

Characteristics of Teacher Apprenticeship Programs and Outcomes of Teacher Residency Programs

Introduction

The Regional Education Laboratory (REL) Northwest responds to requests from state and local education leaders for prompt, evidence-based information and consultation on topics that address high-leverage needs in the Northwest region.

To address the challenge of recruiting and retaining high-quality teachers, a state education agency is developing a teacher apprenticeship program and requested information on existing teacher apprenticeship programs. In response to the request, REL Northwest developed this brief that describes characteristics of teacher apprenticeship programs, outlines considerations for monitoring the quality and outcomes of the programs, and summarizes research on the quality and retention of graduates of similar programs and the academic achievement of their students. The brief may inform decisionmakers at other state agencies as they design and implement teacher educator pathways.

Overview

This brief is organized into four sections:

- Characteristics of teacher apprenticeship programs
- Considerations for monitoring quality and outcomes of teacher apprenticeship programs
- Outcomes associated with teacher residency programs
- Annotated bibliography

To compile the characteristics of teacher apprenticeship programs, REL Northwest reviewed policies, guidance, and research studies on teacher apprenticeship programs from leading sources within the apprenticeship space, including the U.S. Department of Education; U.S. Department of Labor; Pathways Alliance; and the Collaboration for Effective Educator Development, Accountability, and Reform Center. There are five core features of teacher apprenticeship programs:

- On-the-job learning
- Mentorship
- Supplemental education
- Credentialing
- Progressive wages

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The considerations for monitoring quality and outcomes of teacher apprenticeship programs section displays indicators of program quality identified by the National Guidelines for Apprenticeship Standards for Registered Apprenticeships for K–12 teachers, along with potential data sources that can be used to measure quality.

Research on outcomes associated with teacher apprenticeship programs is limited given that the U.S. Department of Labor has only officially recognized and Registered Apprenticeships for K–12 teachers beginning in 2022. However, teacher apprenticeship programs are alike in many ways to teacher residency programs as both often include characteristics of apprenticeships listed above. Due to their similarities, program outcomes for teacher apprenticeship programs may look similar to residency programs (DeMoss, 2022). As a result, REL Northwest draws on research that examines outcomes for teacher residency graduates.

The annotated bibliography includes summaries of citations included in the brief.

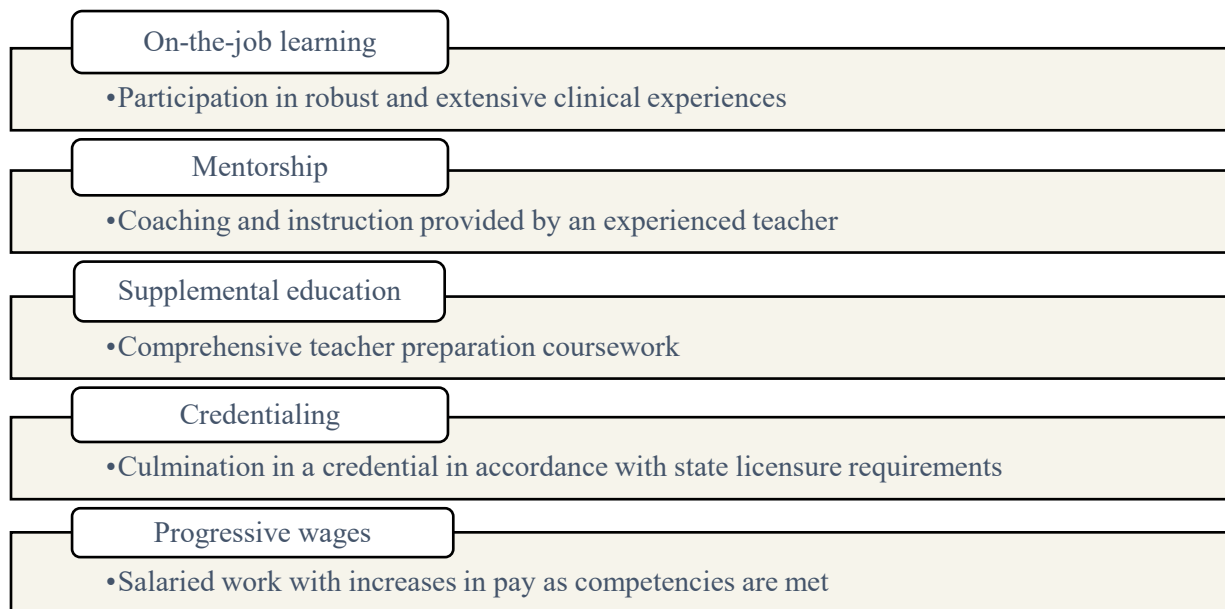
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Characteristics of teacher apprenticeship programs

The U.S. Department of Labor defines apprenticeships as pathways through which individuals participate in structured on-the-job learning from an experienced mentor that prepares them for a successful career. They are paid throughout the apprenticeship with progressive wage increases as they acquire skills (U.S. Department of Labor, 2022a). Apprenticeship programs exist across a variety of industries, with each model designed for their industry-specific needs.

In education, teacher apprenticeship programs are structured programs that combine on-the-job learning with a mentor teacher and formal academic instruction. Teacher apprenticeship programs can be registered with the Department of Labor or a state apprenticeship agency, which means they meet federal criteria for program rigor and quality. Teacher apprenticeship programs have similar core features, namely on-the-job learning, mentorship, supplemental education, credentialing, and progressive wages (figure 1). These features are described in greater detail below.

Figure 1. Core features of teacher apprenticeship programs.



