Some Assembly Required
Piecing Together the Preparation Preschool Teachers Need

Appendix A: Sample and Methodology

Sample

Data used for analysis

Evaluation of preschool teacher preparation programs for this study uses the following sources of data:

- course requirements and descriptions found in institution of higher education (IHE) catalogs and websites;
- syllabi of required courses deemed relevant;
- observation instruments used by university supervisors and/or cooperating teachers in student teaching placements;
- formative and summative evaluation instruments, based on observational data, used in student teaching placements;
- rubrics aligned with the above instruments;
- required textbooks in all relevant coursework;
- textbook chapter listings available online; and
- handbooks prepared by IHEs pertaining to the teacher preparation program and/or student teaching placements specifically.

Who analyzes the data

A general analyst reviews data sources using a protocol specific to the data source and topic of interest. Coding is reviewed by a second analyst. Some literacy textbook analysis was conducted by a reading subject-specialist.

Sample

The analysis of preschool teacher preparation programs comprises data from 100 programs. These include 58 undergraduate programs, 41 graduate programs, and five community college programs. The sample includes programs from 29 states. The states with the most programs in the sample (10 or more) are New York, Ohio, Pennsylvania, and Virginia.

The *Teacher Prep Review* has already analyzed half of these programs (28 undergraduate and 22 graduate) on the quality of their *elementary* teacher preparation; these are generally elementary teacher certification programs that include preschool in their grade span (e.g., a program spanning preschool through 4th grade).

Figure A.1. Half of programs in the sample have already been rated by the *Teacher Prep Review* on the quality of their elementary preparation
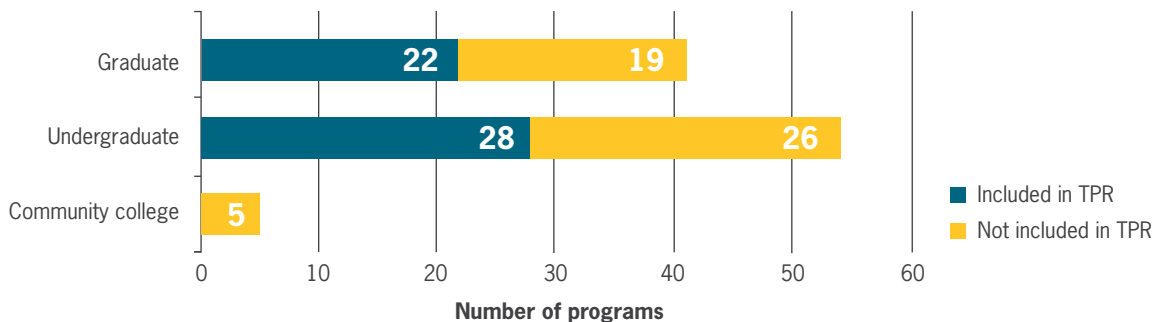
The programs in the sample that have been previously evaluated by the Teacher Prep Review *are generally elementary programs that include preschool certification. The* Teacher Prep Review *has never analyzed community colleges.*

A handful (11 programs) cover age ranges that go no higher than kindergarten, such as programs addressing *birth through age five*. Many more programs (N=50) cover a grade range that goes as high as third grade (e.g., *birth through grade 2*, or *preschool through grade 3*). The remainder (N=38) address an age range that covers preschool to fourth grade or beyond. Most of these (N=17) go as high as sixth grade (including three that certify teachers for *birth through grade 6*), and two license teachers for *preschool through eighth grade*.

Figure A.2. Few programs in the sample focus only on early childhood years
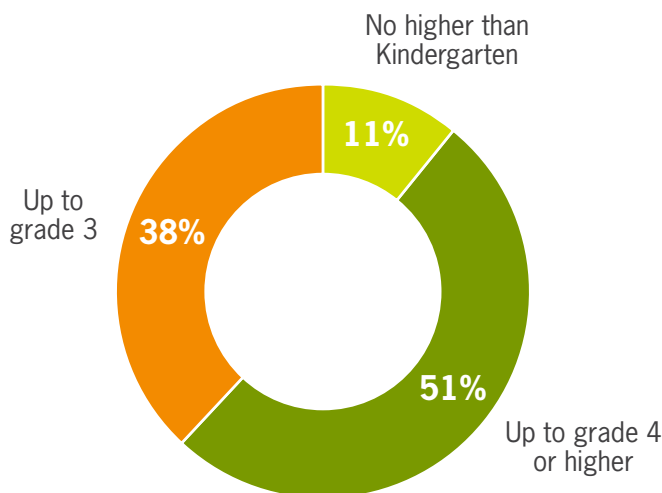
The majority of programs focus on early childhood years (some beginning at birth, others at preschool age) through second or third grade. Grade span data for one community college was not available. This sample was not selected to represent the national distribution of programs' age ranges.

