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**The Evaluation of
Teacher Preparation
Models: Design Report**

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*Paul Decker
John Deke
Amy Johnson
Daniel Mayer
John Mullens
Peter Schochet*

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U.S. Department of Education
National Center for Education Evaluation
Institute of Education Sciences
555 New Jersey Avenue, NW, Room 502C
Washington, DC 20208-5500

Project Officer:

Elizabeth Warner

Submitted by:

Mathematica Policy Research, Inc.
P.O. Box 2393
Princeton, NJ 08543-2393
Telephone: (609) 799-3535
Facsimile: (609) 799-0005

Project Director:

Paul Decker

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I. INTRODUCTION

Every year, thousands of new teachers pass through hundreds of different teacher preparation programs and are hired to teach in the nation's schools. In recent years, "alternative teacher certification" (AC) programs or routes have expanded rapidly, offering an increasingly popular route into teaching that differs from that offered by traditional certification (TC) programs. TC programs generally require trainees to complete their training before they begin teaching full-time. In contrast, although AC programs vary with respect to their exact training strategies, they generally allow trainees to start teaching full-time before they have completed their training.

Despite the expansion of these new routes into teaching, there exists little research to provide guidance as to the effectiveness of different teacher training strategies. The increased variation in teacher preparation approaches created by the existence of various AC and TC programs offers an opportunity to examine the effect of different components of teacher training on teacher performance. For example, some AC programs require substantially less education coursework than TC programs. We can exploit this type of variation to examine whether the form of teacher training is associated with differences in teacher performance.

This document presents the design for an evaluation to investigate these issues. The evaluation—the Impact Evaluation of Teacher Preparation Models—is being sponsored by the U.S. Department of Education's (ED's) Institute of Education Sciences (IES) and is being conducted by Mathematica Policy Research (MPR), Decision Information Resources (DIR), Chesapeake Research Associates (CRA), and Vermont Institutes (VI). The purpose of the evaluation is to rigorously test whether the extent or content of teacher preparation is related to teacher practice or to the effectiveness of teachers, as measured by student academic achievement.

Through various modes of data collection—both quantitative and qualitative—the study will determine the comparative effectiveness of contrasting methods of teacher preparation. To ensure a sufficiently large sample to detect meaningful effects, the study will follow two cohorts of students and teachers for an entire school year. The first cohort will be studied during the 2004-2005 school year and the second cohort will be studied during the 2005-2006 school year. Students will be tested at the beginning and end of the school year to measure academic achievement. Teacher practices will be measured using classroom observations. Background information on teachers collected from a teacher survey and teachers' SAT/ACT scores will be used to help interpret differences in student achievement and teacher practices among teachers who followed different preparation routes.

The study will use a mix of experimental and nonexperimental methods to assess the relationship between preparation modes and student and teacher outcomes. Within each school in the study, students in the same grade will be randomly assigned to either a novice teacher from one of the AC models included in our study or a novice teacher from a TC route. This aspect of the design will provide an experimental estimate of the effect on student achievement of teachers from a particular AC model compared with teachers who choose a TC route. Using

nonexperimental analysis, we can then assess if that effect is related to the characteristics of preparation programs or to the characteristics of teachers who choose different programs. We will also compare the classroom practices of teachers who chose different preparation modes. The results of the study will be used to identify effective teacher preparation strategies and guide policy discussions on ways to promote the most effective among these strategies.

A. QUESTIONS TO BE ADDRESSED BY EVALUATION

The purpose of the impact evaluation is to determine the effect of different approaches to teacher preparation on teacher practice and student performance. Specifically, the evaluation will determine whether there is any difference in teacher practice or student achievement attributable to certain teacher preparation methods and, if so, which aspects of these routes are responsible for observed differences in teacher practice or student achievement.

The evaluation will exploit the existing variation in teacher preparation in order to address questions in three specific areas: (1) professional preparation and support, (2) classroom practices, and (3) student performance. Questions that will be explored in each of these areas are as follows:

- **Professional Preparation and Support**

What is the nature and extent of teacher preparation in different preparation programs? What is the mix of training in such areas as pedagogy, classroom management, and child development, and how are these taught? What is the nature and extent of support for new teachers, provided either by the teacher preparation program or the school/district in which they begin their careers?

- **Classroom Practices**

How do different teacher preparation methods and different support and induction activities relate to new teachers' classroom practices?

- **Student Performance**

Is the extent and content of teacher preparation, particularly the amount of education coursework, related to the effectiveness of teachers, as measured by student achievement? Is the timing of teacher preparation, specifically whether preparation is completed before assuming responsibility for a classroom, related to student achievements?

The collection of information to address these questions will permit analyses that can inform the policy debate on appropriate strategies for responding to teacher shortages and promoting effective alternative preparation, traditional preparation, or aspects of both.