On-the-job learning

On-the-job learning refers to supervised, clinical experience. On-the-job learning can include instructional planning, teaching lessons, working with students, communicating with parents, and participating in professional development (U.S. Department of Labor, 2022a). On-the-job learning requirements vary by teacher apprenticeship program, with programs following either a time-based, competency-based, or hybrid model (DeMoss, 2022). Though teacher apprenticeship programs registered with the Department of Labor or state apprenticeship agency—hereafter referred to as Registered Apprenticeship programs—recommend at least 2,000 hours of structured, on-the-job training, apprenticeship programs can establish

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different duration and competency standards approved by a Standards Recognition Entity (DeMoss, 2022; The Pathways Alliance, 2023). Another important area of variation is the role of the apprentice during on-the-job learning. Many teacher apprenticeship programs, including Registered Apprenticeship programs, require that apprentices spend at least one full academic year participating in side-by-side co-teaching and coaching under the supervision of a mentor teacher, who serves as the teacher-of-record, before taking over their own classrooms (The Pathways Alliance, 2023; White & Garcia, 2022; Will, 2023; National Education Association & American Federation of Teachers, 2022).

Mentorship

Another key feature of teacher apprenticeship programs is mentorship. Mentors are experienced and expert teachers who oversee and guide apprentices as they learn on the job (U.S. Department of Labor, 2022a; U.S. Department of Labor, 2022b). Mentor teachers—also referred to as journey workers—provide mentorship and coaching over a prolonged period, typically throughout the supervision year (U.S. Department of Labor, 2022a; National Science Teachers Association, 2017; Will, 2023). Mentors are often—but not always—classroom teachers (Will, 2023; Swisher, 2023). In addition to providing classroom-based guidance and coaching, mentors model effective instructional practice, provide apprentices with frequent feedback, help apprentices understand school and community culture, work with apprentices to identify professional goals and opportunities for professional development, and collaborate with apprentices on developing lesson plans (National Education Association & American Federation of Teachers, 2022). Variation exists in terms of the criteria (e.g., credentials, time spent in the classroom, teacher effectiveness scores) used to identify mentor teachers as well as training and support (e.g., incentives, compensation) provided to mentor teachers for hosting apprentices (National Education Association & American Federation of Teachers, 2022).

Supplemental education

In addition to on-the-job learning, teacher apprenticeship programs include job-related technical instruction in the form of related coursework that is rigorous and relevant to classroom instruction (U.S. Department of Labor, 2022b; Walsh & Cardona, 2022; Swisher, 2023). Related coursework typically provides background content knowledge that apprentices need to successfully complete requirements necessary for state licensure (U.S. Department of Labor, 2022a). However, coursework related to teacher apprenticeship programs differs in terms of content and competencies covered, hours of instruction, and course delivery. The National Guidelines for Apprenticeship Standards for Registered Apprenticeships for K–12 teachers established minimums of at least 144 hours for related instruction. In addition to the duration of related instruction, the pace at which related instruction is delivered can extend over several years (National Guidelines for Apprenticeship Standards, 2023; Tennessee Department of Education, 2022; DeMoss, 2022). Last, the delivery of related coursework varies among teacher apprenticeship programs, although delivery is most often provided through a state-approved education preparation program that includes partnerships with accredited universities or community colleges and course requirements that result in licensure and a degree (The Pathways Alliance, n.d.; National Education Association & American Federation of Teachers, 2022). Related coursework instruction can be delivered in person, virtually, or both, and it can be taught by multiple instructors (Council of Chief State School Officers, 2022).

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Credentialing

Completing a Registered Apprenticeship program results in having earned a portable, nationally recognized credential, the U.S. Department of Labor Certificate of Completion of Apprenticeship. Additionally, Registered Apprenticeship programs are designed to meet state teaching licensure and certification requirements in full (U.S. Department of Labor, 2022a; U.S. Department of Labor, 2022b; Council of Chief State School Officers, 2022; DeMoss, 2022). For those who start a teacher apprenticeship program without a bachelor's degree, the National Guidelines for Apprenticeship Standards for Registered Apprenticeships for K–12 teachers requires that completion of the program result in a full state license and a bachelor's degree. Teacher apprenticeship programs participants who come into the program with a bachelor's degree will complete the program with a full state license and, dependent on the program, may also receive a master's degree (Pathways Alliance, 2023).

Progressive wages

A final shared characteristic between teacher apprenticeship programs is the commitment to wages throughout the program. Apprentices earn a salary for on-the-job experiences that increases as they improve their skills and competencies (U.S. Department of Labor, 2022a; U.S. Department of Labor, 2022b). This “earn and learn” model makes the pathway into the teaching profession more affordable while also providing opportunities for wage growth and professional advancement commensurate with training, accomplishments, and responsibility assumed on the job (The Pathways Alliance, 2023; Walsh & Cardona, 2022; Council of Chief State School Officers, 2022; Swisher, 2023). The National Guidelines for Apprenticeship Standards for Registered Apprenticeships for K–12 teachers stipulate that entry wages must start at a level that is equal to or higher than the pay rate for paraprofessional staff. Wage schedules must also include at least one progressive increase during the apprenticeship program. Wage increases can be associated with completion of program specific competencies or benchmarks from apprentice's coursework or clinical preparation. Teacher apprenticeship programs may also offer additional financial support in the form of health benefits, reimbursement for professional development, and/or stipends (U.S. Department of Labor, 2022a; National Science Teachers Association, 2017; Swisher, 2023).

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Potential considerations for monitoring quality of teacher apprenticeship programs

Accrediting bodies and the research literature use several indicators of program quality for teacher apprenticeship programs as well as other educator preparation program types. The indicators below are drawn primarily from the National Guidelines for Apprenticeship Standards for Registered Apprenticeships for K–12 teachers but are also similar to the standards of the Council for the Accreditation of Educator Preparation and supported by key studies such as those found in the Evaluation and Improving Teacher Preparation Programs commissioned paper series from the National Academy of Education (2021). Those indicators, along with potential data sources that can be used to measure quality, are displayed in table 1.

