Best of Both Worlds

Teacher Apprenticeship Degrees

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Bellwether

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Glossary of Terms

Apprenticeship: A work-based opportunity, usually paid, for individuals to learn on the job and build skills to succeed in a given industry or occupation. Some apprenticeships include instruction outside of work and lead to a credential.

Credential: A form of documentation that indicates that learning has been achieved to a specific standard. This encompasses both degree credentials, such as an associate degree or bachelor's degree, and nondegree credentials (e.g., certificates and licensures).

Educator Preparation Program (EPP): The provider of instruction and skill-building outside of work. EPPs also provide coaching and student services (academic and nonacademic) to support an apprentice's success. For a Teacher Apprenticeship Degree, an EPP is an accredited degree-granting institution of higher education (IHE) whose focus is on supporting apprentices to complete a bachelor's degree and teacher certification.

Grow Your Own (GYO): An umbrella term for a variety of innovative programs that focus on recruiting and preparing individuals to become teachers in their communities. These programs frequently include partnerships between school districts, IHEs providing teacher preparation, and community-based organizations to provide additional support.

Intermediary: An organization responsible for apprenticeship program development and delivery, stakeholder engagement, monitoring, evaluation and supports, and strategy and field building.[1] This can include managing coordination between players who collectively support an apprenticeship program. Intermediaries often provide active supports to districts as employers, IHEs that provide the instructional component of a Teacher Apprenticeship Degree, and direct apprentice support. The intermediary role can be played by a nonprofit, a district as employer, an IHE, or a state agency.

On-the-Job Training (OJT): Skill-building that occurs 1) through the experience of working, 2) with support from a mentor and/or manager, or 3) through structured training and professional development organized and led by an employer. This can also sometimes be referred to as on-the-job instruction or on-the-job learning.

Paraprofessional: Often referred to as paraeducators, teacher assistants, and instructional or education aides, these are *not* teachers of record, but fill critical functions in enabling success in a classroom.

Praxis Test: A series of American teacher certification exams administered by the Educational Testing Service. These exams measure reading, writing, and mathematics skills as well as specific content knowledge required of prospective educators. Forty-six states and the District of Columbia use the test to some extent in certifying teachers.[2] Some states also have their own certification tests.

Pre-Apprenticeship: A program that begins before a formal apprenticeship. It may involve initial skill-building or acquiring a requisite number of college credits, certain credentials, and/or experiences before entering into a formal apprenticeship.

Registered Apprenticeships (RAs): A formal designation from the U.S. Department of Labor (USDOL), defined as "an industry-driven, high-quality career pathway where employers can develop and prepare their future workforce, and individuals can obtain paid work experience with a mentor, receive progressive wage increases, classroom instruction, and a portable, nationally recognized credential. [RAs] are industry-vetted and approved and validated by the U.S. Department of Labor or a State Apprenticeship Agency."[3]

Related Instruction/Related Technical Instruction (RTI): Instruction during an apprenticeship that happens outside of day-to-day work. This instruction can be provided by an employer, an EPP, or a third party. In the case of a Teacher Apprenticeship Degree, it involves credit-bearing work that contributes toward completing a bachelor's degree and teacher certification.

Sponsor: For RAs, this is the organization that is responsible for fundamentally structuring the ecosystem of relationships necessary for a registered apprenticeship program to work. Sponsors are typically responsible for "identifying program qualifications and standards, recruiting and screening applicants, developing formal agreements between employers and apprentices, defining an apprenticeship's work processes and related instruction, setting the wage progression, and ensuring that the program meets state and federal requirements."[4] A nonprofit, a district as employer, an IHE, or a district/state agency may serve as a sponsor.

Teacher Apprenticeship Degree (TAD): A degree that prepares people to be hired and succeed as a teacher of record through an apprenticeship. A TAD is an employee of a school district in a student-facing role (predominantly as a paraprofessional) who receives OJT to develop their skills and RTI from an EPP in order to complete a bachelor's degree and teaching certification, — all while earning a wage, receiving health and other benefits, and incurring low or no costs to complete their TAD.

Teacher of Record: An individual who is held contractually responsible for student instruction, grading, and academic progress within a particular course or subject area.[5]

Teaching Certificate: A nondegree credential required to teach that is conferred following the completion of a state-approved educator preparation program and a bachelor's degree.

Introduction

"When I began my teaching career in 1988, it was hard to get a teaching job because it was so competitive … now they won't let people like me retire from public schools because there's nobody to replace us. In Missouri, about a third of our teachers in classrooms are not certified. After the [COVID-19] pandemic, a lot of people retired and a lot of early career teachers left the profession. In Missouri, less than half of teachers make it to year six in the classroom; that level of attrition is not sustainable."[6]

—JON TURNER, ASSOCIATE PROFESSOR, DEPARTMENT OF COUNSELING, LEADERSHIP, AND SPECIAL EDUCATION, MISSOURI STATE UNIVERSITY

"The way we approach traditional teacher preparation pathways needs to change. And I know that that conversation makes some education systems very uncomfortable. But we can't continue to do the same thing and expect different results."[7]

—GREG NYEN, SUPERINTENDENT, MARQUETTE-ALGER REGIONAL EDUCATIONAL SERVICE AGENCY, MICHIGAN

"This [Teacher Apprenticeship Degree] isn't about making it easier to become a teacher; it's about expanding opportunity to be a teacher while holding a high bar for quality — both with the apprentice and with the program and school systems supporting them."[8]

—JACK ELSEY, FOUNDER AND CEO, MICHIGAN EDUCATOR WORKFORCE INITIATIVE

Across the United States, postsecondary pathways[i] are becoming increasingly polarized on two ends of a continuum. At one end of the continuum: those pushing for "college for all" citing evidence that, regardless of debt, on average a bachelor's degree (and to a lesser extent, an associate degree) lead to strong economic mobility and a financial return on investment (ROI).[9]

However, average is frequently the enemy of equity.

A 2021 Third Way analysis demonstrated that 65% of bachelor's degrees paid back their net cost to students within 10 years (and 41% in under five years). At the same time, 35% of programs took 10 or more years to break even, and 10% of programs did not ever achieve a positive ROI.[10] This disproportionally impacts people from low-income and Black and Hispanic communities. Ninety percent of those who default on their debt are eligible for federal Pell Grants.[11] The 12-year default rate on student loans for Black graduates is 28% and 13% for Hispanic college graduates, compared to 5% for white college graduates.[12]

On the other end of the continuum: an increasing focus on an expanding menu of approximately 834,000 nondegree pathways, which can include certificates, apprenticeships, badges, licensures, and portfolios, among others.[13] Demand is growing for these nondegree pathways, some of which stems from declining confidence in conventional degree pathways. In a nationwide July 2024 poll of adults, only 36% of respondents indicated they had a great deal of confidence in higher education; 32% had very little or no confidence in higher education.[14] At the same time, there is a growing demand for new pathways that focus on experiential learning. "Nearly 80% of high school students believe it is important to have on-the-job learning opportunities, like internships and apprenticeships — a 14-percentage-point increase since 2022 … 65% say their ideal postsecondary pathway

i *This report refers to "postsecondary pathways" or "pathways" as the pursuit of a credential after high school (though an increasing number begin while in high school). Pathways can include both conventional degree pathways and nondegree pathways.*

focuses just on internships and apprenticeships."[15] Yet a bachelor's degree remains a job requirement in many professions.

At one end is pursuing a conventional college degree; at the other end are nondegree pathways, many with a particular focus on experiential learning. But what if this is a false choice? What if there are postsecondary pathways that are "both/and" regarding a degree and experiential learning instead of "either/or"?

One of these hybrid pathways is the **Teacher Apprenticeship Degree (TAD)**, which focuses on meeting the acute talent pressure facing public K-12 education (Sidebar 1).

TADs are a relatively new offering — if they were a child in school, they would just be entering kindergarten. They have evolved by combining two strands of initiatives that together strive to create a strong pipeline of teacher talent: 1) "Grow Your Own" (GYO) programs in schools and districts, and 2) an apprenticeship as an experiential model for learning. GYO programs have emerged in the past two decades across the country to offer a range of pathways into teaching. Apprenticeships have been around for arguably thousands of years.[ii] At its most fundamental, a TAD:

1. **Prepares people to be hired and succeed as a teacher of record** (i.e., an individual who is held contractually responsible for student instruction, grading, and academic progress within a particular course or subject area).[16]

2. **Has a robust apprenticeship component**, where the apprentice is an employee of a school district in a student-facing role — predominantly a paraprofessional — who spends significant time in the classroom as part of their day job and also receives formal on-the-job training (OJT) that addresses the development and assessment of skills needed to become a teacher (also sometimes called competencies or standards), formal mentoring from an experienced teacher, and time spent in the role of a co-teacher (usually one year).

SIDEBAR 1

U.S. Teacher Employment By the Numbers

Teacher Labor Market

- 3.2 million K-12 teachers working in public education as of 2022.[17]

Teacher Vacancies

- 55,000 teacher vacancies as of August 2023 (i.e., actual teaching positions for which there is no teacher in the classroom; this does not include teaching positions filled through emergency certification).[18]
- 51% increase in teacher vacancies between 2022 and 2023.[19]
- 286,000 individuals as of 2022 in formal teaching roles without full qualifications who were emergency certified to teach.[20]
- 79% of public schools had difficulty filling teaching positions with fully certified teachers for the 2023-24 school year (SY);[21] 70% of public schools reported this difficulty was due to too few candidates applying, while 66% reported a lack of qualified candidates.[22]
- A January 2022 Institute of Education Sciences nationwide survey of schools found that 22% of public schools reported having teaching vacancies higher than 5% (10% of schools reported vacancy rates higher than 10%). The number rose to 34% for schools with high Black and Latino student populations, compared to 16% for schools with low Black and Latino representation.[23]

Teacher Turnover

- 8% of teachers left teaching at the end of SY21-22, and another 8% transferred schools.[24]
- In 2022, 55% of National Education Association (NEA) members reported planning to leave teaching earlier than their original plans because of the COVID-19 pandemic.[25]

Paraprofessional Labor Market

- 1.4 million paraprofessionals were employed in public K-12 education systems as of 2022.[26]
- Approximately 75% of paraprofessionals in 2018 did not hold a bachelor's degree.[27]

ii *In "Apprentice Nation: How the 'Earn and Learn' Alternative to Higher Education Will Create a Stronger and Fairer America" Ryan Craig notes that apprentices have been named since the Code of Hammurabi and adds that a number of America's founders got their start as apprentices.*

3. **Delivers (a) an accredited bachelor's degree**[iii] that is a requirement (outside of emergency situations) for an individual to become a teacher of record and confers the lifetime earnings advantage of having such a degree; **and (b) a teaching certificate**, which is a nondegree credential required to teach and is conferred following the completion of a state-approved educator preparation program and a bachelor's degree program. In most states and the District of Columbia, a teaching certification requires taking and passing the Praxis Test or an equivalent state test that indicates subject area or grade-level expertise.

All of this happens while apprentices are **earning the wage and receiving the health care and benefits** of a paraprofessional or equivalent role (and sometimes more) and **incurring low or even no costs for completing a TAD, including the bachelor's degree** at an institution of higher education (IHE). TADs can take from one to six years to complete, depending on prior postsecondary credits, credits for prior learning, competency-based education, and the life circumstances of an apprentice.

What value are TADs positioned to create?

Ultimately, any postsecondary pathway functions as a kind of currency: A medium of demonstrating and exchanging value between individuals and prospective employers.[28] This report explores the existing complex and dynamic designs of TADs as a currency, what is emerging as their potential for creating value — including what is driving the potential for a true TAD marketplace — and what will be required to enable the TAD field to fulfill its potential.

iii *There are also Teacher Apprenticeship master's degrees, which provide the same apprenticeship experience to those who already have a bachelor's degree and want to pursue becoming a teacher of record.*

There are a range of innovative postsecondary pathways into teaching, including multiple types of apprenticeship programs. This report specifically examines TADs while acknowledging that other types of apprenticeships exist and even overlap with TADs. As discussed later, some but not all TADs are Registered Apprenticeships, and many Registered Apprenticeships in teaching are not TADs. There are also other types of apprenticeships — including in teaching — that are neither Registered Apprenticeships nor TADs.