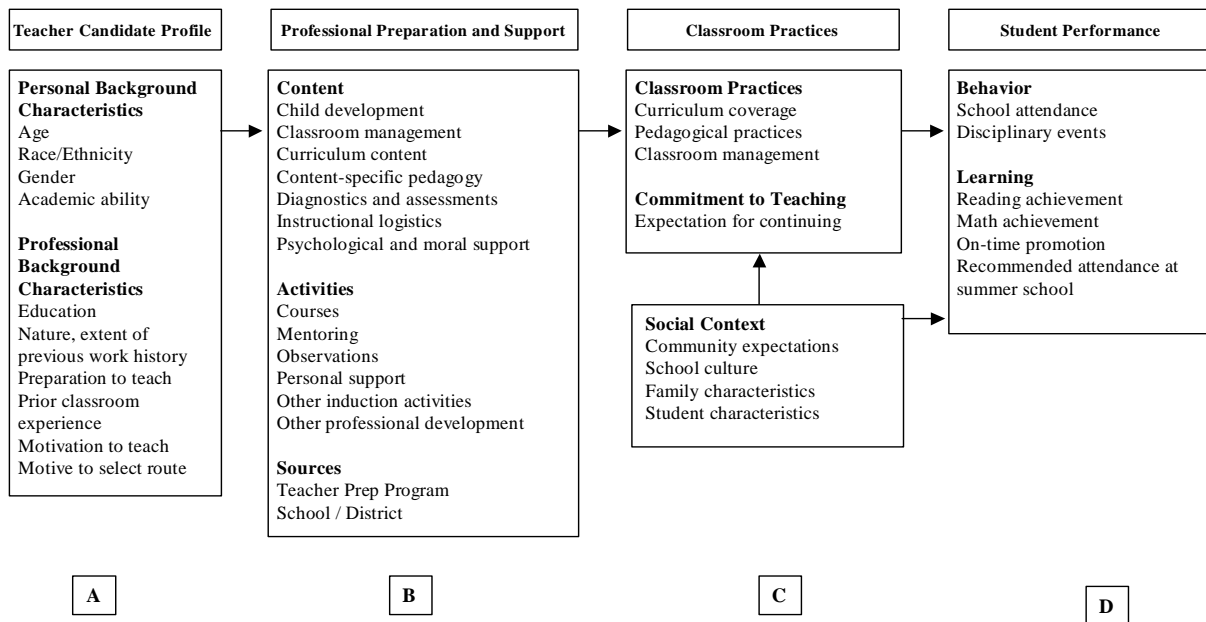
B. CONCEPTUAL FRAMEWORK FOR THE STUDY

To understand the contribution of teacher preparation programs on teacher practices and student performance, it is important to account for differences in teachers’ personal and professional background characteristics, in addition to differences in the content of the preparation programs themselves. A conceptual framework for the study is depicted in Figure I.1.

This framework indicates core areas for exploration under the research questions posed in each of the three areas listed above. It also captures the key background characteristics that are hypothesized to influence the other measures of interest. The framework highlights the important links between the backgrounds of teachers—including such characteristics as age, education, academic ability, and previous work experience (column A); external factors resulting from the professional preparation received and possible ongoing support during their early years of teaching (column B); the intermediate effects these factors might have on classroom practices, which also are influenced by the factors associated with social context (column C); and the key longer-term effects on student performance, including achievement and school-related behaviors (column D).

FIGURE I.1

CONCEPTUAL FRAMEWORK FOR IMPACT EVALUATION OF TEACHER PREPARATION MODELS



Our evaluation is designed to examine how variations in teacher preparation programs, which are represented in column B of Figure I.1, relate to different outcomes in classroom practices (column C) and student performance (column D). In the remainder of this report, we describe how we plan to conduct each component of the study, using Figure I.1 to guide our thinking. Our first step, which is described briefly in Chapter II, is to identify teacher preparation models that help us structure our thinking about variation in teacher preparation. The models differ both in terms of the characteristics of the teacher candidates they serve (column A) and the type of training and support provided (column B). Our objective in the study is to focus specifically on variations in training and support. The identification of the preparation models is based on examination of the existing alternative teacher preparation programs around the country. In Chapter II, once we have defined the preparation models, we will describe our approach for assessing the relationship between teacher preparation and classroom practices (column C) and our experimental design for assessing the effect of teacher preparation on student performance (column D). Chapter III addresses the plan for collecting data on all four parts of the conceptual framework shown in Figure I.1. The data collection efforts will include: (1) administration of a teacher survey, (2) collection of teacher test scores, (3) observations of classroom instruction, (4) administration of standardized math and science tests to students, (5) collection of school records, and (6) collection of contextual information from programs and schools. Chapter IV describes how we will analyze all of these data to address each of the research questions.

II. EVALUATION DESIGN

The study will address two broad research questions related to the impacts of teacher preparation programs on student outcomes and teacher practices:

1. What are the relative impacts on student achievement of teachers who choose to be certified through different forms of teacher preparation? How do teacher practices vary by form of teacher preparation?
2. How are student achievement and teacher practices associated with the timing and amount of teacher preparation coursework?