Table 1. Teacher apprenticeship program quality indicators and potential measurement tools.

Quality indicators	Potential measurement tools
Apprentice content knowledge	<ul style="list-style-type: none"> Standardized test of content knowledge (e.g. Praxis Subject Assessments)
Apprentice skills	<ul style="list-style-type: none"> Teacher observations and evaluations Artifact assessment
Apprentice program progress and completion rates	<ul style="list-style-type: none"> Coursework completion Degree completion Licensure attainment Documentation of progress in on-the-job learning
Mentor effectiveness	<ul style="list-style-type: none"> Apprentice evaluations Program coordinator evaluations
Teacher retention rates	<ul style="list-style-type: none"> Administrative data on teacher assignments by local education agency
Teacher quality	<ul style="list-style-type: none"> Teacher observations and evaluations Administrator surveys and interviews
Student achievement	<ul style="list-style-type: none"> Student achievement scores

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Outcomes associated with teacher residency programs

Research on outcomes associated with teacher apprenticeship programs is limited. However, teacher apprenticeship programs are structurally similar to teacher residency programs, and researchers have suggested that teacher apprenticeship and residency programs may result in similar outcomes (DeMoss, 2022). As a result, REL Northwest draws from research on outcomes for teachers who have completed teacher residency programs. Common indicators used to measure the success of teachers prepared by teacher residency programs include the following (Afacan, 2022):

1. Program completion rates
2. Teacher employment rates
3. Teacher retention rates
4. Principal ratings of teachers
5. Mentor ratings of teachers
6. State evaluation ratings of teachers
7. Student achievement

This review focuses on the outcomes of teacher retention, teacher quality, and student achievement. A summary of the research on each of these outcomes is provided below.

Teacher retention

Teacher retention is the most reported outcome metric associated with teacher residency programs (Afacan, 2022). Teacher residency programs measure retention over different lengths of time (i.e., one- to five-year retention) and within different contexts (i.e., within-profession retention, within-district retention, within-school retention). This is likely due to teacher residency programs requiring different time- and place-based commitments. For example, some teacher residency programs require graduates to teach for at least two years in a high-need district after having completed their residency year, with financial penalties for those who leave teaching before the end of their commitment.

Overall, teacher residency program graduates remain in the profession at high rates during the first few years after their residency year when they are fulfilling their program's teaching commitment. A few studies offer retention comparisons between teacher residency program graduates and novice teachers from other programs, demonstrating higher rates of retention for teacher residency program graduates. For example, a study of the Boston Teacher Residency, which has a two-year teaching commitment, found that 88 percent of residency graduates were still teaching in Boston Public Schools after two years, compared to 73 percent of other novice teachers (Papay et al., 2012). A study of the Memphis Teacher Residency suggests that 95 percent of teachers trained through the program were still teaching in Tennessee public schools after three years, compared to 41 percent of other novice teachers in Tennessee public schools (Tennessee Higher Education Commission, Tennessee Department of Education, & State Board of Education, 2014).

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Some data exists on retention rates for graduates of residency programs after they have satisfied their time commitment for the program. A few studies of teacher residency programs report findings of higher retention rates for their graduates compared to other novice teachers in these later years (Guha et al., 2016). Below are reports from three teacher residency programs' teacher retention rates beyond the teaching commitment years required by their program. These programs include Boston Teacher Residency, San Francisco Teacher Residency, and New Visions Teacher Residency.

- The Boston Teacher Residency requires a two-year teaching commitment after program completion. An in-depth study of this program found that 75 percent of Boston Teacher Residency graduates were still teaching in Boston Public Schools both in their fourth and fifth year (compared with 56 percent and 51 percent of non-Boston Public Schools teachers, respectively; Papay et al., 2012).
- The San Francisco Teacher Residency requires a three-year time commitment after program completion. After five years, 80 percent of San Francisco Teacher Residency graduates were still teaching in San Francisco Unified School District, compared to 38 percent of non-San Francisco Teacher Residency teachers and 20 percent of Teach for America corps members placed in the same district (Guha et al., 2016).
- The New Visions Teacher Residency located in New York City prepares special education teachers for the classroom. It requires a teaching commitment of one year after program completion. Compared to 75 percent of all New York City teachers, New Visions Teacher Residency teachers have a four-year retention rate of 93 percent (Sloan et al., 2018).

Teacher quality

Teacher residency programs use a variety of metrics for assessing teacher quality. These include teacher and principal perceptions of preparedness and state-level teacher effectiveness ratings. Overall, teacher residency programs report high levels of teacher quality. In 2022–2023, the National Center for Teacher Residencies Annual Report noted that 92 percent of principals across 30 teacher residency program partners indicated that teacher residency program graduates were more effective than the typical first year teacher. In the same report, 92 percent of graduates themselves reported that they are better prepared than the typical first-year teacher (National Center for Teacher Residencies, 2023).

This brief provides findings from six teacher residency programs that provide a comparison of teacher quality for their residents and/or residency graduates compared to typical novice teachers: Aspire Teacher Residency, Denver Teacher Residency, Boston Teacher Residency, Memphis Teacher Residency, San Francisco Teacher Residency, and Albuquerque Teacher Residency.

