



Promising Features for Evaluating TRUE Credentials

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Abstract

This research project originally sought to use short-term credentials data from the Texas Reskilling and Upskilling through Education (TRUE) inventory landscape survey to analyze non-credit to credit-based credential stacking in community colleges across Texas. While some descriptive analyses were conducted, data on credential stacking captured in the TRUE inventory were too broadly defined to conduct more detailed analyses. The project instead focused on identifying key features of short-term credentials that could be used as a framework for TRUE credentials program evaluation. A set of promising features of short-term credentials that includes potential measures and possible data sources was developed based on literature review findings and expert feedback. Recommendations for TRUE program evaluation based on the identified promising features are included in the final section of this report.

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Introduction

The goals of the Texas Reskilling and Upskilling through Education (TRUE) initiative are both timely and ambitious. In response to evolving labor market needs, as well as pandemic-related worker displacement, the 87th Texas Legislature appropriated \$15 million to fund TRUE program grants through Senate Bill 8 (according to the Texas Higher Education Coordinating Board website) to support colleges in preparing students for in-demand careers through the development and implementation of labor market-aligned, short-term credentials. Funds were awarded following a May 2022 application deadline to 29 community and technical colleges from across the state for short-term credentials that are designed to be completed in no more than six months and which lead directly to employment in high-demand occupations (see Appendix 1). Selected applicant institutions were required to provide evidence of the value of, and the labor market need for, proposed short-term credentials. Notably, however, TRUE credential criteria specified in SB 8 did not include specific living wage outcomes metrics for credential completers. This is significant because studies of short-term credentials consistently identify earnings improvement and access to a living wage as critical determinants of credential value (Bailey & Belfield, 2017; CCRC, 2021; Collins & Hoffman, 2021; Jagers & Xu, 2015; Jimenez & Lam, 2021; Success Beyond Completion, 2022).

Project Approach

The purpose of this action research project is twofold: first, based on the literature review and expert feedback, the project identifies promising features of short-term credentials; and second, by identifying potential data sources and associated evaluative metrics aligned with each promising feature, the project offers a framework for evaluating the value of TRUE credentials.

Research Questions

The project addresses the following research questions:

1. What features of short-term credential programs might be associated with improved student outcomes?
2. To what extent are TRUE credentials being developed with promising features?

Literature Review

Value and Equity

In “Four Ways to Increase the Value of Short-term Credentials,” Buckwalter (2017) notes both the difficulty in determining “whether certifications capture the skills, knowledge, and abilities their creators claim they signal” and the lack of information “to assist students in choosing worthwhile credentials to pursue or to assist employers in choosing which are most likely to be valuable” (p. 7). Buckwalter (2017) further notes that employer acceptance of short-term credentials is inconsistent and varies by industry. Relatedly, Rios-Aguilar et al. (2018) find that many of the sub-baccalaureate

credentials community colleges present as offering students entry into livable-wage jobs often turn out to be misaligned with the mid-level job skills sought by employers.

The increase in short-term credential offerings and lack of consistent, transparently-explicit return-on-investment (ROI) metrics for either students or employers can be seen globally as well. In a recent Organisation for Economic Co-operation and Development (OECD) working paper, Kato et al. (2020) found that despite the increasing number of alternative higher education credentials across OECD countries, the impact of such offerings remained to be documented. In addition to credit-bearing credentials, Kato et al.'s analysis includes industry-specific certifications and other sub-baccalaureate credentials that fall outside of traditional college-credit pathways. This is significant because these types of credentials, offered domestically, typically do not qualify for federal financial aid, and students enrolled in these credential pathways may not receive the same advising and academic support as students pursuing credit-based awards.