The relative impacts on student achievement will be measured using an experimental design, where students in the study schools will be randomly assigned to classrooms taught by teachers from different preparation routes. Differences in teacher practice can be measured by comparing practices among teachers from different preparation routes. The remaining questions will be addressed using a mix of experimental and non-experimental research methods.

This chapter describes our study design that will support the impact analysis. First, we discuss the types of teacher preparation models that will be the focus of the evaluation. Second, we provide an overview of the random assignment design. Third, we discuss the appropriate level of teaching experience for teachers in the sample. Finally, we present the sample design and the statistical precision of the impact estimates under this design.

A. SELECTION OF TEACHER PREPARATION MODELS

To structure our experimental design, we have chosen to study teacher preparation models that have substantive differences from one another in structure and amount of coursework, but that are also representative of the types of programs that train a majority of the nation's teachers. In terms of structure, we focus on two types of programs: those that place teachers in classrooms only after all of their training has been completed (traditional programs) and those that place teachers in classrooms prior to the completion of their training (alternative programs.) Among the alternative programs, we further refine our focus based on the amount of coursework of the program.

In previous research¹, we identified four prominent dimensions of variation that characterize alternative teacher preparation programs: (1) the entrance requirements, (2) the amount of required teacher-related coursework, (3) the institutions delivering the training, and (4) the amount of support provided during the first year of teaching. Although each of these dimensions merits attention, two stand out as especially important: the amount of teacher-related coursework and the entrance requirements.

¹ Mayer, et al (2003).

The amount of education-related coursework required by AC and TC programs is critical to the debate over certification and teacher effectiveness. Some consider the required education coursework associated with traditional routes and some AC routes as unnecessarily burdensome (Finn 2003; Hess 2001; U.S. Department of Education 2002). These same critics argue that excessive coursework provides little benefit to those who take the courses and creates a disincentive for talented individuals to enter the teaching profession. On the other side of the argument, supporters of such coursework argue that reducing these course requirements will diminish the quality of the teaching force. Even in cases where AC coursework requirements are similar to TC requirements, the TC programs require that individuals complete these requirements prior to becoming the teacher of record, while AC programs allow teachers to become the teacher of record while they are still completing their requirements. The present study will inform the important debate regarding the importance of the amount and timing of the required education coursework in teacher preparation.

The other dimension of variation across alternative certification programs on which we focus is the degree to which programs are selective in their recruitment of teacher candidates. Entrance requirements vary from less selective to very selective. Since entrance requirements might be closely related to teacher effectiveness, ignoring this fact would increase the odds that the study findings will confound the entrance requirements of a program with other aspects of a program. Hence, to identify the effects of different teacher preparation programs, we want to compare programs that serve broadly similar teacher candidates.

Based on these two dimensions of variation, alternative certification programs can be divided into four categories according to entrance requirements (low or high selectivity) and course load (minimal or substantial). Table II.1 illustrates these combinations of teacher preparation models.

TABLE II.1
ALTERNATIVE TEACHER PREPARATION MODELS

		Entrance Requirements	
		Highly Selective	Less Selective
Education Course Load	Minimal	Model A	Model B
	Substantial	Model C	Model D

Because of resource constraints, it will not be possible to include all models in the evaluation. Rather, we will select a subset of models, so that the evaluation can produce precise estimates of their effectiveness. For two reasons, the study will include only programs that have relatively *low entrance requirements* (models B and D). First, most traditional certification programs do not have highly selective entrance requirements (Hess 2001), nor do most alternative programs (Mayer, et al 2003). Hence, programs with low selectivity are more policy-

relevant, since these are the programs that produce most teachers working today. Second, focusing on alternative certification programs with relatively low entrance requirements will help us disentangle effects of the teacher training from the effects of pre-existing individual characteristics. Finally, including both models B and D—programs with high course load requirements and programs with low course load requirements—will help us assess whether increasing the intensity of programs’ course load requirements improves teacher effectiveness.

B. OVERVIEW OF THE RANDOM ASSIGNMENT DESIGN

Our design will randomly assign students to *practicing* teachers (those who have primary responsibility for a classroom) who have chosen to enter the profession through traditional or alternative preparation routes.² The key features of this design are to:

- ***Select a geographically dispersed sample of novice teachers from two general types of alternative certification programs.*** The two types of programs that will be selected are those from programs with high or low course requirements (Models B and D). By “novice teachers,” we mean teachers with four or fewer years of experience as the teacher with primary responsibility for a classroom.
- ***Identify the schools where these teachers teach.*** This information will be obtained from program directors of the selected alternative certification programs and the school districts served by the programs.
- ***Identify traditionally certified teachers who teach in the same schools as the alternatively certified teachers.*** For each alternatively certified teacher in the sample, we will select a traditionally certified teacher who teaches in the same school and grade and who has the same amount of teaching experience (zero to four years of experience).
- ***Randomly assign students to teachers within each school.*** Randomization will be conducted only in those grades taught by the teachers identified above. The random assignment of students to teachers will result in classes within schools that are essentially identical at the start of the school year. Thus, observed interclass differences in average student achievement at the end of the school year can be attributable to differences between the teachers and how they manage and instruct their classes. The random assignment of students to classrooms will avoid the possibility that students assigned to any given teacher will differ systematically from those assigned to any other teacher (which could lead to biased impact estimates). Random assignment also improves the precision of the impact estimates.