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Effectiveness ratings

- In the 2012 cohort of Aspire Teacher Residency graduates, 94 percent were scored as “highly effective” or “effective” as opposed to only 59 percent of other novice teachers in the Aspire Teacher Effectiveness Framework. In the 2013 cohort, 85 percent of graduates—as opposed to 74 percent of other novice teachers—were scored as “highly effective” or “effective” (Perlstein et al., 2014).
- Denver Teacher Residency graduates outscored other novice teachers in each of the Denver Public Schools’ 12 indicators of effective teaching (Perlstein et al. 2014).
- When asked to compare the effectiveness of Boston Teacher Residency graduates to other first-year teachers, principals rated 88 percent of Boston Teacher Residency graduates as effective or more effective than their counterparts, with the majority rated as “significantly more effective” (Berry et al., 2008).
- Memphis Teacher Residency graduates consistently outperform non-Memphis Teacher Residency graduates from year to year. In the most recently published report from Memphis-Shelby County Schools on Teacher Effectiveness, Memphis Teacher Residency graduates within their first three years of teaching outperformed non-Memphis Teacher Residency graduates on the Observation and Professionalism components of the district’s Teacher Effectiveness Measure. Memphis Teacher Residency graduates with 4–12 years of experience outperformed non-Memphis Teacher Residency graduates with similar experience on the Observation and Student Perception components of the same Teacher Effectiveness Measure (Garrison, 2022).

Preparedness

- One hundred percent of principals who hired teachers from the San Francisco Teacher Residents program agreed that they were more effective than other new teachers from both university-based and alternative routes (Guha et al., 2016).
- Four principals of Albuquerque Teacher Resident graduates were surveyed about their preparedness, and all agreed that residency graduates were more effectively prepared than the typical novice teacher, with most rating residency graduates as more prepared and one rating residency graduates as being *much* more prepared than their counterparts (Scheib & Rowland, 2022).

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Student achievement

Teacher residency programs also report on outcomes of their graduates' students. This includes state standardized test scores, number of total credits earned, and graduation rates. This brief shares results from three teacher residency programs' evaluation of student outcomes for residents and/or residency graduates and other novice or veteran teachers: Boston Teacher Residency, Memphis Teacher Residency, and New Visions Teacher Residency.

- Boston Teacher Residency graduates were associated with higher student math scores on the Massachusetts Comprehensive Assessment System during their first five years in the classroom compared to other teachers with the same level of experience. By their fourth and fifth years, the students of residency graduates outperformed not only those of teachers at the same level of experience but also those of veteran teachers in the district with six or more years of experience by as much as 7 percent of a standard deviation (Papay et al., 2012).
- The 2014 Report Card on the Effectiveness of Teacher Training programs found that Memphis Teacher Residency graduates were more effective than other beginning teachers in grades 4–8 math and high school end-of-course exam composite but were less effective in grades 4–8 grade reading and social studies using teacher value-added data (Tennessee Higher Education Commission, Tennessee Department of Education, & State Board of Education 2014).
- A 2015 study of the New Visions Teacher Residency at Hunter College in New York City found that the students of New Visions Teacher Residency graduates outperformed those taught by other novice teachers with similar levels of experience on 16 out of 22 comparisons of New York State Regents exam scores. Students taught by New Visions Teacher Residency-trained teachers performed as well as or better than peers taught by non–New Visions Teacher Residency teachers on the New York State Regent Exam across all subject areas. Students with disabilities in schools with New Visions Teacher Residency-trained teachers earned more credits than those in schools without New Visions Teacher Residency teachers and had higher graduation rates for Hispanic and Black students (Sloan et al., 2018).

Table 2 displays the teacher residency programs that have been studied along with their characteristics.

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Table 2. Teacher residency programs by characteristic

Program	Commitment (beyond residency year)	On-the-job learning	Related coursework	Teaching certification	Degree (name)	Mentoring	Wages
NCTR Network residencies	Varies	✓	✓	✓	Master's degree	✓	Varies
Aspire Teacher Residency	3 years	✓	✓	✓	Master of Arts in Curriculum and Instruction	✓	Stipend
Denver Teacher Residency	4 years	✓	✓	✓	Master of Arts in Curriculum and Instruction	✓	Stipend, earn a salary in years 2–5 (after completing the residency year), tuition reimbursement if they finish the 5-year commitment
Boston Teacher Residency	2 years	✓	✓	✓	Master of Arts in Education	✓	Stipend, tuition waiver upon completion of 3-year commitment
Memphis Teacher Residency	3 years	✓	✓	✓	Master of Arts in Teaching	✓	Stipend, tuition waiver, salary upon graduation (starting year 2 of the 4-year time commitment), housing provided, financial penalty for not completing commitment
San Francisco Teacher Residency	3 years	✓	✓	✓	Complete coursework for a master's degree	✓	Stipend, tuition reimbursement, housing grants, health care
New Visions Teacher Residency (Hunter College)	1 year	✓	✓	✓	Master's degree in secondary education/special education	✓	Stipend, salary after residency year, tuition waiver
Albuquerque Teacher Residency	2 years	✓	✓	✓	Master's degree	✓	Stipend, salary after residency year, tuition waiver

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Annotated bibliography

This annotated bibliography includes two lists of references: characteristics of apprenticeships, and outcomes associated with teacher residency programs. All entries include a summary of information relevant to this brief, a citation, and link to the resource. Entries that include research on outcomes from teacher residency programs also include information about the study design, sample, and data sources.

Characteristics of teacher apprenticeship programs

Teacher Registered Apprenticeship Common Terms

This four-page document, created by the U.S. Department of Labor, defines terms for Registered Apprenticeship programs and compares them to similar terms for other teacher preparation pathways.

- **Reference:** U.S. Department of Labor. (2022a). *Teacher Registered Apprenticeship common terms*. Apprenticeship USA.
- **Link to resource:** <https://www.apprenticeship.gov/sites/default/files/dol-teacher-registered-apprenticeship-terms-factsheet-v03.pdf>

Why Apprenticeship Models?