Each topic area focuses on different data sources and information. Given data collection challenges, NCTQ has partial sets of data for some programs, extensive sets of data on others, and only publicly available data on the rest. For example, one program may have an observation instrument available, but not its reading course syllabi. Consequently, analaysis of each topic area focuses on a different subset of programs depending on the data available. However, all programs are drawn from this sample of 100, and smaller samples are stratified to represent the different levels and age-ranges of programs in the full sample, to the extent possible.

Methodology

The data sources and methodology vary from topic to topic, as each examines different content from different sources. The following gives an overview of how analysts approached each source of data.

Course titles and descriptions

To identify relevant courses, analysts reviewed the required courses for a program. Elective or recommended courses were omitted from analysis. This review involved looking at the course titles and course descriptions. Any course that was relevant to the topic of investigation was flagged. This coding process applied a generous approach. For example, for oral language development, any course was flagged as relevant if it included the terms "language development," "oral," "speaking," "vocabulary," "language acquisition," or similar terms.

Analysts also used course descriptions to determine the targeted age range for which this course prepares teachers to teach. Courses were coded as addressing preschool (inclusive of courses focused on birth through preschool), elementary school (inclusive of courses focused on elementary and older grades), both preschool and elementary school, or unclear.

Course syllabi

Most course syllabi included a **lecture schedule** which provided the topics taught in each course meeting, or each week. Although these lecture schedules varied in their level of specificity (for example, some only listed a textbook chapter, while others provided a paragraph of information or listed half a dozen topics), they indicated the focus of the class and provided insight into what would be taught.

In the common instance that a lecture addressed more than one topic, analysts counted the entire lecture as relating to a topic. For example, when counting the number of lectures on oral language development, if a single lecture addressed both "oral language" and "classroom management," the entire lecture would be counted for oral language. The result is that the measure of course time is likely an overestimate in many cases.

To determine the proportion of a course devoted to a topic, analysts counted the number of relevant lectures, and divided by the total number of lectures. This count excludes holidays (e.g., a lecture is not held because of Thanksgiving) and final exams but counts all other class days given that they represent time that could be devoted to the topic.

When a program had multiple courses that addressed a topic, analysts summed time across courses to calculate the total proportion of a course devoted to a topic. For example, if a program had two courses on oral language development, and spent 25 percent of course time in one course and 10 percent of course time in another,

these were added together to show that 35 percent of a course was devoted to oral language development. Because this analysis adds course time devoted to a topic across all relevant courses, a program could potentially devote more than an entire course to that topic.

Course syllabi generally listed required **assignments** and provided varying levels of detail, ranging from giving the name of the assignment to providing a page-long description with an accompanying scoring rubric. Analysts made the best determination possible from the information available as to whether an assignment related to the topic under investigation.

When an assignment addressed several topics, among them the one under investigation, the analyst counted the entire assignment. For example, if a teacher candidate had to design a lesson plan that addressed print awareness and oral language, analysts counted the entire lesson plan as an oral language assignment.

When the assignment had multiple separate deliverables (e.g., three lesson plans, each explicitly on a different topic), analysts only counted the relevant deliverables.

To determine the proportion of assignments, the calculation was based on the percent of course grades attributed to an assignment, rather than the number of assignments, as the table below depicts.

Table A.1.   Example of how proportion of assignments were calculated for analysis

Assignment	Percent of course grade	Counts for analysis
Participation	10%	No
Responses to assigned reading	20%	No
Lesson plan	40%	Yes
Read aloud demonstration	30%	Yes

In the example above, two assignments were credited for analysis and two were not. However, using the percent of course grade gives a more accurate picture of the weight of the assignments, showing that 70 percent of the course grade was related to assignments that earn credit for analysis, while 30 percent of the course grade was based on assignments that did not earn credit. This 70/30 weighting more accurately represents the coursework than would a 50/50 weighting based on the number of assignments.

As with lectures, assignments were added across syllabi to determine the total proportion of a course grade devoted to relevant assignments.