² An alternative approach is to randomly assign teachers to different types of programs. However, such an approach would fail to take into account the fact that trainees choose the program that best suits their needs and that trainees cannot generally be forced to attend a program they find unattractive. Since the characteristics of trainees and the programs they attend are inextricably connected in this way, this type of random assignment is clearly infeasible.

The goal of the random assignment design is to identify the relative effects of teachers who chose different teacher preparation models on student achievement. Our design will facilitate two types of comparisons using the models described above. First, we will compare teachers from Model B or D programs with other teachers in the same schools and grades who entered the profession through a traditional route. In the case of Model B, the comparisons will be between the traditional route teachers and alternative route teachers from programs with minimal coursework. The objective of this comparison is to measure the degree to which the differential coursework and timing of training of the teachers from traditional and alternative routes generate different student outcomes. In the case of Model D, the comparisons will be between traditional route teachers and alternative route teachers from programs with substantial coursework. Since coursework is substantial for both the alternative and traditional route teachers in this case, the objective of this comparison is to measure the degree to which the timing of training relative to placement in the classroom affects student achievement. These comparisons are made within schools with randomly created classrooms, so in effect we are conducting “mini-experiments” in each of the schools that will form the basis for our estimated impacts.

Second, we will examine the relationship between student achievement and coursework requirements by comparing the outcomes of students taught by Model B teachers with those of students taught by Model D teachers. These two models will be compared using the traditionally certified teachers in each school as a common intermediary or benchmark. Specifically, the Model B impacts described above will be compared to the Model D impacts. Since both of those impacts are relative to the common benchmark of TC teachers, the two impacts can be compared to one another. This nonexperimental approach assumes that the TC teachers in schools with Model B teachers are, on average, comparable to the TC teachers in Model D schools. This assumption could be wrong if the types of schools that hire Model B teachers are systematically different from the types of schools that hire Model D teachers. We will use regression adjustment to control for observable differences between the TC teachers in the Model B schools and the TC teachers in the Model D schools. This comparison of Model B to Model D will show how coursework is related to student achievement for the teachers and AC programs in our sample, but may not be representative of Model B and Model D programs in general.

One feature of our design that warrants comment is that because certification routes will not be randomly assigned to teacher trainees, the impact estimates under our design will address the effectiveness of alternate certification programs for those who *choose* to participate in these programs. It is, however, not structured to directly address the effectiveness of these programs for the *average* teacher, because of likely differences in the types of individuals who attend various certification programs.³ Stated another way, the results cannot be used to rigorously address how a graduate of one program would fare if they had instead attended another one. Instead, our design specifically addresses the effectiveness of teacher preparation programs *for those they currently serve*.

³ Because we will collect extensive data on teacher characteristics, we can use non-experimental methods to partially disentangle impacts due to differences in training from those due to differences in teacher characteristics.

C. TEACHER EXPERIENCE

We believe that the level of teaching experience should be *similar* for the alternatively and traditionally certified teachers. This is because we do not want to confound the comparison of alternative and traditional route teachers with different levels of teaching experience, especially since evidence suggests that teachers with at least a few years of experience, other things being equal, are more effective teachers than novice teachers.⁴

The study will focus on novice (instead of veteran) teachers, since the effect of teacher preparation is likely to be greatest for those with the least experience. For example, the structural difference between the traditional and alternative programs is that teachers in the alternative program are placed in a classroom prior to completion of their training. This initial gap in training between teachers from traditional and alternative programs may be closed over time as both gain classroom experience. Thus, the largest difference in student performance, if one exists, is likely to occur when teachers are new. Furthermore, different retention rates between teachers from different preparation routes could confound comparisons among veteran teachers.

We will define “novice” to include teachers in their first four years of teaching. We include those with one to four years of prior experience, in addition to new teachers, because many first-year alternative route teachers are not yet certified. Thus, we believe the study sample should be designed so we can examine the performance of alternative route teachers both before and after they are certified. Furthermore, if the study were restricted to only new teachers, then it might not be possible to find enough schools with new teachers from both an alternative and traditional program in the same grade. If we are still not able to find enough teachers to meet our sample size requirements, we will expand the experience range to five years.

In each school, teachers from alternative programs will be matched to teachers from traditional programs in the same grade and with a similar level of experience. Ideally, we would match novice teachers of exactly equal experience levels. However, we are aware that exact experience matches in the same school and in the same grade are too rare to meet the study’s sample size requirement. Given that, we will only require that all AC and TC teachers have at most four years of experience; we will not require that the experience levels match within each school. Using that approach, it is possible that either AC or TC teachers will have, on average, a bit more experience than the other group. In that event, we will use regression adjustment to account for differences in experience.

