use of learner success data could contribute substantially to overcoming this problem, and talking about incremental credentials in terms of cohesive pathways to specific careers could improve understanding across constituent groups. External communications (notably, institution websites) would likely benefit from more careful design considering the expectations and perspectives of visitors who might benefit from incremental credentials. And whether it is positive or negative, it is worth considering that attributes of badge graphics potentially impact their communicative value.

Implications and Next Steps

The findings above summarize many considerations that bear on the feasibility of developing and executing new models of incremental credentialing, across the stakeholder groups identified for the study. These results do not, however, specifically address the feasibility of implementing the Credential As You Go Incremental Credentialing Framework—the six-approach model central to the initiative's professional capacity-building and systems-change efforts:

1. **Learn As You Go:** Credentials prepare individuals for upskilling, re-skilling, or developing new skills for the workplace or academic disciplines
2. **Specialize As You Go:** Credentials can prepare individuals for specializations in the workplace and in academic disciplines
3. **Stack As You Go:** Credentials purposefully stack into other credentials, forming credentialing pathways
4. **Transfer As You Go:** Credentials are built to transfer across higher education institutions and/or academic programs
5. **Partner As You Go:** Credentials prepare individuals for employment, and work-focused credentials are accepted into or embedded within credentialing pathways
6. **Retro Award As You Go:** Credentials are awarded for learning already acquired but not yet credentialed

As mentioned previously, focus group informants did not appear to have internalized the framework's components, even if they did in many instances show that they understand one or more of the approaches defined for that conceptual model. Participants also did not make any narrow distinctions among elements of the factors-conditions-actions conceptual model on which the Credential As You Go theory-of-action and study design are based. For these reasons, it's not possible to fully answer the preordinate questions guiding the grant-funded research at this point.

Ongoing data collection will provide additional evidence to help resolve this challenge. Another round of focus groups will be convened starting in December of 2023, aiming particularly to engage institution faculty and staff responsible for executing (rather than designing) innovative incremental credentials. These sessions will apply modified questioning protocols to better understand what conditions are key to readiness for implementation of new credentials (Research Question 5), and what this group perceives as indicators of readiness sufficient to warrant efficacy testing of new credentials (Research Question 8 not yet explored by data collection, essentially asking when it is reasonable to expect different learner outcomes).

This next phase of qualitative research will also delve more deeply into what *actions* institutions are taking to (1) improve their readiness for incremental credentialing, and (2) influence students' understanding and valuing of incremental credentials—affective outcomes that theoretically bear on their decisions to enroll in such offerings. Clarifying these aspects of "how incremental credentials work" to theoretically benefit learners is crucial to framing analyses of student-level institutional outcomes of enrollment, persistence, progress through, and completion, comparing new credential models with the legacy credentials they supplement or supplant.

Until that point, the results of this round of focus group data collection and analysis might serve a variety of purposes, primarily developmental—informing the creation of resources to increase higher education stakeholder capacity for incremental credentialing; educating learners about strengths and weaknesses of new offerings; or helping employers understand opportunities and threats inherent to new approaches to teaching,

awarding, and documenting the proficiency of their labor force (most notably, any factors that they might control).

These findings also should be interpreted through whatever expertise the reader brings to the questions at hand as, for example, the study's low-inference results might reinforce or challenge existing understandings. Findings must be translated into whatever context they are being considered and applied: a community college registrar will understand the content of this report differently than a state policymaker, corporate hiring manager, or university system chancellor. Individuals in each group will likely determine that different topical domains are more important, or maybe just more salient to their role in the higher education credentialing ecosystem. The structure of findings in this report is designed to maximize its utility to those ends.