This report is informed by the insights and experiences from five emerging TAD providers across the country: Brazosport Independent School District (BISD) Apprenticeship Program in Texas, Missouri State University's Pathways for Paraprofessionals ("Paras"), Reach University and its National Center for the Apprenticeship Degree (NCAD), Michigan's Talent Together and its founding nonprofit intermediary, the Michigan Educator Workforce Initiative, and the Tennessee Grow Your Own Center (TNGYOC). Examples of their work are featured throughout this report (Table 1).

TABLE 1: OVERVIEW OF FEATURED TAD PROGRAMS IN THE U.S.

Design Element	BISD Apprenticeship Program (Texas)	Missouri State University's Pathways for Paras	Reach University NCAD	Michigan's Talent Together	TNGYOC (Tennessee)
Year Founded as a TAD Provider	2022	2022	2020	2023	2022
Organization Type	School district	IHE	IHE	Consortium of superintendents and a nonprofit	State-funded part of the University of Tennessee
Geographic Scope	District	State and surrounding region	National	State	State
Sponsor	BISD originally; now Edwell	Missouri State University	Reach University	Talent Together	Tennessee Department of Education
Intermediary	BISD originally; now Edwell	Missouri State University	Reach University	Talent Together	TNGYOC
Number of District or Local Educational Agency (LEA) Partners	1 (BISD)	200	343	305	85
Number of IHEs (as of 2024)	5	1	1 (Reach is an accredited degree provider)	16	14
Focus Population for TADs (as of 2024)	Paraprofessionals and other school-based staff; people not currently employed in a school	Paraprofessionals and after-school care providers	Paraprofessionals and other school-based staff; people not currently employed in a school	Paraprofessionals and other school-based staff; people not currently employed in a school	Paraprofessionals and other school-based staff
Grades/Subject Focus in TADs	Broad range of teaching grades and subjects	Initial focus on special education but now expanding to other subjects	Broad range of teaching grades and subjects	Broad range of teaching grades and subjects	Broad range of teaching grades and subjects
TAD Participants (as of 2024)*	197	400	2,297	1,100	309

***Note**: These numbers reflect current enrollment and do not include TAD completion. Some TAD programs provide a broader set of teacher pathways, from conventional degrees to teacher residencies to nondegree apprenticeship pathways. Others offer apprenticeship degrees in professions beyond teaching.*
***Sources**: Information provided by interviews and documentation from each of the five organizations over the course of this analysis. These data points will be referenced throughout this report.*

What Is a Teacher Apprenticeship Degree (TAD)?

As a point of comparison, what are conventional teacher preparation pathways?

Most individuals enter the teaching profession through a set of three conventional teacher pathways that all start with first obtaining a bachelor's degree (though it need not be in education):

- **Pathway 1**: Complete a bachelor's degree in education (which includes a student teaching component), complete a teaching certification, and become a teacher of record. This does not preclude teachers from pursuing a master's degree later. This is the most traditional entry point into the teaching profession.

- **Pathway 2**: Earn a master's degree in education after completing a bachelor's degree (in education or in general). A master's degree can be pursued by people without a bachelor's degree in education who are looking to make a career transition into teaching or by existing teachers who want a master's degree to advance professionally.[iv] For those not already in teaching, master's degrees typically include a semester or more of an unpaid or stipend teacher residency or student teaching experience. Fifty-eight percent of teachers in the U.S. have earned a master's degree or higher.[29]

- **Pathway 3**: Obtain an alternative certification for those who have a bachelor's degree that is not in education, which provides provisional teacher certifications to permit uncertified individuals to teach full time while in pursuit of a nondegree teaching credential required to be a teacher for the long term. This is separate from emergency certifications.

Note: In some states, critical teacher workforce shortages have led state education agencies to allot emergency certifications, predominantly to people with bachelor's degrees, to fill classrooms.[30]

However, conventional teacher pathways can have limited opportunities for experiential, classroom learning provided to students before they become a teacher of record in the classroom. Bachelor's degree candidates in education typically spend just one semester (14-16 weeks) in their final year as an undergraduate exposed to the classroom setting as a student teacher, limiting their perspective on the experience of daily classroom instruction and school culture. Bachelor's degree graduates in a noneducation degree who enter an alternative certification program generally lack even this experiential training component prior to becoming teachers in the classroom.

Conventional postsecondary teacher pathways can also be expensive. In 2020, 45% of educators had "taken out a student loan to fund their own education, with the average total amount standing at $55,800."[31] The number of aspiring educators who have to take on debt has also been increasing — 65% of younger educators (aged 18-35) went into debt to complete their education versus 27% for educators aged 61 or older.[32] Black educators took on an average debt of $68,300 among those who took out loans, compared to $54,300 for white educators (neither number includes what they paid out of pocket).[33] Sixty-three percent of people who complete a master's degree in education also incur debt.[34]

iv *There are three states that require teachers to have a master's degree to keep their licensure in the long term: Connecticut, Maryland, and New York.*

There are many millions of teachers for whom conventional pathways have been successful in building their careers in the classroom. However, because of the time and cost involved, these pathways can exclude large numbers of people — particularly those who are low-income, first-generation, and Black and Hispanic — from access to conventional on-ramps into the teaching profession. In 2022, there were 1.4 million paraprofessionals,[35] 75% of whom do not have a bachelor's degree.[36] There are also an estimated 41.9 million people as of 2024 who have pursued some college credit but did not complete a degree.[37] Most of these people cannot forgo the opportunity cost of earnings and absorb the out-of-pocket cost to pursue a conventional bachelor's degree as a route into the teaching profession.

In contrast, TADs support people who cannot afford to pursue a conventional pathway into teaching to obtain the credentials and the experience to be successful educators.

"Apprenticeship Degrees are just a great fit for expanding a pipeline of educators because we know that traditional models were only serving a very specific group, and not enough educators were being trained through that model to meet the demands of our state on an annual basis. We needed something that was going to be accessible to working learners. And apprenticeship is a great fit for that."[38]

—ERIN CRISP, EXECUTIVE DIRECTOR, TNGYOC, TENNESSEE

"In a lot of ways, it was like a whiteboard exercise where we said, 'If we were going to redesign teacher education, what would it look like?' If we could go back and redo this process, no one would create the current system. And so that's the philosophical spirit of the whole Teacher Apprenticeship Degree program."[39]

—PRENTICE CHANDLER, DEAN OF EDUCATION, AUSTIN PEAY STATE UNIVERSITY, TENNESSEE

What are the core elements of a TAD program?

At the highest level, TADs are designed to be affordable, provide significant experiential training to prepare someone with the skills to be a successful teacher, and provide the credentials — a bachelor's degree and teaching certificate — required to enter the teaching profession (Sidebar 2).

To successfully deliver on this promise, TADs — and apprenticeship degrees in general — tend to have the following design elements:

1. **Workplace-based and career-connected learning via OJT.** This is in addition to the everyday work responsibilities and development expected while an apprentice is employed in their immediate role. It includes:

    a. **Training aligned to an industry-aligned set of skills, standards, and/or competencies** that prepare apprentices to lead a classroom and pass the state teacher licensure exam by the end of or shortly after graduating from the TAD. For example, at BISD, apprentice mentors lead modules focused on teacher competency development during each year of an apprentice's experience. BISD apprentices complete seven micro-credential courses per year for a total of 28 micro-credentials that are delivered in person by BISD teachers or administrators. After apprentices receive course content, they demonstrate and are assessed on their learned competencies through skills-based assessments and classroom demonstrations.
    Kristi Kirschner, CEO of Gateway Education and former chief human resources officer of BISD, explained a common theme related to TADs and skill-building, namely the advantages of apprentices being embedded in the schools/districts they are likely to teach in: "Through our competencies, apprentices are gaining practical skills, such as actual lesson planning, in the manner required by [BISD]. Our success coaches evaluate them using a similar rubric [to the one] the district employs for full-time teacher evaluations, providing feedback to help them advance. The skills we focus on are often those that first-year teachers typically struggle with."[40]

    b. **A mentor who is an experienced professional in the role that an apprentice is working toward filling.** In the case of a TAD, this is an experienced teacher, sometimes serving in the same classroom in which an apprentice works. Mentoring can provide additional benefits because it offers an opportunity for experienced teachers to grow their abilities in coaching and management. As one TAD facilitator noted, "There can be a dearth of leadership opportunities for experienced teachers. The mentor[s] themselves [get] coaching experience and monthly professional development from us on a variety of topics related to coaching teachers."[41]

    c. **Time in the classroom.** In the specific case of teaching, apprentices develop capabilities as a paraprofessional (or sometimes other student-facing, school-based roles) embedded in a classroom. Apprentices can spend multiple years working in a classroom while pursuing a TAD. In addition, an explicit component of a TAD (usually starting in the final year) is time spent teaching in a classroom (often the one in which they have been a paraprofessional) under the mentorship of an experienced teacher. This time can be named a clinical teaching experience, co-teaching, an apprenticeship teacher, and/or teacher residencies, although there are also many forms of teacher residencies that are adjacent to but do not qualify as TADs. Apprentices in a TAD are not called student teachers, a term generally reserved for students in conventional education programs who are paying tuition to get a degree and have 14-16 weeks of student teaching without getting paid (they are paying for this student teaching opportunity as part of the degree they are obtaining).

This level of learning via OJT collectively provides significant work experience before someone becomes a formal teacher of record. Kristina Smith, special services director of Hollister School District in Missouri (and one of the districts participating in Missouri State University's Pathways for Paras), observed, "You can have a semester in the field with a traditional degree, or you can have two years [with the apprenticeship degree].[v] Or maybe as a para[professional], you've been in the field for years and years and years. So [with an apprenticeship degree] you've got years of field experience before you get to step in on your own. So I certainly think that [the apprenticeship degree] is more valuable than the traditional route."[42]

v *Missouri's Pathways for Paras program begins after a candidate has completed an associate degree.*

2. **Apprentice coaching.** This is support provided to apprentices in addition to what happens on the job. For example, Michigan's Talent Together provides apprentices with a Success Navigator to support them through the TAD journey, including navigating both employment and their college program. Talent Together also provides a Teacher Leader Facilitator who provides instructional coaching alongside the apprentice's classroom mentor. Jack Elsey, founder and CEO of Michigan's Workforce Initiative (which led the creation of Talent Together), noted: "We provide candidates with the support they need to navigate the postsecondary application process, persevere through coursework challenges, secure additional financial supports where needed, and just be there to listen when life happens."[43]

3. **Rigorous, accessible, and flexible academic preparation.** There is no one mode of postsecondary education that will meet the needs of all working adults. Academic preparation in a TAD must be aligned with the work an apprentice will do in a classroom as a teacher, and apprentices need to be provided with the flexibility to meet varying work and life circumstances (e.g., offering in-person and remote learning, live and asynchronous, and both fixed scope and sequence and competency-based degree pathways).

4. **Earning while learning to reduce barriers to participation.**[vi] Apprentices earn a salary while pursuing a degree. This enables individuals who cannot afford to forgo income while pursuing a conventional degree pathway to advance their education and careers (and earnings). In TADs, apprentices also accrue seniority in paraprofessional and teacher pay scales as well as in teacher retirement systems.

vi *The authors acknowledge a tension in TAD programs around earnings, namely: 1) paraprofessionals earn low wages, and 2) teachers — while usually earning significantly more than paraprofessionals — also are not always paid at a living wage and or at a level that matches the value they create for society. At the same time, one of the intended values of TADs is that they enable apprentices to at least earn as a paraprofessional while pursuing a pathway to being a teacher and advancing their wages. For someone already working as a paraprofessional, it is an explicit path to advance out of that role and into a better-paying teaching role. Teaching is itself also a pathway into more advanced, senior, and higher-paying education roles at the school, district, and district leadership levels. Finally, given that the credential TADs earn includes a bachelor's degree, graduates have a critical education accomplishment that is recognized and portable beyond the teaching profession.*

5. **Affordability.** TADs are designed to be low or no cost to apprentices. This creates conditions in which people — particularly from low-income communities and who may be limited to paraprofessional roles — can pursue a pathway into teaching. Anastasia Wickham, provost of Reach University, noted: "To become a teacher, an individual often has to leave their place of employment, if not also their home community, and then incur a tremendous amount of debt to enroll in a traditional program. Very often, the coursework that's required in traditional programs is not accommodating for someone with a full-time job or family. Apprenticeships eliminate these barriers by focusing on affordability and accommodations for the working learner."[44]

6. **Placement and fit.** TAD completion often leads to an offer for full-time employment. But there is also a benefit when it does not. TADs enable both the apprentice and the potential district/LEA employer to determine if teaching is a right fit for the apprentice *before* they are hired as a teacher of record.