D. SAMPLE DESIGN

In this section, we describe our sample design, including our plans for selecting programs, school districts, schools, teachers, and students. Our design is a mixture of a “top-down” approach and a “bottom-up” approach. In the top-down approach, we start by selecting certification programs and work down to the schools who hired teachers from those programs.

⁴ For example, Betts and Morell (1999) found that teacher experience in high school has a positive and statistically significant relationship with college GPA.

In the bottom-up approach, we look for additional alternatively certified teachers in the schools selected by the top-down approach, and then determine whether they were certified by programs that meet the requirements of this study. By including these additional teachers, we can bolster our sample in order to detect smaller effects.

The sample design includes two cohorts of teachers corresponding to two study years. The first study year will begin with a smaller cohort (approximately one third of the ultimate sample), while the second study year will add a larger cohort of additional teachers. The second cohort will draw additional teachers from districts included in the first cohort as well as districts that will be new to the study. A small number of teachers who are in the first cohort will also be included in the second cohort. It should be feasible to identify a larger cohort of teachers in the second study year due to more time for recruiting and the benefit of lessons learned in the first year.

1. Selection of Alternative Certification Programs

As discussed above, we will sample 10 programs with low entrance requirements—5 with minimal course requirements (Model B) and 5 with substantial course requirements (Model D). These 10 programs will be purposely selected from 165 programs in 12 states with low entrance selectivity requirements.⁵ To identify these 10 programs, we will first divide the universe of 165 programs into seven strata based on geography and whether or not the program has intensive course requirements. Second, we will randomly select 50 programs across the 7 strata, where the sample size in a stratum will be proportional to the share of all programs that are in that stratum.

Third, we will randomly order the selected programs within each stratum, and sequentially research each of the 50 programs to assess whether each one is appropriate for the study, based on certain selectivity requirements. These criteria will include (1) program size (the number of elementary school teachers trained by the program), so that we can select the larger programs to ensure that we will be able to obtain sufficient trainee samples; (2) program age, so that we can exclude programs that are too new (that is, programs that do not have teachers with 0, 1, or 2 years of experience); (3) future operational plans, so that we can exclude those programs that are about to cease operations; and (4) entrance requirements, so that we can exclude programs that are too selective (that require a B average or better). This process will generate a sample of 10 purposely selected but geographically dispersed programs that will be included in the study.

2. Selection of School Districts

We will request from the 10 programs identifying information on the districts where their program graduates have been placed in elementary schools in the previous three years. For each program, we will sample two school districts (we will select only one district if it is very large). To be eligible for inclusion in the study, a school district must have hired at least 12 teachers from the program within the past two years to ensure we will have a good chance of obtaining

⁵ The 12 states are geographically diverse and include Arkansas, California, Colorado, Georgia, Illinois, Louisiana, Michigan, New Jersey, New Mexico, Tennessee, Texas, and Wisconsin.

our target sample of treatment and comparison group teachers. We will randomly select and order school districts from among those eligible and will sequentially contact them until our sample size targets have been met.

3. Selection of Schools

From each district, we will include about four schools in the study. Thus, the total number of schools in the study will be about 80. To be eligible for inclusion in the study, a school must have at least one alternatively certified teacher and one traditionally certified teacher with a similar amount of teaching experience (zero to four years) who teaches in the same grade. We will randomly sample and order schools in a district that meets these eligibility criteria, then sequentially contact these schools.

4. Selection of Teachers

At least one alternatively certified and one traditionally certified teacher with a similar amount of teaching experience will be included from each school in our sample. To increase precision, we will bolster this sample by including any other alternatively certified teachers present at a school, so long as their certification program meets our requirements, and so long as they have a traditionally certified match in the same grade and with similar experience. We assume that we will be able to sample a total of 90 alternatively certified and 90 traditionally certified teachers from the 80 schools in the two cohorts of the study, for a total of 180 teachers.

5. Selection of Students

We will request that school staff allow us to randomly assign all students in those grades to teachers included in the study. Thus, students in the relevant grades will be randomly assigned to a classroom taught by an alternatively certified teacher, a classroom taught by a traditionally certified teacher with comparable experience, or a teacher at the same grade level who is not included in the study (for example, a veteran teacher). This approach will reduce design effects due to clustering of students within classrooms because there should be no difference between the average baseline characteristics of students in the treatment and comparison group classrooms. *All* students in the treatment and comparison group classrooms will be part of the research sample. On average, we anticipate that 23 students will be in each type of classroom. Thus, we will have a sample of 80 schools, 90 alternatively certified teachers, 90 traditionally certified teachers, and 4,140 students.

E. STATISTICAL PRECISION

To assess appropriate sample sizes for the evaluation, we adopted a precision standard using impact results found in other evaluations. Several authors (for example, Cohen 1988; and Lipsey and Wilson 1993) have conducted meta-analyses across a range of fields to examine the extent to which impacts, measured in effect size units (that is, as a percentage of the standard deviation of the outcome), are considered to be “meaningful.” The consensus is that an effect size of .20 (which is equivalent to about 4 percentile points on a standardized test) is considered to be

moderate in size. Thus, we adopt this .20 effect size value as the standard for this evaluation. Since subgroup analyses will be an important part of this evaluation, we have designed the study to achieve this standard for a 50 percent subgroup.