When attempting to determine the value of short-term, sub-baccalaureate credentials, the capacity to stack into intermediate-level certificates and associate degrees is a commonly-recognized feature. Indeed, stacking is often taken to be inherently desirable in an educational pathway and may be cited as a rationale for short-term credentials that initially offer minimally-viable remuneration but can subsequently become the basis for longer-term credentials that lead to jobs with family-sustaining wages (Bailey & Belfield, 2017; CCRC, 2021; Daugherty et al., 2020). Several studies, however, question the efficacy of stacking as an approach for achieving social and economic mobility for racially-minoritized, economically-disadvantaged, and historically-underserved populations. Giani and Fox (2017), for example, studied the role of stacking in health professions pathways and found that many short-term credentials “had minimal labor market value” and that “participants who earned very short credentials experienced a wage growth of \$1,489, *less than* the wage of students who earned no credential at all [emphasis added]” (p. 18). Of particular concern, Giani and Fox (2017) also found evidence that students from racially-minoritized groups, while as likely to earn short-term credentials as their white peers, were less likely to go on to earn economically-valuable, longer-term credentials.

Several other studies also point to a lack of stacking among students who have been historically underserved by higher education. Daugherty et al. (2020), for example, found in their study of stackable credentials pathways in Ohio that older students and those most in need of sustained employment, were least likely to be able to take advantage of credential stacking because they were supporting families. A 2021 Community College Research Center report further identified differences in educational attainment and high rates of COVID-related unemployment among Black, Hispanic, and Native American workers in comparison to White workers as reflecting ongoing educational inequities across P-16 sectors. While stacking can work as a strategy for increasing postsecondary credential attainment in specific fields, overcoming persistent equity gaps in credential-of-value attainment in terms of race/ethnicity, gender, income, and age remains a vital element in the design of, and support services offered in, short-term credential pathways (Bohn et al., 2019; Davis et al., 2020; Jenkins & Weiss, 2011).

Alternatives to vertically-sequenced stacking may address some inequities in the attainment of credentials of value. Lattice pathways, for example, incorporate both lateral and progressive, linear stacking (Bohn & McConville, 2018) by offering a shared set of courses as a foundation for several areas of specialization and related credential pathways. In their scan of California community college programs, however, Bohn & McConville (2018) found that while “more than half (54%) of career education programs had at least three credentials with overlapping coursework, only 6 percent explicitly called out a set of core courses” (p. 14). They note that business and public service programs offered the highest share of core courses leading to multiple credential pathways, but that overall, there were few well-defined lattice pathways. While they found differences in stacking between Latino, African American, and White students, as is consistent with other studies, they found the greatest disparity in credential attainment between younger students and those in the 35-age range, the age group least likely to stack (Bohn & McConville, 2018).

In a New America policy brief based on focus group findings and an analysis of Adult Training and Education Survey (ATES) data, Ositelu (2021) found that short-term credentials can disproportionately undermine the economic security of students of color, women, and those who are socially and economically disadvantaged, noting that “more than half of adults with a short-term certificate who are employed earn \$30,000 or less per year, which is below the national poverty line for a family of four, [w]ith the highest concentration (18 percent) of short-term certificate earners making \$10,000 or less annually” (p. 10). These effects were found to be most pronounced for racially-minoritized groups and women. When considering short-term certificate earnings disparities for students of color specifically, Ositelu (2021) found median annual earnings were \$10,000 to \$20,000 less for Black and Latino/Latina adults when compared to White adults with similar credentials; comparable labor market disparities were found for women in comparison to men. These findings reinforce the need for an evaluative framework to ensure that short-term credential offerings do not perpetuate labor market inequities and the stratification of postsecondary credential attainment. This is particularly relevant now since, as Ositelu (2021) points out, “despite the limited evidence showing significant value of sub-baccalaureate programs, they are the largest-growing credential within higher education” (p. 5).