7. **Portable bachelor's degree and teaching certificate.** Apprentices obtain a bachelor's degree as well as a teaching certificate that may be state-specific but still signals the capability to teach in other states. The bachelor's degree enables successful apprentices to advance in teaching and into nonteaching roles within an education system, is portable to other education systems, and is a unit of education value that is transferable outside of the field.

SIDEBAR 2

Skills Are the Underlying Source of Value in TADs[vii]

If postsecondary pathways are a currency, the underlying "coin of the realm" are the skills that these pathways enable an individual to build in a way that is credible to potential employers.

For skills to convey value, they must: 1) be named and prioritized in a way that they can be used as a common language among stakeholders; 2) be built through content, learning, and experience; and 3) be measured. In the case of teaching in general, and TADs specifically, three conditions for a functioning "skills market" exist in the following ways:

1. Skills are clearly articulated in TADs, even though the range of skills frameworks are fragmented because different states and even different districts can have their own skills frameworks.

2. Skills are built in TADs through the combination of OJT and a Related Instruction/Related Technical Instruction (RTI) that can include district training, training from an intermediary, and pursuing a bachelor's degree in education.

3. Skills are measured through a combination of tasks or tests, document reviews by a mentor teacher (e.g., lesson plans or individualized education plans), and classroom-based observation and assessment.

Skill-building efforts can be both highly structured and highly supportive. Nicole Sinclair, an education development specialist at Michigan's Talent Together, explained: "Over the course of the [apprenticeship] year, apprentices work on standards core to teaching, like 'execute backwards design.' They submit their planning as evidence of their skill and their mentor reviews it and says either, 'Yes, this is a quality exemplar of this person's work-based competency' or 'Nope, they need to do a little bit more,' in which case the apprentice continues working on that. It's all in service of their progress and success at a school."[45]

Kirshner of BISD noted: "We cover a broad range of critical skills, including — How to greet your students, build rapport, and build relationships? How do you manage and organize your classroom? How do you build routines? How do you monitor students? How do you assess students formatively and summatively? How do you engage in small group instruction?"[46]

vii *"Skills" can also be referred to as "competencies" or "standards."*

TADs exist within a complex ecosystem of workforce and teacher preparation pathways.

Registered Apprenticeships (RAs) are a formal designation from the U.S. Department of Labor (USDOL), defined as, "an industry-driven, high-quality career pathway where employers can develop and prepare their future workforce, and individuals can obtain paid work experience with a mentor, receive progressive wage increases, classroom instruction, and a portable, nationally recognized credential. [RAs] are industry-vetted and approved and validated by the U.S. Department of Labor or a State Apprenticeship Agency"[47] (Sidebar 3). Sometimes these are also referred to as **Registered Apprenticeship Programs (RAPs)**.

SIDEBAR 3

Overview of RA Design Elements[48]

Industry-Led
Instructional programming aligned with employer requirements.

Paid Work
Progressively increasing schedule of wages, no less than minimum wage.

OJT/Learning/Mentorship
At least 2,000 hours of on-the-job learning per year.

Supplemental Education/RTI
A recommended minimum of 144 hours of RTI for each year of an apprenticeship.

Diversity
Strong nondiscrimination and recruitment practices to ensure access, equity, and inclusion.

Quality and Safety
Apprentices are afforded worker protections while receiving rigorous training.

Credentialing
Apprentices earn a portable, nationally recognized credential within their industry.

TADs can be RAs but are not required to be (though this has implications on accessing some funding sources, as explained on Page 29). RAs require that apprentices receive a credential, but not necessarily a bachelor's degree, and so even in teaching, there are RAs that are not TADs.

The marriage of teaching and RAs is very recent. In November 2021, the Tennessee Department of Education announced that its teacher apprenticeship programs were the first to be recognized by the USDOL as an RA.[49] However, there are challenges to becoming an RA that turn some potential apprenticeship programs away from pursuing this registration. It takes effort to become a RAP. As Third Way noted, "The registration process for apprenticeships places a significant administrative burden on employers to understand varying regulations, collect data, complete paperwork, and meet standards that may look different from state to state or even city to city."[50] RAs also have tracking and reporting requirements, but employers must create and maintain their own data systems.[51] And all of this requires additional effort and costs.

There are also **pre-apprenticeship** programs that sometimes begin before a formal apprenticeship. They may involve initial skill-building or acquiring a requisite number of college credits, credentials, or experiences before entering into a formal apprenticeship. For example, some TAD programs may require that a prospective apprentice completes their associate degree before entering a formal apprentice program and may call that time a pre-apprenticeship.

If TAD programs are RAs, they require a **sponsor** whose responsibilities "typically include identifying program qualifications and standards, recruiting and screening applicants, developing formal agreements between employers and apprentices, defining an apprenticeship's work processes and related instruction, setting the wage progression, and ensuring that the program meets state and federal requirements."[52] A nonprofit, district as employer, IHE, or district/state agency may serve as a sponsor.

TADs require **school districts** as the employer of record for an apprentice. Additional district responsibilities in a TAD can include identifying teacher pipeline needs, recruiting apprentices from their nonteaching school-based staff, and interviewing and hiring prospective apprentices. Districts ultimately own the employment decision to hire a paraprofessional and permit them to enter a TAD program. Districts also provide OJT and mentoring during an apprenticeship pathway.

TADs require IHEs to serve as **Educator Preparation Providers (EPPs)** to provide the necessary instruction that enables an apprentice to achieve a bachelor's degree and teacher certification. EPPs can also provide advising and student services (academic and nonacademic) that conventional college students receive, but with additional specialization and focus on the needs of working adults in an apprenticeship. Some TADs have multiple EPPs, while other TAD programs are run by an IHE that serves as the single EPP.

TAD programs also have **intermediaries** whose responsibilities include program development and delivery, stakeholder engagement, monitoring, evaluation and supports, and strategy and field-building.[53] Like the role of sponsor, intermediaries can be played by a nonprofit, district as employer, IHE, or state agencies.

One critical role that intermediaries play is in coordinating with individuals, districts, and EPPs to create the three-way match that enables a TAD to operate. With districts, intermediaries will work to understand their emerging talent needs and help district leaders source paraprofessionals, other nonteaching school staff, and individuals not currently employed in the school system who might be interested in a TAD. Some intermediaries will directly recruit prospective apprentices, hosting information sessions and doing printed and social media outreach.

Intermediaries work closely with apprentices to set up the match with their EPP that reflects their existing and prior education, as well as the specific needs of a program tailored to their life circumstances. This includes working with each apprentice to understand and access the full range of financial aid opportunities to match them to their preferred pathway while also negotiating with EPPs to reduce tuition and fees to a level matched by these resources.

Intermediaries commonly provide a range of coaching and navigation supports to apprentices. One TAD shared that they provide tutoring, with intensive supports to ensure apprentices achieve a 3.0 GPA, and if necessary, advocate for them to lessen their OJT if they are slipping academically so they can improve their academic standing and continue in the apprenticeship. Intermediaries may also foster a strong community of apprentices who provide mutual support and social capital to support their short- and long-term success.

Workforce Boards, American Job Centers, and similar types of state-level labor programs also play an important role for some TAD programs. They can deploy Workforce Innovation and Opportunity Act (WIOA) funding in support of TADs, including funding to meet critical needs like transportation and child care that otherwise serve as obstacles to participation and success.

The TNGYOC has published a resource[54] to share with EPP faculty and school district leaders to connect apprentices facing challenges with housing instability, food insecurity, or other significant needs directly with an American Job Center[viii] in their community.[55] Workforce Boards can provide funding for OJT and RTI, and some can offer subsidies or reimbursements to employers for participating in registered apprenticeship programs. TADs that are RAs are automatically eligible for WIOA funding, but non-RA TADs may qualify for support if they meet locally set criteria.

viii *American Job Centers are initiatives started by Workforce Boards.*

TADs exist within a continuum of GYO teacher pathways programs. In the past two decades, states have started GYO programs to address teacher shortages that provide a wide range of pathways into teaching, ranging from career and technical education (CTE) with high school students, to adults with bachelor's degrees or master's degrees seeking a career change.[56] All 50 states and the District of Columbia have GYO programs, but have different policies, priorities, target populations, and pathways within them.[57]

GYO program costs to participants can range depending on the pathway, what credential is being obtained, if they are employed by a district while pursuing a pathway, if the program is an RA, and what funding sources are available to cover their salary and the tuition, fees, and other expenses, required to pursue a credential. TADs are an emerging additional pathway option that some GYO programs now offer.

TADs also exist within a broad continuum of apprenticeship models; TADs are on the most structured end of this continuum (Figure 1).[58]

FIGURE 1: APPRENTICESHIP MODELS IN THE U.S.

Traditional Apprenticeships	College-Connected Apprenticeships			Degree Apprenticeships	
Non-Credit	Non-Credit, For-Credit Hybrid	Credit Evaluation for Noncollege Experience	For-Credit	Degree	Competency-based Degree
A college, union, community-based or other training provider delivers technical instruction that does not result in postsecondary credit.	An IHE delivers technical instruction through a combination of for-credit and noncredit courses.	An IHE awards academic credit for an apprenticeship experience provided outside of a college setting.	An IHE delivers technical instruction through for-credit courses.	An IHE delivers for-credit technical instruction that culminates in a degree.	An IHE delivers for-credit technical instruction and/or awards credit for apprenticeship experience as part of a degree pathway.

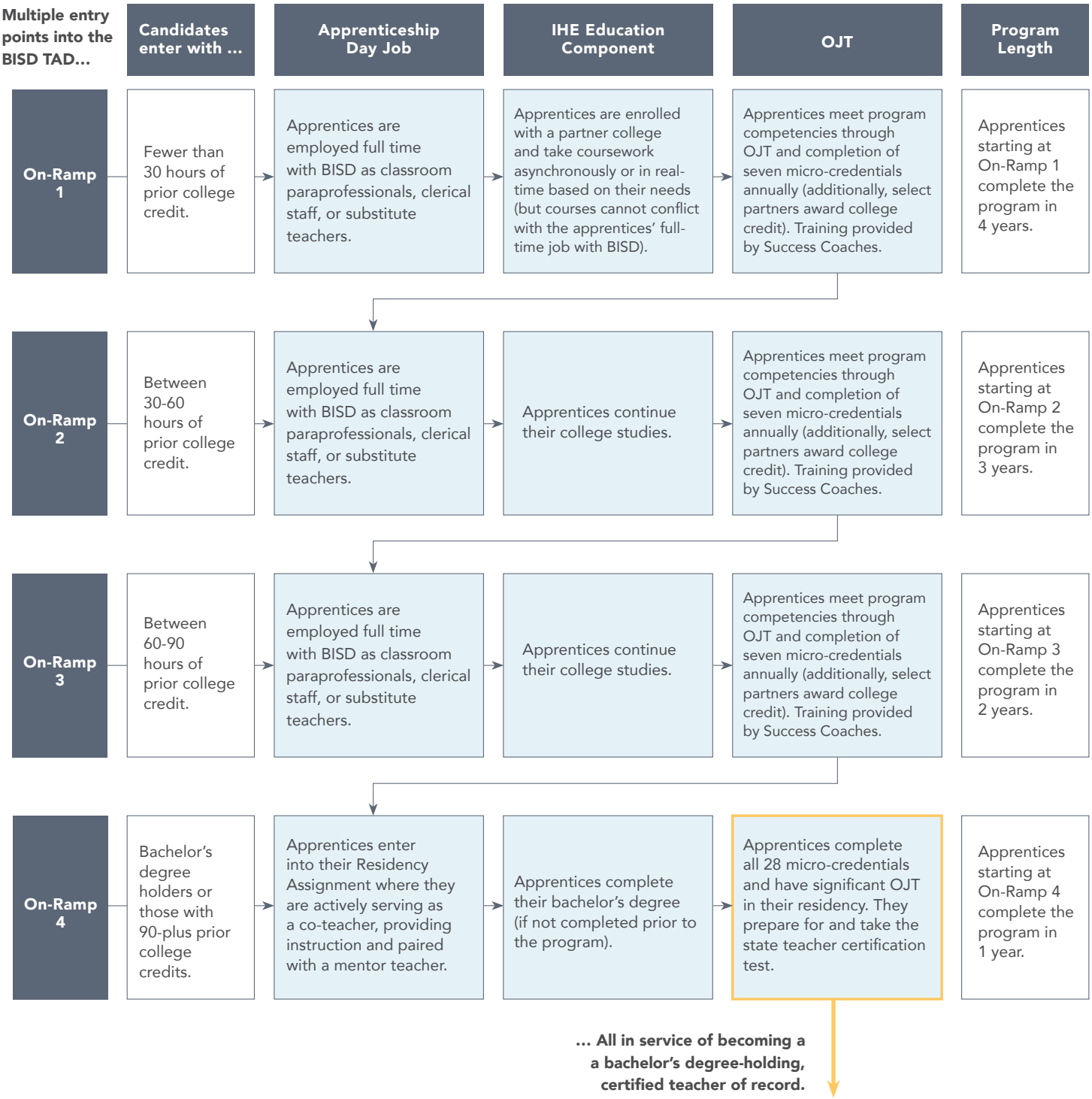
***Source**: Re-created figure from Lul Tesfai, "Creating Pathways to College Degrees Through Apprenticeships," New America, updated September 19, 2019.*

TADs offer multiple inclusive on-ramps to support successful completion.