Table II.2 displays minimum detectable effects (MDE) on a student outcome measured in effect size units at 80 percent power for a 95 percent one-tailed test and for a 95 percent two-tailed test.⁶ The table also shows how the MDE varies with assumptions regarding the regression R^2 value and subgroup size.⁷ These calculations incorporate design effects due to clustering at the school and teacher level. Incorporating design effects is necessary to calculate detectable effects that are externally valid to the programs included in the study. On the basis of findings from previous education-related evaluations, we assume an intraclass school effect of .07 and an intraclass teacher effect of .16. Other assumptions are displayed at the bottom of Table II.2.

The expected student sample sizes provide sufficient statistical power to provide a definitive assessment of the overall impacts of the two types of teacher certification routes under investigation (relative to the traditional route), as well as for key subgroups of programs and teachers. For the overall design and a two-tailed test, the MDE is .13 of a standard deviation for an R^2 value of .60 and .17 of a standard deviation for an R^2 value of .30; these MDEs are both below our .20 precision standard. The MDEs are even smaller for a one-tailed test (.11 and .15, respectively). For a 50 percent subgroup of programs (for example, programs with substantial coursework requirements) or a 50 percent subgroup of teachers (for example, teachers in a particular range of grades), the MDE is about .18 of a standard deviation for an R^2 value of .60 and a two-tailed test or 0.24 for an R^2 value of 0.30.⁸ Although we cannot know for sure what the R^2 will be in these regressions, we believe this range suggests the study should be adequately powered to detect an effect size of approximately 0.20 of a standard deviation for a 50 percent subgroup under reasonable assumptions.

⁶The decision to use a one- or two-tailed test depends on the nature of the hypothesis being tested, which can vary both by outcome and by subgroup. Therefore, we present MDEs for both one- and two-tailed tests.

⁷It is appropriate to assume an R^2 as high as 0.6 for outcomes where baseline measures of the outcome are available, such as test scores. However, there can be considerable variation in the regression R^2 from one study to another, thus an R^2 of 0.6 should be considered a best case scenario. If baseline measures of the outcome are not available, we assume an R^2 of 0.3. The considerable difference between the MDEs in these two cases (see Table II.2) illustrates the importance of obtaining baseline measures of outcomes.

⁸We can detect even smaller internally valid effects. When we do not take into account clustering, the MDE for a 33 percent subgroup is 0.10 standard deviations, assuming an R^2 of 60 percent. For the full sample, the MDE is 0.06 standard deviations.

TABLE II.2

MINIMUM DETECTABLE EFFECTS UNDER ALTERNATIVE SAMPLE DESIGNS

Sample	Student Sample Size (Assuming 20 per Class Complete Tests)	Detectable Effect Sizes (Percentage Points)	
		(1)	(2)
		Regression R ² : 60%	Regression R ² : 30%
1. One-Tailed Test. 80 Schools, 180 Teachers, 20 Students Responding per Teacher			
Full Sample	3,600	11	15
50% Subgroup of Programs	1,800	16	21
50% Subgroup of Teachers	1,800	15	20
33% Subgroup of Programs	1,200	20	26
33% Subgroup of Teachers	1,200	19	25
25% Subgroup of Programs	900	23	30
25% Subgroup of Teachers	900	21	28
50% Teachers; 50% Programs	900	22	29
2. Two-Tailed Test. 80 Schools, 180 Teachers, 20 Students Responding per Teacher			
Full Sample	3,600	13	17
50% Subgroup of Programs	1,800	18	24
50% Subgroup of Teachers	1,800	17	23
33% Subgroup of Programs	1,200	22	30
33% Subgroup of Teachers	1,200	21	28
25% Subgroup of Programs	900	26	34
25% Subgroup of Teachers	900	24	32
50% Teachers; 50% Programs	900	25	33

Note: Minimum detectable effects are estimated for a 5 percent level of significance and 80 percent power level. These calculations take into account clustering effects at the teacher level and at the school level. The equation used to calculate the minimum detectable effect is:

$$2.486 * \sqrt{1 - R^2} * \sqrt{\frac{2\rho_1(1-c)}{S} + \frac{2\rho_2}{T} + \frac{2(1-\rho_1-\rho_2)}{N}}$$

where

S is the number of schools, T is the number of treatment (comparison) teachers, N is the number of students in the treatment (comparison) group, ρ_1 (=0.07) is the between-school variance as a percentage of the total variance of the outcomes based on previous studies, ρ_2 (=0.16) is the between teacher variance, and c (=0.50) is the correlation between treatment and control group students within the same school. Previous impact evaluations have found that an R^2 as high as 60 percent may be an appropriate assumption when baseline measures of an outcome are available, but 30 percent is more realistic when baseline measures are not available. However, the regression R^2 can vary considerably between studies.