This two-page document, produced by the Pathways Alliance, outlines the basics, characteristics, and benefits of Registered Apprenticeship programs for employers and teacher candidates.

- **Reference:** The Pathways Alliance. (n.d.). *Why apprenticeship models?* Retrieved December 13, 2023, from <https://www.thepathwaysalliance.org/reports>
- **Link to resource:** <https://www.thepathwaysalliance.org/reports>

Key Policy Letters Signed by the Education Secretary and Deputy Secretary

This letter from the U.S. Secretary of Labor and the U.S. Secretary of Education presents a nationwide call to action for addressing teacher shortages in the wake of COVID-19. In this letter, the Secretaries encourage states to create Registered Apprenticeship programs.

- **Reference:** Walsh, M. J., and Cardona, M.A. (2022). *Key policy letters signed by the Education Secretary and Deputy Secretary*. U.S. Department of Education.
- **Link to resource:** <https://www2.ed.gov/policy/gen/guid/secletter/220831.html>

National Guidelines for Apprenticeship Standards for K–12 Teacher Apprenticeships

This bulletin informs interest holders of the approval of the new National Guidelines for Apprenticeship Standards for Registered Apprenticeships for K–12 teachers. The bulletin attaches the standards and all relevant appendices.

- **Reference:** Pathways Alliance (2023). *National guidelines for apprenticeship standards for K–12 teacher apprenticeships*. Retrieved December 13, 2023, from <https://www.thepathwaysalliance.org/reports>
- **Link to resource:** <https://www.thepathwaysalliance.org/reports>

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Registered Apprenticeship Programs for Teacher Preparation: Recommended Standards and Design Principles

This ten-page resource, developed by the National Education Association and the American Federation of Teachers, provides recommendations and examples for Registered Apprenticeship programs, organized along the U.S. Department of Labor’s framework of key elements of all Registered Apprenticeship programs. It also provides potential metrics for assessing program fidelity and outcomes of interest (e.g., mentor teacher effectiveness, recruitment data, retention rates over time, credentials, duration of program).

- **Reference:** National Education Association & American Federation of Teachers. 2022. *Registered Apprenticeship programs for teacher preparation: Recommended standards and design principles.*
- **Link to resource:** <https://www.apprenticeship.gov/sites/default/files/Registered%20Teacher%20Apprenticeship%20Design%20Principles%20NEA-AFT.pdf>

Teacher Registered Apprenticeships: SEA Self-Assessment Tool

This self-assessment tool, developed by the Council of Chief State School Officers, provides a set of key questions a state education agency can consider to determine whether a Registered Apprenticeship program would be a good addition to the state’s teacher training programs, whether to pilot a Registered Apprenticeship program with a subset of teachers, and whether it makes sense for the state education agency to serve as the sponsor of the Registered Apprenticeship program.

- **Reference:** Council of Chief State School Officers. (2022). *Teacher Registered Apprenticeships: SEA self-assessment tool.*
- **Link to resource:** <https://753a0706.flowpaper.com/CCSSOTeacherRAP92922/#page=1>

Registered Apprenticeship Programs and Teacher Residencies: Building Shared Understandings Between Workforce Development and Education

This nine-page brief, produced by Prepared to Teach, stresses the importance of understanding workforce and education terminology when seeking an official Registered Apprenticeship program designation for a pre-existing teaching residency program. It provides a side-by-side comparison of key distinctions between requirements for Registered Apprenticeship programs (non-trade specific) and teacher residency programs in terms of participants, management structure, partners, academic preparation, practical experiences, supervision, duration, credentials, pay, and funding sources, and provides a list of considerations for designing Registered Apprenticeship programs.

- **Reference:** DeMoss, K. (2022). *Registered Apprenticeship Programs and teacher residencies: Building shared understandings between workforce development and education.* Prepared to Teach.
- **Link to resource:** https://assets-global.website-files.com/648a407f22007944606d9581/649042567331b740ab584ba4_Registered%20Apprenticeship%20Programs%20and%20Teacher%20Residencies_%20Build.pdf

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State of the States 2023: Policies to Increase Teacher Diversity

This 44-page brief, produced by the National Council on Teacher Quality, defines and differentiates between different teacher pipeline programs, including post-baccalaureate teacher residencies and teacher apprenticeships. It also provides states with recommended ways to increase teacher diversity through recruitment and retention efforts and a list of data points that states can use to measure recruitment and retention among different subgroups of teachers.

- **Reference:** Swisher, A. (2023). *State of the states 2023: Policies to increase teacher diversity*. National Council on Teacher Quality.
- **Link to resource:** <https://eric.ed.gov/?id=ED629753>

Apprenticeship USA: Education

This two-page industry factsheet, produced by the U.S. Department of Labor, introduces the concept of Registered Apprenticeships in education as a solution to teacher shortages and low teacher retention. In addition to providing a rationale for different education-related apprenticeships (K–12 teachers, teaching assistants, teaching aides, early childhood educators), it provides helpful links for learning more about existing apprenticeships within the field of education.

- **Reference:** U.S. Department of Labor. (2022b). *Education. Apprenticeship USA*.
- **Link to resource:** <https://www.apprenticeship.gov/sites/default/files/dol-industry-factsheet-education-v05.pdf>

Teacher Apprenticeship: What Is It and Why Now?

This blog post, produced by New America, discusses the history and features of Tennessee’s Occupation Apprenticeship Program. It also explains that we may not see immediate benefits of teacher apprenticeship programs on teacher retention rates because these are multi-year programs. The blog post explains how apprenticeships can be long-term solutions to teacher retention and can also—in the meantime—create high-quality, diverse teaching pools.