TAD programs can be designed to provide flexibility to reach people where they are, and then help them get where they want to go in the teaching profession. Many TAD programs offer opportunities for individuals to begin a TAD regardless of how much or how little prior college credit they may have, and regardless of their work experience (though to become a teacher apprentice, they must become a school employee). Some TADs — like TNGYOC — require the completion of an associate degree first (though it also helps prospective apprentices pursue pathways to attain their associate degree and then enter into TNGYOC's apprenticeship program).

For example, BISD in Texas has mapped out a progression that allows apprentices to enter into its TAD program based on an applicant's existing college credits, and then proceed along a pathway with the common outcome of achieving a bachelor's degree and teacher certification (Figure 2).

FIGURE 2: ON-RAMPS INTO BISD'S APPRENTICESHIP PROGRAM PATHWAY, TEXAS



"Beginning an apprenticeship program was really a way to fill a critical need based on the teacher shortage … and it provides more pathways to the profession than the traditional university model. We can get teachers certified, no matter where they are on their educational journey. The apprenticeship model really gives us more flexibility and the opportunity to expand our candidate pool."[59]

—DANNY MASSEY, SUPERINTENDENT, BISD, TEXAS

Different TAD programs may find more demand for certain on-ramps than others in the specific communities they serve. For example, BISD shared that the bulk of its apprentices are coming in at On-Ramp 2, with some college but not yet an associate degree, which speaks to the potential of TADs as a pathway for people who started college but left before completion.[60]

TADs strive to provide flexibility in the time to complete a bachelor's degree while holding the line of rigor and OJT experiences and skills-building. In the BISD pathway example, while individuals can achieve their bachelor's degree and then teacher certification at different speeds, they must always spend one year in the apprenticeship working as an apprentice resident and co-teaching with an experienced mentor teacher and must still demonstrate proficiency in all of the micro-credentials required to be a BISD teacher.

As Kristi Kirschner explained: "If I entered the program at On-Ramp 2, I will still be required to learn the competencies that otherwise start at On-Ramp 1, because they scaffold and are embedded in future trainings; collectively they provide the tools and experience to be a high-quality classroom teacher."

One interesting variation across TAD programs profiled is the timing of when an individual in a TAD formally becomes an "apprentice." Some TADs refer to them as an apprentice the moment they enter a program, while others do so when they enter their final year in a co-teaching or residency-teaching role.

TADs are developing and demonstrating a range of design innovations.

Different organizations in a TAD program can serve in the roles of sponsor and intermediary, and they can have different numbers of districts and EPPs involved. For example:

- In Texas, **BISD** is a school district that became the original sponsor and intermediary of its TAD program and works with multiple EPPs. However, a new third-party nonprofit effort — Edwell — is going to assume the role of sponsor and intermediary for BISD to enable it to work with other districts interested in participating in but not leading their own TAD program.

- **Missouri State University's Pathways for Paras** is itself an IHE serving as the sponsor and intermediary as well as the EPP in its TAD program; it works with 200 districts.

- **Reach University** is an IHE that is also the sponsor and intermediary of its TAD program working across 343 school districts. If necessary, it can serve as a sponsor and intermediary to support the launch of other TAD programs and has launched the National Center for the Apprenticeship Degree as a "widespread impact"[ix] strategy to support the creation of new TADs and build a network of TADs to support one another.

- **Michigan's Talent Together** is a consortium of state regional superintendents and a nonprofit that serves as the sponsor and intermediary for its TAD program and organizes TADs across 305 school districts and 16 EPPs.

- **TNGYOC** is a state-funded part of the University of Tennessee; the sponsor is the Tennessee Department of Education and TNGYOC is the intermediary that organizes TADs across 85 districts and 14 EPPs.

These and other TAD programs continue to grow and evolve, and as they do, the various roles and responsibilities may shift across organizations involved in their TAD programs.

TAD programs can partner with one or multiple EPPs to provide greater variety and flexibility in delivering the education and degree component of the program. TADs can provide a range of EPP options based on geography, program of study, and model design, including in-person and remote, live and asynchronous, and a fixed pace versus competency-based.

Michigan's Talent Together currently has 16 different IHE partners that allow prospective apprentices a choice of pathway options. In Texas, BISD has five IHE partners.

TNGYOC has 14 current IHEs as EPPs. Even though it is based in the University of Tennessee System, it sees working with other colleges and universities as essential to effectively serve all Tennessee school districts, many of which have other existing partnerships with local EPPs that can be expanded into TADs. As TNGYOC's Crisp noted, "There is enough need to go around."[61]

In contrast, Pathways for Paras in Missouri currently has one IHE — Missouri State University — which also acts as the sponsor and intermediary of its TAD.

Several TAD programs also noted the need for a certain amount of diversification — from local and national EPPs — because it remains to be seen which IHEs in their program will truly embrace the TAD model at scale.

Credit for learning on the job that can be applied to a TAD bachelor's degree. For example, Missouri State University's Pathways for Paras provides prior learning assessments that grant students credits for participating in district-led learning experiences. The program maintains a quality bar by using the same summative assessment given to traditional students to determine if an apprentice can demonstrate the requisite skills and knowledge to gain college credit.[62] Reesha Adamson, associate dean at the School of Special Education, Leadership, and Professional Studies at Missouri State University, said, "Prior learning experiences honor the field expertise we have in our K-12 schools and allow our participants to learn and apply critical skills immediately in their employment that give them the practice needed to find success in their first day on the job as a certified teacher."[63]

Credit for prior learning that can be applied to a TAD bachelor's degree. For example, TNGYOC leverages credits for prior learning in its TAD program. Amelia Brown, director of the Office of Professional Licensure at the University of Tennessee, Knoxville, said, "Through our current accreditations, up to 25% of a degree can be transferred via a prior learning proficiency exam. This has pushed not just us but the entire state of Tennessee towards a more equitable model of recognizing the competencies that individuals come in with and translating those into meaningful college credit."[64]

TADs are also increasingly focused on providing competency-based degree pathways as an option for apprentices. Most TAD providers in this report worked with brick-and-mortar, in-state schools as EPPs, but all are exploring how to provide scalable options that are competency-based. This can include both EPPs that are

ix *Widespread Impact is one of three impact strategies (the others are Direct Impact and Systemic Impact) explained in Bellwether's A Pragmatic Playbook for Impact: Direct, Widespread, and Systemic.*

competency-based only and conventional EPPs that are offering a competency-based option in parallel to their other degree pathways.

For example, TNGYOC has developed an online curriculum for apprentices that will be piloted in SY24-25.[65] The purpose of this effort is to:

- Increase access to a high-quality online competency-based program across Tennessee.
- Provide competency-based assessments to assess prior learning and OJT to accelerate degree completion.
- Enable teacher apprentices in rural districts who may not have easy access to physical colleges to access high-quality competency-based teacher education.

While TADs reasonably focus on in-state IHEs as EPPs, the three examples of TAD programs with multiple EPPs all have at least one national competency-based provider, such as Western Governors University and Southern New Hampshire University. These national players focus on providing virtual, competency-based degree pathways to meet the needs of apprentices who require that particular model to meet their life circumstances and, in some cases, to support rural communities that do not have a physical campus nearby.

Some TAD programs specifically prioritize paraprofessional or other school-based nonteaching roles. For example, Missouri State University's Pathways for Paras requires prospective apprentices to work in a school district and be recommended by a school principal. In Tennessee, the TNGYOC also focuses on existing nonteaching, school-based staff. Interviewing leaders, operators, and apprentices of these programs reveals that this decision is not about being exclusionary; it seizes on an opportunity. Kristy Brown, the Tennessee Department of Education's chief academic officer, noted:

> "Rural districts in Tennessee often experience disproportionately higher numbers of vacancies, especially in certain high-need roles. District leaders are looking at growing their own pipelines of teachers, leveraging this pipeline of people who are already working within their schools — people who they know are going to stay and persist where they are and who are already deeply connected to the community. This works with roles that have traditionally been designated as hard to fill."[66]

Focusing on paraprofessionals is about capitalizing on potential teaching talent already in the building and making pathways for those who cannot otherwise pursue being a teacher. Lisa Barron, associate dean and director of teacher education and partnerships with Austin Peay State University in Tennessee, shared, "We had a huge vacancy problem. And yet we had teacher assistants in their building who had shown a passion for teaching, a love for teaching, a disposition you would want in a teacher. But many already had children, families — they thought, 'I can't ever be a teacher.'"[67]

Some TAD programs focus on filling specific teaching subject needs. Missouri State University's Pathways for Paras was initially created to focus on the special education teacher pipeline. A May 2024 report from the Missouri Department of Education noted that 10.8% of specific education positions were vacant, and approximately 18% of special education positions that are filled rely on what the state refers to as "inappropriately certified teachers."[68]

This need is not unique to Missouri. At a national level, 45% of public schools as of December 2022 report vacancies in special education teaching roles.[69] However, based on market demand, Missouri State University's Pathways for Paras has started to expand into new subjects and areas of expertise.

Some TAD programs work with employer districts to target specific needs in specific classrooms, including to prepare for future teacher vacancies. Amy Peterson, regional program director, Northern Michigan at Talent Together, said:

> "Before coming to Talent Together, I was the superintendent and principal at Mackinac Island, a small island between the Northern and Lower Peninsula off Lake Huron. It's about 8 square miles around the island and we had one [pre-K through grade 12] school, about 72 students. Staffing is such a challenge in a small rural school like that, but we had a teacher assistant who had so many great skills. I encouraged her to apply to Talent Together, and she was one of the first in the cohort to be accepted. She was placed in a preschool/kindergarten classroom [for her apprenticeship]. The teacher in [her assigned] classroom retired in the spring and they hired the apprentice teacher. So now those students will start this fall with a certified teacher who has had this whole year of coaching and co-teaching in that classroom, and it's just a really easy transition. This is a big win for students, families, and the district!"[70]

Some TAD programs also offer a TAD that confers a master's degree and one that confers a teacher certification. These TAD pathways support people who have a bachelor's degree but want the apprenticeship component of pursuing a pathway into teaching and also want a low- or no-cost model while earning as a paraprofessional.

Even with a bachelor's degree, an apprentice in this pathway still commits to and benefits from a yearlong apprenticeship experience building skills, receiving mentoring, and serving as a resident or co-teacher. These TAD variations can also appeal to people who are teaching through emergency certification but want to get formal certification to be a successful teacher long term. In its coming fall cohort, Michigan's Talent Together reported that 40% of the applicants into the program were existing teachers working under emergency certifications.[71]

While complex, these design innovations also provide flexibility and dynamism. TADs may have many variations at this stage of the field's evolution, but this complexity is not a design flaw; rather it is a critical feature to allow TADs to customize to a local district or state context and to be most inclusive in supporting individuals without degrees seeking to become teachers of record.

How Big Is the TAD Field?