III. DATA COLLECTION PLAN

Our data collection plan is designed to capture information that will permit analyses in the study's three core areas of interest: (1) professional preparation and support of teachers, (2) classroom practices, and (3) student performance. Our goal is to apply data collection tools that will provide the most objective measures in each of these areas, that minimize respondent burden as much as possible, and that closely reflect the study's needs as depicted in the conceptual framework (Figure I.1 in Chapter I).

The primary data collection activities will include:

- Administration of student tests in reading and math
- Collection of teacher SAT/ACT test scores
- Classroom observations
- Teacher survey
- Collection of students' school records
- Context study interviews

These data collection activities will capture information called for in the conceptual framework presented in Chapter I as follows: The teacher survey, teacher test scores, and context study interviews will provide personal and professional background characteristics of the teachers (Column A of Figure II.1) and information on teachers' professional preparation and ongoing support (Column B); the classroom observations will provide an objective measure of classroom practice (Column C); and the student achievement test and school records data will provide the key outcome measures of student performance (Column D).

The timeline for all data collection efforts is presented in Figure III.1. All data collection will take place during the 2004-2005 and 2005-2006 school years. We will collect baseline student achievement data at the start of each school year, during which time we will also request permission from teachers to access their SAT or ACT scores. Final student achievement data will be collected at the school year's end. We will conduct classroom observations in the spring, and we will ask teachers to complete their survey at the time of the spring administration of the student achievement test. Context interviews with program and school staff will be conducted between January and March. We will collect school records data when available, following the end of each school year.

Below we provide details on each of the six core data collection activities, with more detailed information on the objectives of each activity and our plans for collecting the information needed. The matrix presented in Table III.1 displays the role of each data collection method in providing information relevant to the conceptual framework.

FIGURE III.1
TIMELINE FOR DATA COLLECTION ACTIVITIES

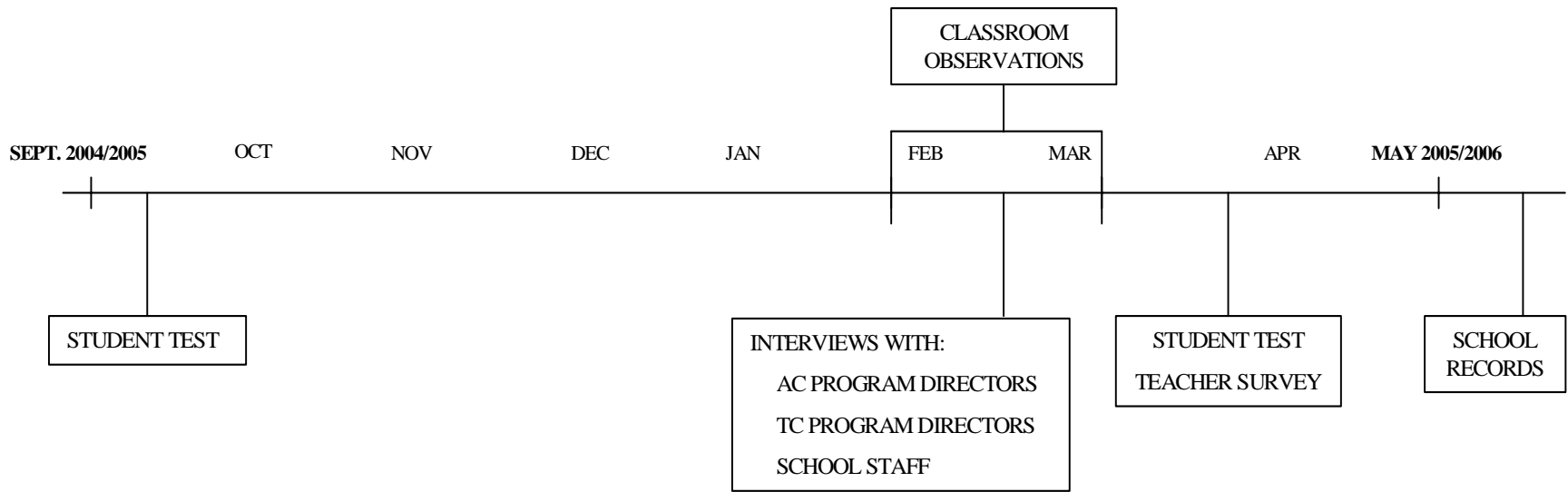


TABLE III.1

MATRIX OF DATA SOURCES AND DATA COLLECTION METHODS

Key: Data Sources

AC	Alt Cert Program Administrator
D	Certification Program Documents
I	Instructional Supervisor
M	Teacher Mentor
CCD	Common Core of Data (NCES)

P	Principal
R	School/District Records
SAT/ACT	Teachers' Scores on SAT/ACT tests
ST	Standardized Tests - MPR Administered
T	Teacher
TC	Traditional Certified Program Administrator