- **Reference:** White, T., & Garcia, A. (2022). *Teacher apprenticeship: What is it and why now?* New America.
- **Link to resource:** <https://www.newamerica.org/education-policy/edcentral/teacher-apprenticeship-what-is-it-and-why-now/>

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See Which States Have Teacher Apprenticeship Programs, and How the Model Plans to Expand

This news article, produced by Education Week, describes the history and relevance of teacher apprenticeship programs in addition to the prevalence of Registered Apprenticeship programs across the country (21 states have a Registered Apprenticeship program at the time this article was written). The article discusses how and why The Pathways Alliance has helped the Department of Labor set up national guidelines, shared definitions, and clear indicators of quality for Registered Apprenticeship programs, although states and districts do not have to adhere to the guidelines. The article also describes how the U.S. Department of Education provides support to states who are interested in establishing a Registered Apprenticeship program and that Research Triangle Institute International will be a key partner in promoting and expanding apprenticeships across the country.

- **Reference:** Will, M. (2023). *See which states have teacher apprenticeship programs, and how the model plans to expand*. Education Week.
- **Link to resource:** <https://www.edweek.org/teaching-learning/see-which-states-have-teacher-apprenticeship-programs-and-how-the-model-plans-to-expand/2023/07>

Launching a Grow Your Own Teacher Apprenticeship Program

This playbook, produced by the Tennessee Department of Education, is a practical guide to support states in developing and launching their own teacher apprenticeship programs. The guide is meant to be read sequentially, with each section guiding education preparation programs and district partners through key tasks in the planning process. The playbook also includes the Grow Your Own Teacher Apprenticeship Program Workbook, which provides a set of tools that can be tailored to fit a district's needs.

- **Reference:** Tennessee Department of Education. (2022). *Launching a Grow Your Own teacher apprenticeship program*.
- **Link to resource:** <https://www.tn.gov/content/dam/tn/education/grow-your-own/TDOE-GYO-Playbook.pdf>

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Outcomes associated with teacher residency programs

Teacher Residency as an Alternative Teacher Preparation Program: A Program Review

This meta-analysis reviews the literature on selected teacher residency programs in the United States and summarizes their common characteristics, indicators used to measure success, recruitment and selection processes, financial support for residents, post residency requirements, induction supports, and program limitations. Findings are meant to assist teacher education programs wishing to develop, adapt, modify, or extend existing characteristics of teacher residency programs. Findings suggest that key indicators used to measure the success of teacher residency programs include retention, employment immediately following graduation, principal rating/evaluations, diversity of residents in the program, student achievement, program completion, state evaluation ratings, attrition rates, and supervisor and/or mentor ratings.

- **Reference:** Afacan, K. (2022). Teacher residency as an alternative teacher preparation program: A program review. *Journal of Teacher Education and Educators*, 11(3), 351-372.
- **Link to resource:** <https://dergipark.org.tr/en/pub/jtee/issue/75078/1036128>

Design	Meta-analysis
Sample	The meta-analysis was based on 45 peer-reviewed articles that met inclusion criteria, covering 10 teacher residency programs: Academy for Urban School Leadership, Apple Tree Early Learning Teacher Residency, Aspire Teacher Residency, Boettcher Teacher Residency, Boston Teacher Residency, Newark Montclair Urban Teacher Residency, Denver Teacher Residency, San Francisco Teacher Residency, Seattle Teacher Residency, and Nashville Teacher Residency (years in which studies were conducted vary)
Data source	Articles from Education Research Complete, ERIC, PsychINFO, and Google Scholar were included in the meta-analysis if they were published in academic journals or published as education policy briefs or reports; written in English; published in the United States; employed quantitative, qualitative, mixed, or descriptive research methods; and focused on teacher residency programs. The review was not restricted to a specific date range.

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Creating and Sustaining Urban Teacher Residencies: A New Way to Recruit, Prepare, and Retain Effective Teachers in High-Needs Districts

This report, which was a collaboration between the Center for Teaching Quality and the Aspen Institute Education and Society Program, examines two Urban Teacher Residencies: the Boston Teacher Residency and the Academy for School Leadership in Chicago to inform policymakers and practitioners about the design and financing of Urban Teacher Residencies, the evidence of their impact, and the conditions relevant to their success and sustainability. Findings indicate that principals rated 88 percent of Boston Teacher Residency graduates as effective or more effective than their counterparts. The three-year retention rates were 90 percent for the Boston Teacher Residency and 95 percent for the Academy for School Leadership.

- **Reference:** Berry, B., Montgomery, D., Curtis, R., Hernandez, M., Wurtzel, J., & Snyder, J. (2008). *Creating and sustaining Urban Teacher Residencies: A new way to recruit, prepare, and retain effective teachers in high-needs districts*. The Aspen Institute & The Center for Teaching Quality.
- **Link to resource:** <https://www.aspeninstitute.org/publications/creating-sustaining-urban-teacher-residencies-new-way-recruit-prepare-retain-effective/>

Design	Descriptive study
Sample	Chicago's Academy for Urban School Leadership and the Boston Teacher Residency (2007–2008)
Data source	This study was based on the following sources of information collected between October 2007 and April 2008: review of publicly accessible and internal program documents provided by the Urban Teacher Residencies and the Urban Teacher Residency Institute; an onsite visit to each of the Urban Teacher Residency programs that included individual and focus group interviews of program staff, participants, and school personnel, as well as classroom observations; similar data collection from Bank Street College as a case of institute of higher education-initiated partnership with urban schools; a financial analysis conducted by Education Resource Strategies; and commissioned essays from teachers representing various roles and positions: an experienced urban teacher, a mentor with a Urban Teacher Residency program, and an Urban Teacher Residency resident.