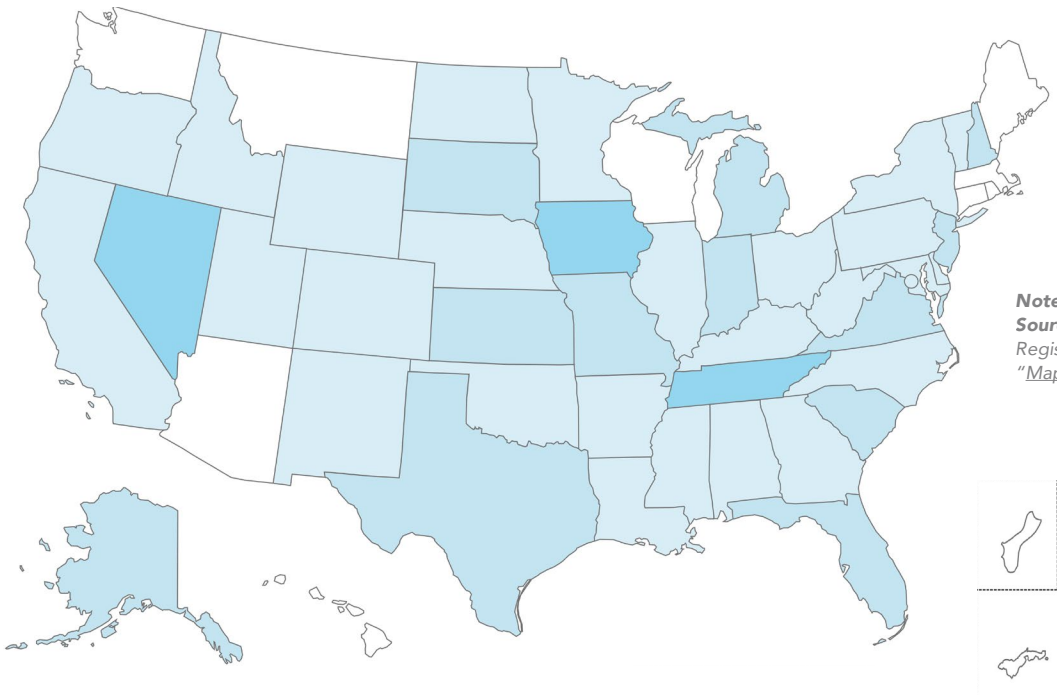
The TAD field is still nascent, and determining its size is a challenge. Not all RAs in teaching are TADs and vice versa. National sources of information do not (yet) track and differentiate registered teacher apprenticeships from TADs, and some organizations do not (yet) track and differentiate TADs from the many other teacher apprenticeship pathways that they offer. (Note: individuals may switch between pathways offered by GYO organizations.)

For example, Apprenticeship USA reports that "in 2023, there were over 7,450 registered apprentices serviced in the education industry, a 247% increase over the past five years."[72] However, this number does not include non-RA TADs and appears to also include RAs in other non-K-12 teacher education roles such as in early childhood.

Educator Registered Apprenticeship (ERA) Intermediary has a database of active and completed registered apprenticeships in K-12 teaching, which reports 3,327 registered apprenticeships in teaching as of September 2024 — but this database may not include all programs that have yet to self-report to ERA, and it does not include TADs that are not currently RAs (Figure 3).[73]

As TADs and RAs in teaching continue to grow, it is vital that the field clearly distinguishes among different categories of apprenticeships and tracks them in order to understand the circumstances under which each is driving positive outcomes for stakeholders in a TAD marketplace.

FIGURE 3: U.S. STATES AND TERRITORIES WITH REGISTERED RA PROGRAMS



***Note**: Map is current as of September 2024.*
***Source**: Re-created figure from Educator Registered Apprenticeship Intermediary, "Map of K-12 Teacher RA Programs."*

Market Forces That Indicate the Potential for TAD Growth

The premise of a TAD is that it will enable individuals to advance into teaching roles that help improve their earnings, and in doing so create a pipeline of strong teachers that improve education. However, TADs can only achieve scale if they provide compelling value and meet the needs of key stakeholders in a TAD marketplace — filling an unmet need and/or filling it competitively relative to existing alternatives.

Altruism does not scale.

Fortunately, TADs have the potential to scale specifically because of their potential (which ultimately must be measured) to meet market needs of three critical stakeholders: 1) K-12 systems as employers, 2) individuals seeking high-value pathways, and 3) IHEs.

K-12 systems as employers face a number of talent and labor challenges that — if not addressed — impede their ability to deliver on educational outcomes. K-12 schools face increasing shortages of labor in an industry where quality and representation of talent matter, and where there are specific credentials and skills required to even be considered for a role in teaching (Table 2).

TABLE 2: K-12 DISTRICT LABOR MARKET FORCES CREATING DEMAND FOR TADs IN THE U.S.

Market Conditions		Supporting Data
Unmet labor market demand (i.e., teacher shortage and/or recruitment challenges). *(Note: Labor market trends may vary across the 13,318 public school districts and 99,388 public schools across the country.)*[74]	Schools are challenged by teacher vacancies and emergency certifications.	• There were 55,000 teacher vacancies as of August 2023, up from 36,000 the prior year.[75] • 79% of public schools reported having difficulty filling teaching positions with fully certified teachers for SY23-24;[76] 70% of public schools reported this difficulty was due to too few candidates applying, while 66% reported a lack of qualified candidates.[77] • In January 2022, an Institute of Education Sciences survey of schools found that 22% of public schools in the U.S. reported having teaching vacancies higher than 5% (10% of schools reported vacancy rates higher than 10%). The number rose to 34% for schools with high Black and Latino student populations, compared to 16% for schools with low Black and Latino representation.[78] • Specific teaching roles are especially challenging to fill: In 2022, 43% of public schools reported vacancies in special education and 32% in general elementary.[79] • There were 286,000 individuals as of 2022 in formal teaching roles without full qualifications who were emergency certified to teach.[80]
	Schools are challenged by teacher retention.	• 8% of teachers left teaching as of the end of SY21-22; an additional 8% transferred schools.[81] • 55% of NEA members report planning to leave teaching earlier than their original plans because of the COVID-19 pandemic.[82]
	Schools are challenged by their existing talent pipeline.	• Interest in teaching among incoming bachelor's degree-seeking freshmen declined from 11% in 2000 to 4.3% in 2018.[83] • *See Page 25, Table 4: "IHE Market Forces Creating Opportunities to Expand Into TADs."*

TABLE 2: K-12 DISTRICT LABOR MARKET FORCES CREATING DEMAND FOR TADs IN THE U.S. *(continued)*

Market Conditions		Supporting Data

The quality of teaching talent materially impacts educational outcomes.	Teacher diversity and representation impacts education.	• Disparities in representation:
		  • 56% of public K-12 students are students of color[84] while only 27% of public K-12 teachers are people of color.[85]
		  • 21% of districts lack any teacher identifying as a person of color; 14% of districts report only one teacher of color.[86]
		• Representation matters:
		  • "Exposure to at least one Black teacher in grades 3-5 significantly reduced" the probability of dropping out of high school among low-income Black male students by 39%.[87]
		  • "Black students randomly assigned at least one Black teacher in grades K-3 are 9 percentage points (13%) more likely to graduate from high school and 6 percentage points (19%) more likely to enroll in college."[88]
		  • Teachers of color also provide benefits to white students.[89]

	Teacher quality matters to education outcomes.	• A summary of 85 teacher effectiveness studies noted that teacher effectiveness is positively associated with student achievement as well as other measures of success such as attendance.[90]
There are specific requirements to be a teacher that support quality but also create barriers to entry into teaching.	Teaching requires specific skills to succeed — both "durable" and "technical" skills.	• Classroom instruction requires a set of industry-recognized skills (also called competencies or standards). For example, the Council of Chief State School Officers, via its Interstate Teacher Assessment and Support Consortium, has developed a model of teaching standards. Each standard has a clearly delineated set of performances, essential knowledge, and critical dispositions.[91] Another example is TNGYOC's teacher competencies, organized around "professionalism, environment, planning, and instruction."[92]
	Teaching requires specific credentials.	• Generally, being a teacher of record requires a bachelor's degree and a teaching certification and/or licensure. Some states eventually require a master's degree.

Individuals as potential students and employees are showing an increased interest in alternatives to conventional education pathways with lower costs, expected higher earnings and a positive ROI, and a focus on experiential learning (Table 3).

TABLE 3: INDIVIDUAL INTEREST IN PURSUING NEW POSTSECONDARY PATHWAYS

Market Conditions	Supporting Data
There is growing consumer skepticism about traditional pathways.	• In a national July 2024 poll of adults, only 36% of respondents indicated they had a great deal of confidence in higher education; 32% had very little or no confidence in higher education.[93]
There is growing reluctance to pursue conventional pathways — including in teaching — due to cost.	• 56% of people in a March 2023 national opinion poll believe that college is *not* worth the cost.[94]
	• In 2020, 45% of educators had taken out a student loan to fund their own education, with an average total amount of $55,800.[95] • 65% of younger educators (aged 18-35) had to take on debt, versus 27% of educators aged 61 or older.[96] • Black educators took on an average debt of $68,300, compared to $54,300 for white educators.[97]
There is a growing interest in and enthusiasm for apprenticeships and nonconventional degree pathways.	• Nearly 80% of high school students believe it is important to have OJT opportunities like internships and apprenticeships — a 14% percentage point increase since 2022; 65% say their ideal post-high school pathway focuses on internships and apprenticeships.[98] • 62% of Americans in a 2018 survey believe apprenticeships make people "more employable than going to college." In the same survey, 87% of adults advise that it is smart to consider both apprenticeships and college as options, and 90% agree that apprenticeships are helpful in leading to a new career.[99]

Once again, a TAD is not an either/or between an apprenticeship and conventional college degree — it is a both/and. IHEs are also feeling market pressure from a general decline in enrollment and specifically in teacher pathways. IHEs could benefit — both in impact and income — from expanding into TADs (Table 4). These key stakeholders are facing market forces that could make TADs a compelling pathway to pursue and expand. However, to truly scale, TADs must be able to measure the value they create to each of these stakeholder groups, as well as the local, state, and federal entities that can shape policies in favor of TADs and providing funding.

TABLE 4: IHE MARKET FORCES CREATING OPPORTUNITIES TO EXPAND INTO TADs

Market Conditions		Supporting Data
Undergraduate enrollment is down.	Enrollment has been declining even before the pandemic.	• Undergraduate enrollment has been in a long decline, peaking at 18.1 million in 2010 and dropping to 15.4 million in 2022 — a 2.7 million decline in undergraduate students.[100] • The number of Americans in the traditional college-going age group is expected to start shrinking dramatically from 2025 to 2037.[101]
	Enrollment in traditional teacher pathways has declined.	• Graduates from undergraduate education programs have declined by 15% from SY12-13 to SY21-22,[102] and graduates from master's degree programs in education have declined 8% in the same period.[103] • According to federal Title II tracking based on state reporting, the number of teacher pathways graduates declined from 204,000 in SY11-12 to 156,000 in SY21-22 — a decline of nearly 23%.[104]
IHEs — in aggregate — are facing financial challenges.*	Declining enrollment means declining revenue.	• A 2019 Chronicle of Higher Education survey of 292 IHEs across the country found that roughly 60% missed their 2019 enrollment goals and 67% missed their 2019 revenue goals.[105] • EY-Parthenon estimated a 26% increase in higher education capacity from 2009 to 2019; this could equal as many as 3 to 5 million unfilled seats and $27 billion to $51 billion in spending on excess student capacity.[106]
	There have been an increasing number of program and campus consolidations, closures, and mergers.	• As of August 2024, Higher Ed Dive has tracked 127 private colleges or universities that have closed or merged since 2016.[107] This excludes public school campus mergers, degree programs eliminated, and an estimated 579 for-profit colleges that have closed between 2016 and 2023.[108] • The State Higher Education Executive Officers Association also reports that an average of one-third of students affected by a college closure did not go on to receive a degree.[109]
Yet there is a large potential market of individuals who could find an apprenticeship-degree pathway appealing.		• There are an estimated 41.9 million people who have pursued some college credit but exited without completing a degree and who may be open to pathways that allow them to earn while obtaining a degree.[110] • Specific to TADs, in 2022, there were 1.4 million paraprofessionals also classified as teaching assistants.[111] Approximately 75% of paraprofessionals do not have a bachelor's degree.[112]

***Note**: *Varies significantly depending on the specific IHE.*

Measuring TADs

There are encouraging initial measures indicating strong demand for TADs and enrollment, but much additional work needs to be done to demonstrate the impact from TAD programs as they mature and produce more graduates.