Additional Considerations

Worker-retraining or upskilling programs based on the completion of short-term credentials frequently enroll place-bound learners who intend to remain in their local areas after training (Holzer, 2021; Nagaoka & Mahaffie, 2020). The value of short-term credentials then must in part be determined relative to a given region or locale and a specific set of industries and employers. Yet when considering these place-based constraints, Rios-Aguilar et al. (2018) identified a pervasive mismatch between sub-baccalaureate credentials and middle-skill employment in terms of the available jobs in a particular geographic area. They note that individuals who pursue short-term credentials are unlikely to relocate (due to many factors) and should thus be able to attain relevant skills and credentials aligned with locally-available jobs and career pathways (Rios-Aguilar et al., 2018). Given the geographic spread of community colleges in Texas and distinct regional features across the state, localization, particularly for adult learners, would seem to be a key feature in designing and delivering short-term credentials of value.

Funding policy must also be considered in the design and evaluation of short-term credentials. Li and Kennedy (2018) found, for example, that performance-funding (PF) policies can result in an increase in short-term credential offerings and a decrease in associate degree attainment. Their analysis shows that PF policy, designed to support completion of gainful employment sub-baccalaureate credentials, may lead instead to an increase in completion of short-term credentials of questionable labor market value (Li & Kennedy, 2018). Moreover, because some short-term and most micro credentials are typically ineligible for federal financial aid (Baum et al., 2021), community colleges may be reluctant to integrate alternative credit pathways into their for-credit program offerings.

Methods

In addition to the literature review conducted to identify potential promising features associated with short-term credentials, I performed an artifact review of the TRUE credential inventory collected by the Texas Association of Community Colleges (TACC). After this review, I gathered expert feedback through two interviews (30 minutes each) and four email exchanges. The interviews were conducted with Dr. Martha Ellis and Mr. Andres Alcantar and included policy context for the TRUE credential inventory, as well as feedback on the promising features as an evaluative framework. Researcher feedback collected through email was provided by Dr. Iris Palmer, Dr. Nan Travers, Dr. Michelle Van Noy, and Mr. Brett Visger. I transcribed the interviews and produced analytical notes, which were used in tandem with the email responses to produce the aggregated feedback table below.

Table 1. Expert Perspectives on Promising Features of Short-Term Credentials

	Data Collection	Metrics	General Comments
Andres Alcantar— Sr. Workforce Lead, Texas Success Center		<ul style="list-style-type: none"> • For incumbent students, occupational alignment/employer reimbursement • For dislocated workers, value in terms of labor market demand and pathways to high-demand jobs 	<ul style="list-style-type: none"> • Important to offer short-term certificate opportunities to incumbent and dislocated workers • Communicate value in terms of career progression
Martha Ellis— Sr. Pathways Lead, Texas Success Center	<ul style="list-style-type: none"> • Include career progression and document work-based learning • THECB, TEA, and TWC will be building a repository of credentials 	<ul style="list-style-type: none"> • Embedded industry-based certifications • Demonstrated employer value 	<ul style="list-style-type: none"> • Potential to learn from TRUE pilot college data

<p>Iris Palmer— Deputy Director for Community Colleges, New America Foundation</p>	<ul style="list-style-type: none"> • State-level collection will be difficult. • Assess whether stackability is included in advising. • Consider advising modality. • Data collection for outcomes features could be added to existing systems and reporting structures. 	<ul style="list-style-type: none"> • Specify credit, non-credit • Provide details for PLA credit-awarding process • Program cost for students • Completion of industry credentials or licensures 	<ul style="list-style-type: none"> • Test pilot with a few pilot colleges • Time and number of programs are barriers • Not aware of any other state trying to do this
<p>Nan Travers— Director, Center for Leadership in Credentialing Learning, SUNY Empire State College</p>		<ul style="list-style-type: none"> • Completion of industry certification or licensure during program • Include other services, such as disability services in student experience measures 	<ul style="list-style-type: none"> • Program features of design are also features of the Incremental Credentialing Framework developed at SUNY.
<p>Michelle Van Noy— Director, Education and Employment Research Center, School of Management and Labor Relations, Rutgers University</p>	<ul style="list-style-type: none"> • Better information needed on non-degree credential quality and outcomes 	<ul style="list-style-type: none"> • Employment outcomes: job attainment, wage gains, promotion, retention • Educational outcomes: stacking of additional credentials, academic degree completion • Social outcomes: improved health and well-being, greater civic involvement, intergenerational benefits • Societal outcomes: employer metrics and civic life measures 	<ul style="list-style-type: none"> • Aligns with work at Rutgers on measuring non-degree credential quality based on elements of credential design, demonstrated competencies, market processes, and outcomes
<p>Brett Visger— Sr. Director, Education Strategy Group</p>	<ul style="list-style-type: none"> • Data consistency for credit and non-credit is needed for understanding and disaggregation. • Better data provide evidence to support student persistence and signal that certificates should continue to something else. 	<ul style="list-style-type: none"> • Alignment of course sequences from certificates to degree 	