Characteristics of Teacher Apprenticeship Programs and Outcomes of Teacher Residency Programs

Memphis Teacher Residency: Teacher Effectiveness in 2021–2022

This report—prepared by the Memphis-Shelby County Schools’ Department of Research and Performance Management—evaluates the effectiveness of teachers trained through the Memphis Teacher Residency and teachers not trained through the Memphis Teacher Residency within Memphis-Shelby County Schools during the 2021–2022 school year. It examines four measures. The first is teacher scores from the Tennessee Value-Added Assessment System that is designed to demonstrate student growth on achievement tests from year to year. The other three measures of teacher effectiveness are the three components of the district’s Teacher Effectiveness Measure: Observation, Professionalism, and Student Perception. Analyses separated outcomes based on results from teachers with 1–3 years of experience and those with 4–12 years of experience. Findings suggest that Memphis Teacher Residency teachers in their first 3 years of teaching outperformed their counterparts on both Teacher Effectiveness Measure Observation and the Teacher Effectiveness Measure Professionalism score, but not on the Tennessee Value-Added Assessment or Teacher Effectiveness Measure Student Perception. In terms of teachers with 4–12 years of experience, Memphis Teacher Residency–trained teachers outperformed their counterparts on the Teacher Effectiveness Measure Observation and Teacher Effectiveness Measure Student Perspectives measure, but not on Tennessee Value-Added Assessment System nor Teacher Effectiveness Measure Professionalism. This report also summarizes findings from past evaluations that Memphis-Shelby County Schools has collected every year for the past eight years. Memphis Teacher Residency teachers consistently outperformed non–Memphis Teacher Residency teachers on Tennessee Value-Added Assessment System in all past studies, although the current study does not find differences between Memphis Teacher Residency and non–Memphis Teacher Residency teachers on this particular measure.

- **Reference:** Garrison, A.W. (2022). *Memphis Teacher Residency: Teacher effectiveness in 2021–2022*. Memphis-Shelby County Schools.
- **Link to resource:**
<https://static1.squarespace.com/static/64270cff85ef0f530f03e109/t/6491fd864949b80c6e29abc0/1687289222244/Memphis-Teacher-Residency-2021-22-Evaluation-Report.pdf>

Design	Correlational study
Sample	Memphis Teacher Residency (2021–2022)
Data source	State-level teacher-value added measure, district-level teacher effectiveness measures

Characteristics of Teacher Apprenticeship Programs and Outcomes of Teacher Residency Programs

Teacher Residencies: An Innovative Model for Preparing Teachers

This research report from The Learning Policy Institute defines teacher residencies and describes the impact of residencies in terms of recruitment, retention, and student outcomes across a variety of evaluations. The report includes an in-depth feature on the San Francisco Teacher Residency using data from San Francisco Unified School District, which this brief draws on to describe outcomes from this particular teacher residency program. Findings suggest that San Francisco Teacher Residency teachers had higher retention rates compared to similar non-San Francisco Teacher Residency teachers (80 percent compared to 38 percent of district-hired novice teachers and 20 percent of Teach for America teachers) and higher principal-rated effectiveness.

- **Reference:** Guha, R., Hyler, M.E., & Darling-Hammond, L. (2016). *Teacher residencies: An innovative model for preparing teachers*. Learning Policy Institute.
- **Link to resource:** https://learningpolicyinstitute.org/media/182/download?inline&file=Teacher_Residency_Innovative_Model_Preparing_Teachers_REPORT.pdf

Design	Meta-analysis and descriptive study
Sample	Special focus on San Francisco Teacher Residency (2010–2016)
Data source	District administrative teacher data, student surveys, principal surveys

National Center for Teacher Residencies Annual Report 2022

This 2022–2023 annual report from the National Center for Teacher Residencies provides the most updated metrics demonstrating the reach and impact of teacher residencies around the country. Key findings indicate that 86 percent of residency graduates remained in the classroom after three years, 79 percent of residency graduates taught in the same district in which they trained after three years, 92 percent of residency graduates reported being better prepared than the typical first year teacher, and 92 percent of hosting principals reported that residency graduates were more effective than the typical first year teacher.

- **Reference:** National Center for Teacher Residencies. (2023). *NCTR annual report 2022–2023*.
- **Link to resource:** <https://nctrresidencies.org/resource/nctr-annual-report-2022-2023/>

Design	Descriptive study
Sample	Respondents (Around 740 teacher residents, 440 residency graduates, 720 mentors, and over 220 hosting principals) from 30 National Center for Teacher Residency Network programs (2022–2023)
Data source	Surveys of teacher residents, residency graduates, mentor teachers, hosting principals

Characteristics of Teacher Apprenticeship Programs and Outcomes of Teacher Residency Programs

Does an Urban Teacher Residency Increase Student Achievement?

This study used value-added models to compare Boston Teacher Residency graduates and non-Boston Teacher Residency teachers with similar levels of teaching experience on their effectiveness in raising student test scores in math and English language arts (specifically for students in grades 4–8). They also examined one-, two-, three-, four-, and five-year teacher retention rates for these two groups. Findings suggest that Boston Teacher Residency graduates had higher district-level retention rates compared to non-Boston Teacher Residency teachers by around 20 percentage points. The study suggests that Boston Teacher Residency graduates—while not more effective at raising student test scores than other teachers in their first few years of teaching—improved student math performance more rapidly than other teachers as they gained more experience. By their fourth or fifth year of teaching, Boston Teacher Residency graduates' students outperformed both novice and veteran teachers' students in math by as much as 7 percent of a standard deviation.