As the oldest of the TAD programs profiled, Reach University has seen its TAD enrollment grow from 96 entering apprentices in SY20-21 to 2,297 in SY24-25.[113] Similarly, in its first year of operation in Texas, BISD intended to begin with an apprenticeship degree class of 34, but with 180 applicants, it expanded the first class to 65 to take advantage of the demand and the opportunity to strengthen the district's teacher pipeline.[114]

Jon Turner of Missouri State University observed, "We created an initial interest postcard that said there is a new apprenticeship program for paraprofessionals. We sent that out to every para in the state — about 4,000 paras. We got 8,000 responses back. It wasn't only people who got the card — they were also telling others. It was low tech, no social media … and that's where we got off and running."[115]

Elsey, founder and CEO of the Michigan Educator Workforce Initiative, noted that "at the end of year one, we had a total of 4,000 applicants for 550 spots. There will be a [waitlist] again this year. Interest is high, people still want to get into the profession — they just need a new pathway in."[116]

TAD programs are experiencing growing interest and participation by school districts. For example, Missouri State University's Pathways for Paras had 120 school districts participating in a TAD program in SY23-24; it has 200 participating in SY24-25, representing approximately one-third of districts in the state.
EPP partners are also beginning to see the benefit of growing demand for TADs and the potential TADs have to positively impact their enrollment. Meaghan Polega, the associate department chair in the College of Urban Education at Davenport University, explained, "Before this [apprenticeship degree] program, Davenport University was not known for teaching. For the past 10 years, we've had 30-ish new students in our education program each year. This year we had 115 new students [because of Talent Together's Teacher Apprenticeship Program]."[117]

Some TADs are meeting their goal of building a pipeline of apprentices and eventually teachers who are more representative of students and communities. Within BISD, 51% of teacher apprentices are people of color, compared to 29% of teachers in the district.[118] Kirschner from BISD noted, "Our apprentice demographics are starting to reflect our student population, because we're recruiting from within the communities we serve."[119] Michigan's Talent Together shared that in its most recent cohort of apprentices, 42% identified as people of color (compared to 10% of teachers statewide).[120] Reach University reported that 90% of apprentices are either low-income, first-generation, or working parents and 48% are people of color.[121]

However, it is important to recognize that some TAD programs — because of a combination of geography, a focus on rural versus urban communities, and the districts participating in their programs — may be focused on serving predominantly white school districts.

Measures of TAD progress in persistence, completion, and post-apprenticeship outcomes become more anecdotal because of the early stage of the TAD programs profiled in this report. Reach University notes that 70% of apprentices are projected to graduate on time, and that for those apprentices who complete the first year, retention from one semester to the next averages 91% over the course of the four-year

program.[122] It is seeing strong satisfaction, with its most recent undergraduate cohort providing a Net Promoter Score[x] of 70.[123] Michigan's Talent Together reports a 90% first-year retention of its participants.[124]

Where measurement needs to go next. For TADs to reach their potential, they must demonstrate progression, completion, and job placement, followed by persistence, performance, advancement, and, ultimately, an impact on student outcomes (educational ROI). TADs must also demonstrate a financial ROI to students, IHE's, and to some extent to districts relative to the cost of securing talent through other teacher preparation pathways. (Note: financial ROI becomes critical for apprenticeship degrees in other professions.)

Given how many postsecondary pathway programs in teaching offer both TADs and a broader range of teacher preparation pathways, it will be important that these programs build the capacity to measure the efficacy of each type of pathway discretely from the others — apprenticeship degrees separate from nondegree apprenticeships, residencies, and conventional degree pathways. Otherwise, it will be challenging to isolate the value of TADs relative to other pathways.

One advantage that TADs will have related to measuring long-term outcomes is their close relationship with school districts as employers. Districts should be able to track and report apprenticeship placement, retention, advancement, and wage increases, among others, which will also help programs and districts calculate a financial ROI.

The ultimate measure of success in education is improvement in student learning — educational ROI. When TADs achieve a minimum population of graduates, it will be necessary to more formally evaluate the impact of TADs on student education attainment and high school and postsecondary degree attainment.

For TADs to scale, it will also be vital to measure benefits to individuals — the increase in earnings as well as their financial ROI from completing a TAD. This will allow individuals to make informed decisions about their choice of pathways and enable TADs to competitively demonstrate their value to individuals relative to both existing conventional pathways and peer innovative pathways proliferating in the market.

Measurement is a continual journey to create the right metrics, track them, and then leverage them to drive continuous improvement (Appendix A).

> *"All stakeholders care about outcomes like eliminating persistent vacancies, retaining newly licensed educators, and of course realizing achievement gains for students. Complex organizational change at scale requires that we position the right outcome data in front of the right audiences at the right times."*[125]
>
> —ERIN CRISP, EXECUTIVE DIRECTOR, TNGYOC, TENNESSEE

x *Net Promoter Score is a survey metric asking respondents to rate the likelihood of recommending a company, organization, product, service, or experience to others.*

Cost and Funding for TADs

TADs require the collaboration of a complex set of stakeholders, each of which has distinct costs as well as the potential for transferring costs from one entity to another in terms of who actually pays — in particular student tuition, fees, and other costs to pursue the degree component of a TAD. TAD costs may move chairs, but they ultimately sit somewhere.

Costs

Sponsors and/or intermediaries incur costs related to administrative leadership and staff, regional program staff, and staff responsible for grant management and reporting, as well as providing wraparound supports, including coaching and advising for apprentices and to district staff involved with a TAD. Sponsors and/or intermediaries may also incur costs if they are subsidizing the degree component of a TAD, costs to districts, and other costs to encourage district participation.

Districts incur costs related to stipends for mentor teachers and/or teacher leaders who are assuming additional responsibility for supporting apprentices in their classrooms, although, for example, Michigan's Talent Together as an intermediary directly covers the district cost of $7,500 per mentor teacher.[126]

Apprentices are employed as paraprofessionals or in other nonteacher school-based roles, and to the extent that these are positions already required and budgeted for in the school, there is no marginal cost. However, some TAD programs pay apprentices more in their final year when they are in their co-teaching/apprenticeship teacher role. For example, in Michigan's Talent Together TAD program, teachers assume gradual teaching responsibility in their final year and are paid at 80% of a first-year teacher's salary, and Michigan's Talent Together covers this cost in the final year to encourage district participation (again, transferring this cost from the district to the intermediary).[127] In return for covering the cost of tuition, apprentice supports, and the final year of salary, Michigan's Talent Together does set a nonbinding expectation of five years of teaching with both districts and apprentices.[128]

EPPs incur costs related to running their degree program, which are then translated into the actual tuition, fees, materials, and other charges that are passed along to apprentices. Some EPPs also incur costs from redesigning existing conventional education pathway curriculum and program design to meet apprenticeship needs.

Older, brick-and-mortar IHEs have larger facility and administrative costs, and they have to decide how these costs translate into their "list price" for a pathway program. Virtual programs can have lower costs depending on whether they are a "pure play" virtual program or affiliated with a physical school. Some TAD programs will also negotiate specific prices with EPPs for their apprentices.

Apprentices incur costs related to tuition, fees, materials, and other fees charged by EPPs. However, TAD programs strive to cover most or even all of the degree-related costs to apprenticeships to make TADs viable as a postsecondary pathway into teaching. For example, Reach University apprentices only pay tuition and fees of $900 per year, a 94% discount on the true cost of its degree program.[129]

However, the way TAD programs create apprenticeships that are no or low cost to apprentices is by actively working with an apprentice and their unique circumstances to maximize the amount of funding they can access at the federal and state levels to cover the cost of their degree and help cover living expenses, transportation, and more, during their time as a bachelor's degree candidate. Because apprentices are employed in paid roles, they do *not* incur opportunity costs by having to forgo employment at a paraprofessional salary.

Funding

TAD programs access a wide range of funding sources. A 2023 report looking at a broader set of workforce pathways estimated that the average number of funding sources for the apprentice programs in their sample was seven (ranging from two to 10).[130] While none of these programs was an apprenticeship degree, this illustrates the efforts apprenticeship programs pursue in order to access workforce funds. Because TADs have a degree component, they can access significant additional funds from education sources.

The TAD programs profiled in this report pursue a range of funding sources and distribution of costs.

Example 1: Missouri State University's Pathways for Paras (an IHE serving as the EPP, sponsor, and intermediary). In this TAD program, districts cover apprentice salaries, stipends to mentor teachers, any costs for recruiting apprentices, and the costs for apprentices taking prior learning assessments. To cover the cost to Missouri State University — and by extension apprentices — for pursuing a degree, the IHE braids a variety of funding sources. Missouri State University estimates that the full in-state tuition, books, and supplies for one year cost $9,108. Every prospective apprentice completes the Free Application for Federal Student Aid to enable access to any available financial aid.[131] Missouri State University also pursues a range of resources to make the TAD free to an apprentice (Table 5).

One of the general complexities in higher education is determining the true cost of a degree pathway, including but extending beyond tuition, fees, books, and supplies.[132] Missouri's Pathways for Paras program apprentices may receive awards beyond the $9,108 to help them cover room and board, transportation, technology requirements, and other expenses. The program also offers opportunities for apprentices to take assessments to demonstrate value from prior learning that can accrue as credit toward a bachelor's degree. Missouri's Pathways for Paras estimates that attaining these credits generates savings of approximately $6,696 for TADs pursuing a bachelor's degree.[133]

TABLE 5: MISSOURI STATE UNIVERSITY'S PATHWAYS FOR PARAS FUNDING SOURCES AND LEVELS

Funding Source(s)	Typical Dollar Amount (USD)
Workforce Development Funding: Missouri State University currently is funded through both an Apprenticeship Building America Grant and a U.S. Economic Development Administration Good Jobs Challenge, available in 58 counties in Missouri.[134]	$2,000 per year
Missouri Access Grant: Students eligible for Pell Grants can receive up to $7,395 per year depending on need.[135]	Full-time students who are eligible typically receive around $4,000 per year
TEACH Grant: Comes with stipulations regarding GPA and a requirement to teach for 4 years in a low-income area.	Up to $4,000 per year
Fast Track Workforce Incentive Grant: Recent changes in eligibility have made more students eligible for this money.	"Last Dollar"covers anything left over after other grants and/or scholarships have been applied

Example 2: TNGYOC (serves as the statewide TAD intermediary based on an interagency grant between the Tennessee Department of Education — the TAD sponsor — and University of Tennessee system). TNGYOC is focused on ensuring that participating in its TAD program incurs low to no cost to apprentices (Table 6). As an intermediary, TNGYOC is in a constant matching process among districts that have specific needs (currently serving 85 out of 140 districts), individuals who have various interests and different levels of college credits, and IHEs serving as EPPs. The circumstances for each potential apprenticeship opportunity are different (Table 7). Prentice Chandler, dean of the College of Education at Austin Peay State University in Tennessee observed: "The cost to each apprentice varies and it takes us braiding together funding sources to make this program affordable for all."[136]

TNGYOC's braiding pulls on many strands:

TABLE 6: TNGYOC'S STATE AND FEDERAL FUNDING TO SUPPORT TADs

Type of Funding	
State Grants	• The state of Tennessee initially funded teacher apprenticeships via the Elementary and Secondary School Emergency Relief (ESSER) Fund in 2020 and 2021, awarding high-capacity EPPs a total of $6.5 million to fund student tuition, books, fees, and testing. ESSER funding has since expired.[137] • In 2023, the governor of Tennessee funded $5 million from a discretionary fund that provided EPPs with annual scholarships for apprentices amounting to $5,000 per year for two years of their bachelor's degree program.[138]
Federal Grants	• In 2023, the Tennessee Department of Labor and Workforce Development (which allocates federal funds) announced that "10% of all apprenticeship funds in the state would be directed to [RAs] in teaching."[139] • Programs may also access WIOA funds "through their local workforce boards to cover tuition, child care, and transportation expenses" if eligible.[140]

In addition, the following (nonexhaustive) list of funding programs are made available to apprentices based on need and/or apprentice demographics. In addition to these funds, the TNGYOC will contribute a defined amount for each apprentice's program of study. Once a district identifies a teacher apprentice, the candidate will apply to the college or university that suits their geographic, certification, and subject-area specification and their financial aid is calculated just as it would be for any other applicant.[141] TNGYOC funds are then applied as last-dollar scholarships to ensure that there is low to no cost to the apprentice.

TABLE 7: SOURCES OF STUDENT FINANCIAL AID THAT TNGYOC APPRENTICES CAN ACCESS

Type of Funding	Source	Amount	Comments
Student Financial Aid[142]	Federal Pell Grants	Up to $7,395 per year	Up to 12 semesters of full-time study.
	Tennessee Student Assistance Award	Up to $4,000 per year	For those who have an Expected Family Contribution of $5,846 or less.