Textbooks

Textbooks are a common source of instruction for teacher candidates and may serve as a resource long after teacher candidates have left college. Identifying which textbooks were required for a course was a straightforward process. Most colleges and universities had an affiliated campus book store that listed all the required textbooks for courses that semester. If a course was not offered during the semester, or no textbook listing was available for a course, the course was omitted from the sample.

Textbook chapter titles were used to determine the proportion of a textbook focused on a topic, such as oral language development. Textbook chapters were generally listed on Amazon.com or on publishers' websites.

All chapters that related in whole or in part to oral language were counted, including those that did not focus on preschool years (e.g., "Adolescent and adult language").

In some cases, experts conducted a more thorough analysis of textbooks. For example, reading subject-specialists reviewed a set of textbooks to determine whether the textbooks support effective reading instruction with regard to the five components essential for early reading – many of which are also relevant to emergent literacy.

Observation instruments

Observation instruments are the tools used to provide feedback to teacher candidates during their culminating student teaching experience. These tools varied, but some were quite detailed, spanning multiple pages with extensive rubrics in a range of areas. These forms also represent the areas on which teacher candidates would be evaluated, thereby signaling the areas of teaching that the preparation program believed were essential for candidates to master before completing their training.

Analysts reviewed these instruments for language related to a range of areas in oral language development and classroom environment. Analysts also coded language based on whether it related to a general student population or if anything in the language suggested the focus was on teaching preschool children.

Student teaching handbooks

Student teaching handbooks provide teacher candidates with a wealth of information about their student teaching experience. The handbooks may contain observation instruments. They also frequently specify the policies surrounding student teaching placements. Analysts reviewed these documents for information about the length of placement, the number of observations, and the age groups candidates engage with as student teachers.

Expert panel

We are grateful for the input and advice of our expert panelists, who helped us to identify critical areas of preschool teacher preparation and conceptualize how to evaluate preparation programs, and who pushed us in new directions in our thinking.

Dr. Marilyn Jager Adams
Marilyn Jager Adams, Ph.D., is a Visiting Scholar in the Cognitive, Linguistic, and Psychological Sciences Department of Brown University.

Dr. Sue Bredekamp
Sue Bredekamp, Ph.D., is an early childhood education specialist from Washington, DC, who consults on topics such as early literacy, curriculum, teaching, and professional development. She served as Director of Accreditation and Professional Development at the National Association for the Education of Young Children (NAEYC).

Dr. Sherry Davidson
Sherry L. Davidson, Ph.D., serves as a lead professional development specialist and researcher at the National Center for Children in Poverty, Columbia University's Mailman School of Public Health.

Dr. Vicki Gibson

Vicki Gibson, Ph.D., is CEO of Gibson Hasbrouck & Associates, and is a consultant, author, speaker, and trainer. She is the author of the following programs: We Can Early Childhood Curriculum; I Can Draw Pre-Writing Program; Letter, Sounds, and Strokes Phonics Program; and the We Can Manage the Early Childhood Classroom.

Ms. Susan Gunnewig

Susan Gunnewig joined Hatch Early Childhood as VP of Product Development in 2007 after serving as Asst. Professor in Pediatrics at University of Texas Medical School in Houston for 7 years.

Dr. Bridget K. Hamre

Bridget Hamre, Ph.D., is an Associate Research Professor and Associate Director of the University of Virginia's Center for Advanced Study of Teaching and Learning (CASTL).

Dr. Ruth Kaminski

Ruth A. Kaminski, Ph.D., is CEO/COO and Director of Research and Development for Dynamic Measurement Group and co-author of Dynamic Indicators of Basic Early Literacy Skills (DIBELS).

Dr. Deborah Leong

Deborah J. Leong, Ph.D., is professor emerita of Psychology; she taught developmental and educational psychology for 32 years at Metropolitan State College of Denver. She is Director of the Tools of the Mind Project.

Dr. Craig Ramey

Craig T. Ramey, Ph.D., is Distinguished Research Scholar of Human Development at the Virginia Tech Carilion Research Institute, Professor of Psychology at Virginia Tech, and Professor of Pediatrics at the Virginia Tech Carilion School of Medicine.

Dr. Sharon Ritchie

Sharon Ritchie, Ed.D., is the Director of FirstSchool, a PreK-3 Public School reform initiative committed to improving the school experiences of African American, Latino, and low-income children and their families.

Dr. Katharine B. Stevens

Katharine Stevens, Ph.D., leads the American Enterprise Institute's (AEI) early-childhood program, focusing on the research, policy, and politics of early-childhood care and education with particular emphasis on programs for disadvantaged children.

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