- **Reference:** Papay, J. P., West, M. R., Fullerton, J. B., & Kane, T. J. (2012). Does an urban teacher residency increase student achievement? Early evidence from Boston. *Educational Evaluation and Policy Analysis*, 34(4), 413–434.
- **Link to resource:** <http://dx.doi.org/10.3102/0162373712454328>

Design	Descriptive study
Sample	Boston Teacher Residency (2001–2002 to 2010–2011)
Data source	District administrative data on students and teachers, residency program records

Characteristics of Teacher Apprenticeship Programs and Outcomes of Teacher Residency Programs

Building Effective Teacher Residencies

This report from the National Center for Teacher Residencies provides an overview of the teacher residency model and describes five elements that are crucial to teacher residencies' success: recruitment and selection, coursework and seminars, coaching and feedback, assessment and evaluation, and the school and the school system. Using two teacher residencies, Aspire Teacher Residency and Denver Teacher Residency, this report demonstrates what each of these elements look like in practice. Aspire Teacher Residency reported that 94 percent of their 2012 cohort received a score of “highly effective” or “effective” on the Aspire Teacher Effectiveness Framework (compared to 59 percent of novice teachers within the network), and 85 percent of their 2023 cohort received “highly effective” or “effective” ratings (compared to 74 percent of novice teachers within the network). Denver Residency Program reported that, in 2012–2013, residency graduates outscored other novice teachers on Denver Public Schools’ 12 indicators of effective teaching.

- **Reference:** Perlstein, L., Jerald, C., & Duffrin, E. (2014). *Building effective teacher residencies*. National Center for Teacher Residencies.
- **Link to resource:** <https://nctresidencies.org/wp-content/uploads/2021/01/NCTR-BETR-v2-Final-1.pdf>

Design	Descriptive study
Sample	Aspire Teacher Residency, Denver Teacher Residency (2012–2013)
Data source	Teacher effectiveness ratings

Characteristics of Teacher Apprenticeship Programs and Outcomes of Teacher Residency Programs

External Evaluation of the Albuquerque Teacher Residency Partnership

This report provides an overview of the Albuquerque Teacher Residency Partnership and presents findings on outcomes from the 2018–2019, 2019–20, and 2020–21 cohorts. Results suggest that Albuquerque Teacher Residency Partnership residents and graduates are effectively prepared, particularly when compared to typical new teachers. Albuquerque Teacher Residency Partnership residents and graduates are reported to be as prepared or more prepared as graduates from similar teacher residency programs, particularly when compared to typical new teachers.

- **Reference:** Scheib, C., & Rowland, C. (2022). *External evaluation of the Albuquerque Teacher Residency Partnership (ATRP)*. National Center for Teacher Residencies.
- **Link to resource:** <https://nctr residencies.org/resource/external-evaluation-of-the-albuquerque-teacher-residency-partnership-atrp/>

Design	Descriptive study
Sample	5-17 residents, 11-12 co-teachers, 3 hiring principals, 3-4 hosting principals, and 7-11 graduates, depending on the study year.
Data source	Perception surveys completed by residents, co-teachers, graduates, and principals at the end of the school years, focus groups and interviews with graduates and principals

New Visions-Hunter College Urban Teacher Residency: A Different, More Durable Model

This report presents findings from three longitudinal studies of the Urban Teacher Residency Project. Findings suggest that Urban Teacher Residency teachers had a positive impact on student achievement; New York State Regents exam scores across all subject areas showed that Urban Teacher Residency-trained teachers' students performed as well as or better than peers taught by teachers trained in other programs. Additionally, Urban Teacher Residency teachers had an overall retention rate of 91 percent. Urban Teacher Residency graduates had a lower rate of attrition—by half—than other new high school teachers. Retention rates declined slightly over time, but close to three-fourths of Urban Teacher Residency's first cohort were still teaching after six years.

- **Reference:** Sloan, K., Allen, A., Blazeovski, J., Carson, F., & Rockman, S. (2018). *New Visions-Hunter College Urban Teacher Residency: A different, more durable model*. Rockman et al.
- **Link to resource:** https://rockman.com/docs/downloads/TQPXCombinedReport_10.23.18-1.pdf

Design	Correlational and Descriptive studies
Sample	150 teachers who participated in the Urban Teacher Residency Project
Data source	Teacher retention data, and student achievement data

Characteristics of Teacher Apprenticeship Programs and Outcomes of Teacher Residency Programs

2014 Report Card on the Effectiveness of Teacher Training Programs

This report, jointly prepared by the Tennessee Higher Education Commission, the Tennessee Department of Education, and the State Board of Education, contains information designed to inform the public of the effectiveness of teacher training programs and to provide preparation programs with the opportunity to improve the quality of programs through the use of data. Findings indicate that just over half (53 percent) of those who completed a training program taught the year after completing the program, and just below half (47 percent) of those who completed the program taught consecutively for three years. Students of those who completed a training program from the 2011–2013 cohorts performed as well as students statewide on 4th–8th science and social studies exams and high school biology, chemistry, English, and U.S. history exams but worse than students statewide on 4th–8th grade composite, math, and reading/language exams and high school composite and algebra exams.

- **Reference:** Tennessee Higher Education Commission, Tennessee Department of Education, & State Board of Education. (2014). *2014 report card on the effectiveness of teacher training programs*.
- **Link to resource:**
<https://www.tn.gov/content/dam/tn/stateboardofeducation/documents/teacherprep/2014%20Report%20Card.pdf>

Design	Descriptive report
Sample	19,875 people who completed teacher training programs from the 2009–2010 through the 2012–2013 cohorts
Data source	Teacher program completion and retention data, student assessment data

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