TABLE 7: SOURCES OF STUDENT FINANCIAL AID THAT TNGYOC APPRENTICES CAN ACCESS *(continued)*

Type of Funding	Source	Amount	Comments
Student Financial Aid	The Tennessee HOPE Scholarship	Up to $2,850	For those who earn less than $36,000 per year.
	University of Tennessee Promise	Any gap between the Tennessee HOPE Scholarship and cost	Only available to students at University of Tennessee System schools.
	Tennessee Reconnect	Pays remaining balance after other sources of aid for specific populations	For those with fewer than 60 credits; applies for two years or associate degree completion, and for some bachelor's degree students.
	Tennessee Future Teacher Scholarship Act of 2023	Pays remaining balance after other sources of aid for specific populations	Juniors and seniors in a teacher bachelor's degree program who commit to teaching four years at a distressed or at-risk county, or in a critical subject facing teaching shortages.
	TEACH Grant	Up to $4,000 each year for four years of undergrad or $8,000 for graduate studies[143]	Requires a 4-year commitment teaching students from low-income households in high-need fields.
	Grow Your Own Scholarship	$5,000 a year for undergraduates; $2,500 a year for graduate students	2-year renewable for undergraduates; must be enrolled in an IHE that has been allocated GYO scholarships.
EPP Funding	In Tennessee, community college coursework is free for state-based attendees; apprentices can earn their general education credits in these programs to reduce costs. Some EPPs have additionally reduced tuition for apprentices by using flexible university funding to cover program costs or by changing their delivery model to teach more students per class.		

Crisp noted, "Tennessee's Department of Labor and Workforce Development is very committed to working with us to determine the best way to make WIOA funding sources from the U.S. Department of Labor more accessible and consistent statewide. It's a complicated process because each local workforce development board in the state has different needs and approaches that are contextual to the communities they serve. We are all on a learning curve when it comes to federal funding."[144]

Example 3: Michigan's Talent Together (a nonprofit as sponsor/intermediary). Michigan's Talent Together was able to launch in 2023 via $66.4 million provided by the Michigan State Legislature to cover the first two years of the program. This state funding has allowed Michigan's Talent Together to cover all costs for apprentices and participating school districts (such as stipends for mentor teachers) while funding the organization to provide significant wraparound supports to apprentices and to mentor teachers. This funding also enables Talent Together to serve as the TAD sponsor and an advocate for TADs in Michigan. Michigan's Talent Together received another $12.5 million in the most recent legislative session.[145]

TADs can also access funding streams available for RAs (if they are RAs). Being an RA does not automatically come with public funding, but it does make programs eligible to apply for public funding.

A February 2023 analysis by New America shared a comprehensive overview of potential funding sources that TADs — if RAs — can pursue.[146] Major federal funding sources include:

- WIOA funding, which is funding provided by the federal government to then be disbursed through local Workforce Development Boards. This funding can be used for OJT and RTI costs, as well as covering the costs of what would otherwise be obstacles to participation, including transportation and child care.

- State Apprenticeship Expansion Formula grants, which is a 5-year effort from the USDOL to support apprenticeships. In 2023, the agency awarded $65 million to 45 states and territories to support expansion of RAs from both formula-funded grants and competitive grants.[147]

- The Apprenticeship Building America Grant program is a third effort funded by the USDOL. The first round of funding in 2022 made available $113 million in grants to support the growth of RAs.[148]

- RAs that are also apprenticeship degrees enable their apprentices to access federal student aid, including Pell Grants.

States also provide a range of funding source for registered apprenticeships, ranging from tax credits to subsidies.[149]

There are a growing number of resources to use in exploring federal and state funding opportunities for RAs, including WorkforceGPS, an initiative of the USDOL.[150] In addition, the American Institutes for Research Center on Great Teachers and Leaders issued a guide on how to access federal and state funds for RAs.[151]

Next Steps to Enable TADs to Scale and Succeed

"There's an element of bravery required. If you really want to achieve scale, if you really want to be candidate-centered and eliminate some of the barriers to starting Teacher Apprenticeship Degree programs, it's not going to come without challenges. It's not possible to make everyone happy, at least not right away."[152]

—JACK ELSEY, FOUNDER AND CEO, MICHIGAN EDUCATOR WORKFORCE INITIATIVE

"This is not about putting all of our eggs in the apprenticeship basket; we need a range of talent strategies and pathways. There's a big gap in the supply and demand of teachers, and apprenticeship programs have the opportunity to fill this gap by bringing more people to the profession."[153]

—KRISTI KIRSCHNER, CEO OF GATEWAY EDUCATION AND FORMER CHIEF HUMAN RESOURCES OFFICER, BISD, TEXAS

TADs will continue to gain interest from districts, individuals, and IHEs. The organizations profiled in this report are far from the only TAD initiatives emerging across the country. TADs present a compelling premise. They provide flexible on-ramps into achieving a degree and becoming a teacher for potentially millions of individuals who cannot pursue a conventional pathway, and they provide this pathway at low or no cost while apprentices continue to earn and receive benefits. TADs offer individuals substantive skill development and experience before they become a teacher of record, ensuring they are more likely to succeed as a teacher and remain in the role, filling gaps in the teacher talent pipeline.

However, as with any nascent social innovation, there is more to do to turn the compelling premise of TADs into a demonstrated and scaled promise that meets district pipeline needs. Specifically, the field must establish a common language, build infrastructure to measure impact, increase funding, and create intermediaries to support scale.

Establish a common language. As illustrated in this report, there is a lot of jargon, and there is also not unanimity in definitions (yet). A common, shared language about the field of TADs will facilitate alignment across K-12 systems, IHEs, intermediaries, sponsors, state and federal government agencies and policymakers, and philanthropies.

Build the infrastructure, tools, and training to use measurement to manage, maximize, and demonstrate impact. Measurement is also a critical component of a common language. Strong measurement will:

- Build the TAD field's capacity to continuously improve existing TAD programs.
- Provide critical lessons to lower the barriers to establishing new TAD programs nationally and increase their likelihood of success.
- Create demand and attract more stakeholders to create TAD markets in local and state geographies.
- Shift mindsets about TADs and build partners to influence systems to create the conditions — including funding — for TAD programs to scale, succeed, and achieve sustainability.

One particular measure TADs must demonstrate is financial ROI to various stakeholders (this is also true for postsecondary pathways more generally). At present, there is no unanimity or uniformity in how to calculate financial ROI for districts, individuals, and IHEs. Having a rigorous and common, comparable method of measuring financial ROI for each stakeholder is necessary in the long term to build credibility, market demand, and supportive policies.

Ultimately, the measure that matters most to districts as employers and systems supporting TADs is the ability to positively impact student outcomes — educational ROI. Does teaching and learning improve from this pipeline of apprenticeship teaching talent? This is not an easy or quick measure, but capturing it must be a long-term priority for TADs (and any teacher pathways).

Measurement is not a costless endeavor, so funding will be needed to build the field's capacity for it.

Increase funding and reduce barriers to access it. Each of the TAD programs examined in this report has been extremely entrepreneurial in braiding funding from a range of sources to keep TADs low or no cost to individual apprentices and to support districts, intermediaries, and IHEs in providing critical supports that make a TAD program work.

However, low or no cost to apprentices does not mean TADs are costless to run. All TAD programs discussed in this report face funding challenges, and those challenges will only be magnified as they grow.

It would be most efficient if there were a single significant funding source for TADs. In reality, increasing funding will likely require growth across the many funding sources that these innovative TADs are able to access from both workforce and education. This includes existing federal WIOA funding and specific federal initiatives such as Apprenticeship Building America Grants. Funding can also flow from many state sources, both to support low- or no-cost apprenticeships to individuals and to fund the other costs required to support TAD success. Districts are also more likely to directly fund TADs if they see financial ROI from cost savings on less turnover, recruitment, and/or use of substitute or emergency-certified teachers. While RAs create rigor and enable TADs to pursue specific funding sources, a common refrain in the field is that they are also laborious to apply for and maintain. Increasing funding and streamlining the process for TAD providers to obtain an RA designation will seed future growth in this nascent marketplace and increase the likelihood of TADs (and apprenticeship degree programs generally) becoming RAs.

Create infrastructure and intermediaries to support scale. TADs are complicated. Capturing, codifying, and communicating the hard-won lessons to date and sharing with aspiring TADs creates value by: 1) reducing variability in TAD programs, 2) improving overall quality and speed to quality, 3) buying back time and money because of efficiency, and 4) driving equity by making sure everyone aspiring to start a TAD program has access to the best resources, support, and partners.

For TADs, it is important to differentiate intermediary organizations from infrastructure organizations (though a given organization could play both roles).

Intermediary organizations play a critical role in setting up and supporting a TAD program, keeping stakeholders aligned and collaborating, and providing critical supports to individuals and IHEs.

Infrastructure organizations will work on building the field of TADs. They can play a critical role in establishing a common language and an infrastructure of measurement, and they can be in a position to advocate for changes in policies and funding. As membership organizations, they can 1) build the capacity of individual TAD programs on their individual priorities, 2) create community where TAD programs support one another in pursuing their individual priorities, and 3) organize collective action where TAD programs collaborate on a shared priority.

Infrastructure and intermediaries also must be funded.

There are encouraging bright spots emerging for the TAD field in terms of infrastructure and intermediary initiatives.

For example, Reach University founded the NCAD to use its direct program experience in supporting the widespread growth of local and state apprenticeship degree programs (in teaching and in other fields). NCAD is an industry association specifically focused on degree-conferring apprenticeship programs, and it offers support for containing degree costs, partnering with employers, and designing programs that incorporate OJT.

Another example has evolved at BISD in Texas. Gateway Education Partners, an initiative of Edwell led by the founders of BISD's TAD program, serves as a sponsor and an intermediary to support the launch of TADs in other school districts.

RTI International has been funded by the USDOL to lead ERA to build a pipeline of RAs in teaching, some of which will likely be TADs.[154]

Most recently, Reach University and Western Governors University have partnered to enable the latter IHE to acquire Craft Education. Craft Education is a technology platform "for establishing, monitoring, reporting and facilitating [OJT] aligned with degree programs and work-ready skills," that better enables employers and IHEs to partner in creating strong apprenticeship degree programs.[155] Craft Education will be folded into a nonprofit division of Western Governors University and made available as a free "public utility" available to all IHEs.[156]

Conclusion

As a currency of value, innovative pathways programs like TADs are often relegated to a Plan C, behind a Plan A (bachelor's degree — the "gold standard") and Plan B (associate degree). Plan Cs are sometimes pejoratively referred to as "alternative" postsecondary pathways, including apprenticeships.

But what if a postsecondary pathway innovation like a TAD can rival or surpass the success of Plan Bs and Plan As? What if a TAD can enable individuals to become a teacher more easily, at a significantly lower cost, without loss of income, and perform better in the role? What is to stop TADs from becoming a respectable, value-add, and in-demand Plan A for a subset of individuals who prefer the benefits of this pathway?