As captured in the table, expert feedback consistently identifies integrated, metrics-aligned data collection as critical to assessing the value of short-term credential pathways, beginning from non-credit programs to credit-based programs to labor market outcomes. Another point to highlight in the feedback is the alignment between the promising features identified here with other evidence-based frameworks designed to assess the value of short-term credentials.

Findings

Based on the literature review and expert feedback, a final set of 11 promising features of short-term credentials grouped by program design, student experience, and outcomes were identified (Table 2). Each feature includes potential measures—many of which are already being assessed—as well as likely data sources; some data sources are extant but may be disconnected from one another. Although the TRUE inventory was a one-time landscape analysis, the types of data captured—such as employer involvement in curriculum development—would likely need to be captured elsewhere as part of program evaluation. As an evaluative framework, the promising features set offers community college practitioners, leaders, and policy thinkers a touch point for determining the value of short-term credential programs for meeting employer and student needs.

Table 2. Short-Term Credentials Promising Features

	FEATURE	POTENTIAL MEASURE(S)	DATA SOURCES
	<i>Program Design</i>		
1	Credential is built to stack with other educational programs in the same college	<ul style="list-style-type: none"> Embedded in an associate degree (i.e., vertical stacking opportunities) Shared coursework with other certificates (i.e., horizontal/latticed stacking opportunities) 	<i>Program reporting form/survey, higher education agency data</i>
2	Credential is built to stack with educational programs in other colleges	<ul style="list-style-type: none"> Bilateral or statewide articulation agreement in place 	<i>Program reporting form/survey, higher education agency data</i>
3	Credential is aligned with industry certifications/credentials	<ul style="list-style-type: none"> Student is prepared for an industry certification or license upon program completion as evidenced by third-party certification criteria, including licensure examinations 	<i>Program reporting form/survey</i>
4	Credential provides opportunities to build on prior learning	<ul style="list-style-type: none"> Program offers prior learning assessment (PLA) Program builds on continuing education (CE) 	<i>Program reporting form/survey</i>

	FEATURE	POTENTIAL MEASURE(S)	DATA SOURCES
	<i>Student Experience</i>		
5	Credential stacking opportunities are transparent to students	<ul style="list-style-type: none"> College website clearly presents a program map that shows how credentials stack with other credentials Students are aware of stackable opportunities 	<i>Program reporting form/survey, website scan, marketing materials, student interviews or survey</i>
6	Delivery modalities and schedules facilitate participation by diverse learners	<ul style="list-style-type: none"> Courses are offered online Courses are offered on nights and/or weekends 	<i>Program reporting form/survey, IPEDS/state reports</i>
7	Credential labor market outcomes are presented to students	<ul style="list-style-type: none"> College website clearly presents data on jobs associated with credential and earnings data for those jobs Students are aware of job and earnings outcomes 	<i>Program reporting form/survey, website scan, marketing materials, student interviews or survey</i>
8	Advising and learning supports are similar to those of degree-seeking students	<ul style="list-style-type: none"> Non-degree students receive an ID number and are tracked in the student information system Students in the program can receive tutoring and other supports Students are assigned to advisers 	<i>Program reporting form/survey</i>
	FEATURE	POTENTIAL MEASURE(S)	DATA SOURCES
	<i>Outcomes</i>		
9	Credential completion leads to livable-wage employment	<ul style="list-style-type: none"> Job most associated with credential has annual living wage (MIT LWC) 	<i>Program reporting form/survey, Dept. of Labor state agency data</i>
10	Credential completers go on to earn other credentials	<ul style="list-style-type: none"> At least X% of credential completers go on to earn another credential within Y years 	<i>Program reporting form/survey, higher education agency data</i>
11	Credential completion contributes to equity in postsecondary credential attainment	<ul style="list-style-type: none"> Racially-minoritized and low-income students are represented in greater percentages among credential (of value) completers than their representation among all postsecondary credential completers 	<i>Program reporting form/survey, higher education agency data</i>

Recommendations

Approach to Data Collection

Where possible, demographic variables, access to student services, and credential outcomes data should be collected through existing state-level reporting processes and linked to labor market outcomes data. Institutionally-reported program data used by the Texas Success Center/TACC should include Classification of Instructional Programs (CIP) codes to facilitate cross-tabulation with the Department of Labor Standard Occupational Classification System, which can be further linked to Texas Workforce Commission data. Following students from program entry and into the labor market to assess earnings outcomes provides a critical measure of value for any workforce credential, and data capture must reflect this.

Feedback received on the promising features set underscores both the importance of relevant data collection and the difficulty of obtaining needed data. Program design data, for example, can be straightforward to collect, given that a feature like credential stacking is included as a metric for determining success point funding for Texas community colleges. However, as noted in the literature review, stacking, as a design element, may be loosely defined and cumbersome to quantify. In collecting evaluative data for TRUE credential programs, it will be important to connect cross-agency data, such as those identified in the proposed agreement being developed by the Tri-Agency Workforce Initiative (<http://twc.texas.gov>). Data collection results will be more meaningful—and more actionable—given agreement on key programmatic and outcomes definitions across the Texas Education Agency (TEA), the Texas Higher Education Coordinating Board (THECB), and the Texas Workforce Commission (TWC). The need to evaluate TRUE program credentials provides a salient rationale for initial implementation of such an agreement.

Program Evaluation to Determine Value

As reflected in the promising features set, short-term credential program evaluation should focus on three key areas: program design, the student experience, and program outcomes. The tables below suggest specific promising features for evaluating TRUE credential programs in alignment with these three areas.

Program Design

A key metric for stacking in program design is the extent to which short-term credential stacking leads to associate degree completion (see Table 3). Short-term TRUE credentials may be reported as embedded in associate degrees, but that does not mean that the students who complete these short-term credentials in fact go on to complete associate degrees. When considering short-term credentials that begin with non-credit coursework, program design evaluation may entail changes in institutional student information system (SIS) data capture processes, requiring that colleges assign student IDs/SIS identifiers to non-credit students so they can be followed through completion of credit-bearing programs.

Table 3. TRUE Evaluation Short-Term Credentials Promising Features – Program Design

	FEATURE	POTENTIAL MEASURE(S)	DATA SOURCES
	<i>Program Design</i>		
1	Credential is built to stack with other educational programs in the same college	<ul style="list-style-type: none"> • Embedded in an associate degree (i.e., vertical stacking opportunities) • Shared coursework with other certificates (i.e., horizontal stacking opportunities) 	<i>Program reporting form/survey, higher education agency data</i>

Student Experience

When considering the student experience, evaluation should include evidence that reliably-measured labor market outcomes for a given credential have been presented to students through the enrollment and advising processes. Most importantly, in terms of the student experience, and a prerequisite for ensuring communication of labor market outcomes, TRUE credential programs can be evaluated on whether they provide the same advising and learning supports made available to associate degree-seeking students (see Table 4). Again, providing these supports may entail changes in institutional data governance, the updating of inclusion protocols for the primary institutional SIS, and modifications in reporting practices and staff student data access.