BISD leaders shared that it has five high school graduates from the Class of 2024 who are now matriculating directly into the district's TAD program. Assuming they complete their program, they will have a free bachelor's degree and a teaching credential; they will have had a steady income and benefits during their TAD; they will have a job if they have done well, with substantial experience in the classroom, in teaching, and in learning the culture and pedagogy of the district in which they will teach; they will have built relationships to support their success by the time they are teachers of record; and they will be four years into the Teacher Retirement System of Texas, impacting their retirement and advancing their pay scale.[157]

> *"I've fast-tracked my pathway to the classroom. I have only been in college for about 2 1/2 years and it's all been completely paid for. I don't have student debt, and I already have networked so much within the district. I have two principals who would love to have me back as a certified teacher, and I have had invaluable paraprofessional experience that's prepared me for the role."*[158]
>
> —JORDAN WRIGHT, BISD TAD CANDIDATE, TEXAS

> *"This program has given me the confidence to manage my own classroom. I consistently use my experiences as an apprentice in my role now as I navigate as a first-year teacher. The apprenticeship program gave me extensive classroom experience, a network of support, and enabled me to become more familiar with the curriculum and the district prior to my first day on the job."*[159]
>
> —DANIELA BAILEY, FORMER BISD TAD GRADUATE, SECOND GRADE TEACHER, TEXAS

Appendix A

FRAMEWORK FOR MEASURING TADs

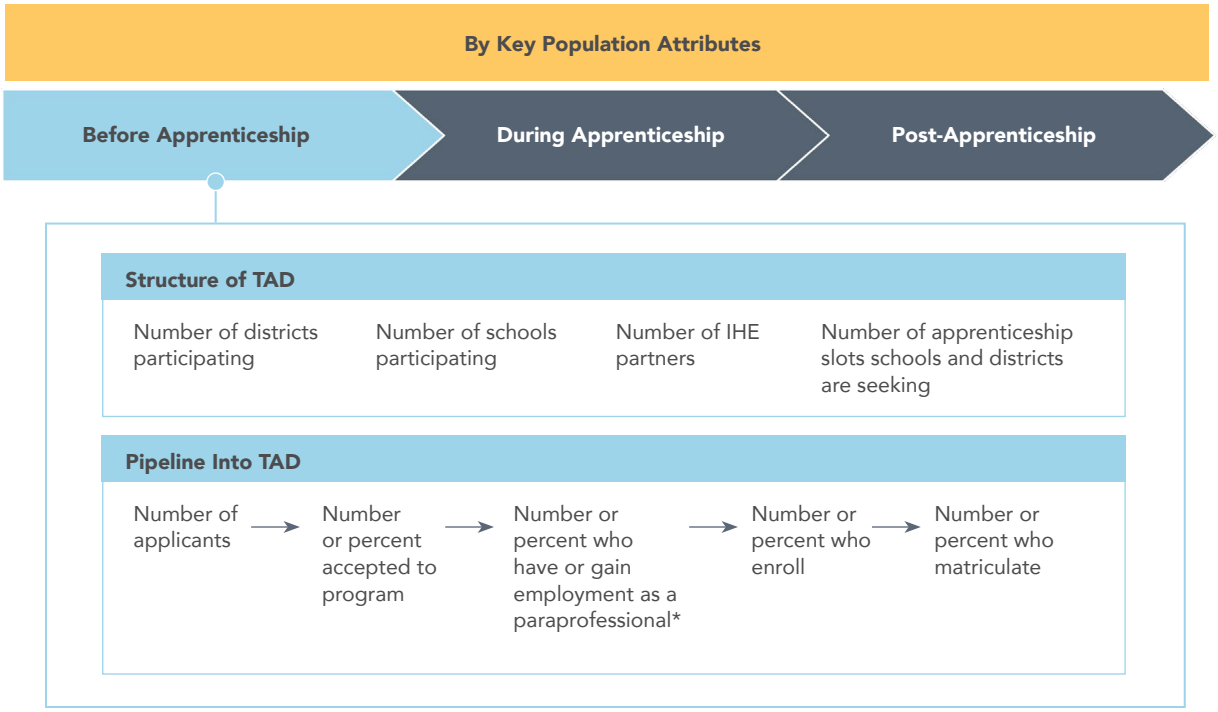
The purpose of measurement is to manage, maximize, and demonstrate impact. TADs have the opportunity to incorporate best practices in collecting and using measurements from K-12 education and teaching as well as postsecondary and workforce pathways.

However, measurement is often challenging to execute because of 1) strong disagreement about what to measure and how to measure it; 2) costs associated with capturing measures, including integrating different information systems; and 3) sensitivity that some stakeholders have about reporting measures publicly and using measures as a mechanism to drive performance and accountability.

First, there are an important set of **key population attributes** to track and desegregate apprenticeship outcomes 1) before an apprenticeship, 2) during an apprenticeship, and 3) post-apprenticeship.

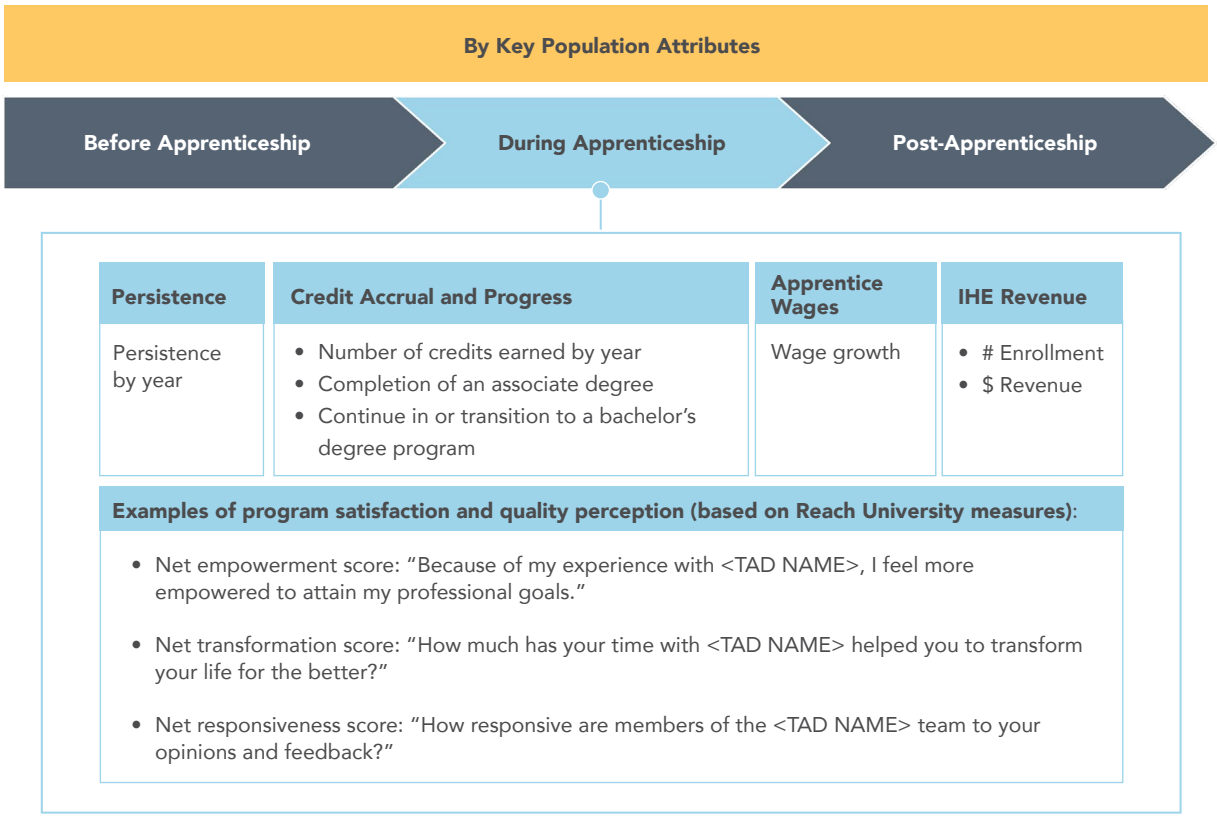
Key population attributes to track performance against, across apprenticeship experience:			
Demographics	**Education Status**	**Employment Status**	**Geography**
• Race/ethnicity • Gender • Socioeconomic status • Age at start of apprenticeship • First-generation (if reported)	• Any college credits accrued • Number of attempts at completing a conventional degree • Nondegree certification • Associate degree • Other (military service)	• Already employed as a paraprofessional (or similar role) in school or district • Number of years of employment • Salary prior to starting apprenticeship	• Rural district • Suburban district • Urban district

Second, are measures to understand progress and performance *before* an apprenticeship begins, tracked by:

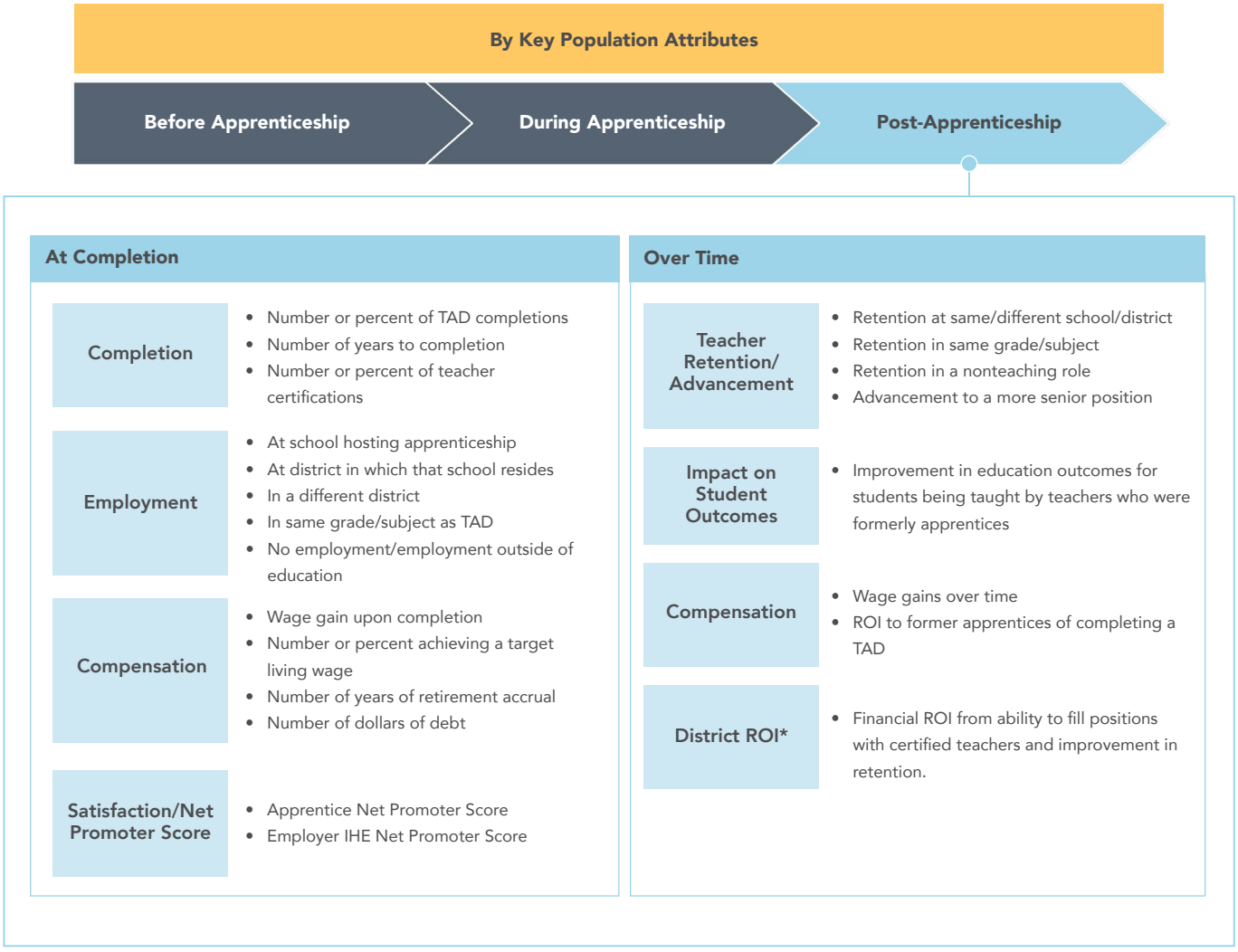


***Note**: *Or other student-facing role in the school for some TAD programs.*

Third, are measures of progress and performance *during* the apprenticeship:



Fourth, are measures of progress and performance *post-apprenticeship*:



***Note**: *Financial ROI becomes significantly more important in measuring value for employers in for-profit industries and occupations.*

Appendix B

INTERVIEW PARTICIPANTS

The following individuals and entities lent their time and expertise to this report, including participation in in-depth interviews conducted by Bellwether:

Brazosport Independent School District Apprenticeship Program

Daniela Bailey
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Jordan Wright
Kristi Kirschner
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Michigan's Talent Together

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Greg Nyen
Jack Elsey
Kenneth Gutman
Meaghan Polega
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Nicole Sinclair
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Betty Glasgow
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Donna Brake
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Reach University and the National Center for the Apprenticeship Degree

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Lauren Bauml
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Seth Rosenblatt

The Tennessee Grow Your Own Center

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Brooke Amos
Christie Southerland
Erin Crisp
Jesse Gray
Kristy Brown
Lisa Barren
Michael Hassler
Prentice Chandler

Other Stakeholders Interviewed

Andrew Tonsing
Courtney Hills McBeth
Farhad Asghar
Jamie Pearson
Jim Short
Ryan Craig
Stacey Ludwig Johnson

Endnotes

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7 Greg Nyen, superintendent at Marquette-Alger Regional Educational Service Agency (RESA), Michigan.

8 Jack Elsey, founder and CEO of Michigan Educator Workforce Initiative, August 2024.

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About Bellwether

Bellwether is a national nonprofit that exists to transform education to ensure systemically marginalized young people achieve outcomes that lead to fulfilling lives and flourishing communities. Founded in 2010, we work hand in hand with education leaders and organizations to accelerate their impact, inform and influence policy and program design, and share what we learn along the way. For more, visit **bellwether.org**.

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