Table 4. TRUE Evaluation Short-Term Credentials Promising Features – Student Experience

	FEATURE	POTENTIAL MEASURE(S)	DATA SOURCES
	<i>Student Experience</i>		
7	Credential labor market outcomes are presented to students	<ul style="list-style-type: none"> • College website clearly presents data on jobs associated with credential and earnings data for those jobs • Students are aware of job and earnings outcomes 	<i>Program reporting form/survey, website scan, marketing materials, student interviews or survey</i>
8	Advising and learning supports are similar to those of degree-seeking students	<ul style="list-style-type: none"> • Non-degree students receive an ID number and are tracked in the student information system • Students in the program can receive tutoring • Students are assigned to advisers 	<i>Program reporting form/survey</i>

Program Outcomes

The third key evaluative criterion considers whether credential completion leads to livable-wage employment (Table 5). For this metric, regional reference data can be obtained through the Massachusetts Institute of Technology (MIT) Living Wage Calculator (<https://livingwage.mit.edu>), combined with TWC data, and linked back to TEA and THECB program data (as would be possible under the previously mentioned Tri-Agency agreement). This is not to suggest that the value of a postsecondary credential be unequivocally reduced to earnings outcomes; however, given that TRUE credentials are designed specifically to support labor market demand, this metric would seem to be initially the most salient.

Table 5. TRUE Evaluation Short-Term Credentials Promising Features – Outcomes

	FEATURE	POTENTIAL MEASURE(S)	DATA SOURCES
	<i>Outcomes</i>		
9	Credential completion leads to livable-wage employment	<ul style="list-style-type: none"> Job most associated with credential has annual living wage (MIT LWC) 	<i>Program reporting form/survey, Dept. of Labor state agency data</i>

Conclusion

Texas community colleges have a vital role to play in workforce credential development designed to meet the changing demands of regional labor markets across Texas. This is reflected in the scale of funding appropriated for the TRUE initiative and in the new THECB strategic plan, “Building a Talent Strong Texas.” Texas community colleges, however, also serve as critical pathways of social mobility, and as such must consider the sustained economic value of the short-term credentials they offer. Short-term credentials that prepare workers for below living-wage employment are of dubious value and may serve only to perpetuate systemic inequities. Fortunately, with the TRUE initiative, Texas community colleges have an opportunity to take the lead in ensuring that the short-term credentials they provide are truly credentials of value.

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Appendix 1

Texas Reskilling and Upskilling through Education (TRUE) Grant Program 2022

Applicant	Grant Award Amount
Amarillo College	\$530,000.00
Austin Community College	\$530,000.00
Central Texas College	\$530,000.00
Cisco College	\$357,000.00
Coastal Bend College	\$530,000.00
College of the Mainland	\$530,000.00
Collin College - Consortium with Ranger College, Cisco College, Hill College	\$670,200.00
Dallas College	\$530,000.00
Dallas College - Consortium with Amarillo College, Navarro College	\$1,065,000.00
Del Mar College	\$530,000.00
Frank Phillips College	\$530,000.00
Galveston College	\$378,500.00
Grayson College - Consortium with Paris Jr. College, Vernon College	\$1,060,000.00
Houston Community College - Consortium with San Jacinto College, Brazosport College	\$1,056,700.00
Lamar State College Orange	\$530,000.00
Lone Star College	\$389,200.00
McLennan Community College	\$349,900.00
Navarro College	\$530,000.00
North Central Texas College	\$529,800.00
Odessa College	\$185,100.00
Panola College	\$436,600.00
Paris Jr. College	\$251,800.00
Smithville Chamber of Commerce	\$50,000.00
South Texas College	\$385,500.00
Temple College	\$530,000.00
Texarkana College	\$429,700.00
Texas Southmost College	\$530,000.00
Texas State Technical College	\$529,800.00
Victoria College	\$515,200.00
Total	\$15,000,000.00

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Texas Success Center

The Texas Success Center supports the Texas Association of Community Colleges members' efforts to improve student success and directs Talent Strong Texas Pathways—a statewide strategy focused on building capacity for community colleges to design and implement structured academic and career pathways at scale, for all students. For more information, visit tacc.org/tsc