Topic Areas		Data Collection Methods				
		Phone Interview	On-Site	Survey	Observation	Document Review
Personal Background of Teachers						
1	Age			T		
2	Race/Ethnicity			T		
3	Gender			T		
4	Academic Ability			T		SAT/ACT
Professional Background of Teachers						
5	Education			T		
6	Nature, Extent of Work History			T		
7	Preparation to Teach			T		
8	Prior Classroom Experience			T		
9	Motivation to Teach			T		
10	Motivation to Select Route			T		
Content of Preparation Program						
11	Child Development	TC	AC	T		D
12	Classroom Management	TC	AC	T		D
13	Curriculum Content	TC	AC	T		D
14	Content-Specific Pedagogy	TC	AC	T		D
15	Diagnostics and Assessments	TC	AC	T		D
16	Instructional Logistics	TC	AC	T		D
17	Psychological and Moral Support	TC	AC	T		D
Support Activities for Teachers						
18	Courses	TC	AC, P/M/I	T		D
19	Mentoring	TC	AC, P/M/I	T		D
20	Observations	TC	AC, P/M/I	T		D
21	Personal Support	TC	AC, P/M/I	T		D
22	Other Induction Activities		AC, P/M/I	T		D
23	Other Professional Activities		AC, P/M/I	T		D
Classroom Practices						
24	Curriculum Coverage				T	
25	Pedagogical Practices		P/M/I	T	T	
26	Classroom Management		P/M/I	T	T	
Teacher Commitment						
27	Commitment to the profession			T		
28	Commitment to the school			T		
Social Context						
29	Community Expectations		P			
30	School Culture/Environment		P	T		CCD
31	Family Characteristics		P			
32	Student Characteristics					R
Student Behavior						
33	School Tardiness					R
34	School Attendance					R
35	Disciplinary Events					R
36	Mobility (school, district, beyond)					R
Student Learning						
37	Reading Achievement					ST
38	Math Achievement					ST
39	On-Time Promotion					R
40	Recommended Summer School					R

A. STUDENT TESTING

Student achievement in reading and math is a critical outcome of interest in the study. Our intent here is to measure students' math and reading achievement in a way that is both objective and consistent across the sample. Because student test scores will constitute the core outcome for teacher training impacts, it is critical that we are confident in their measurement and accuracy. Having trained MPR staff to administer the same test under the same testing conditions at approximately the same time of year to all students in the study sample will address these validity issues.

We plan to administer four subtests of the California Achievement Tests, 5th Edition (CAT/5), published by CTB Macmillan/McGraw-Hill. The four subtests are: Reading Comprehension, Vocabulary, Math Concepts and Applications, and Math Computation. Each of these subtests has 20 questions and the total test time is 66 minutes. We will administer the same test form in the fall and in the spring. We chose to use the CAT/5 because it is a relatively short test and because the test generates scores for students who answer only a subset of questions, thereby avoiding lost observations due to incomplete tests.

Prior to the test administration, we will need to secure parent/guardian permission for all sample members. We will distribute passive consent forms to all sample members at each school during the second week of classes; MPR staff will work with the schools to ensure that the forms are distributed. Schools will return to MPR via fax any form where the parents or guardians have indicated that their children cannot participate in the study. MPR staff will log the status of "no consent" into the data monitoring system. MPR staff will ensure that these students will not be tested. We expect less than 2 percent of the student sample will be excluded from the study because of non-consent.¹

The achievement tests will be administered in the fall approximately 4 to 5 weeks after the start of the school year, and in the spring approximately 19 to 20 weeks later. Prior to testing, MPR staff will arrange with each school for a convenient day and time to conduct the testing in each classroom. One week prior to the testing, MPR will reconfirm the testing schedule by sending a memo to each teacher. The memo will explain what the teacher can expect to do prior to our arrival as well as what we will want them to do during the testing period.

The MPR testing team will consist of three staff: 1) the Test Administrator will give all verbal instructions to the students while they are taking the test; 2) the Test Proctor will walk around the classroom to ensure that all students are answering the test on the correct spot on the test form and ensure students are not looking at other classmates' test materials to obtain answers; and 3) the Test Coordinator will ensure that all questions the principal and teacher may have are answered, and will help the Test Administrator and Proctor when needed. Before leaving the classroom, the MPR testing team will review all material to ensure students answered the questions.

¹ These estimates are based on our experience with the Teach For America evaluation.

If for some reason a student did not complete the test (such as became ill in the middle of the test) they will be rescheduled for a make-up test session, along with any absent students. MPR local field staff will contact the schools to arrange a day to come in and administer the test to these students. We also expect that up to five percent of the student sample who were tested in the fall will have transferred to another school within the same original district by the time we test in the spring. Arrangements will be made by MPR staff with the principals of these new schools to test these students. Overall we expect 98 percent of the research students to complete the test in the fall and 90 percent of the students to complete the test in the spring.²

Staff involved in test administration will participate in training approximately two weeks prior to fall testing. MPR staff will participate in training in person, while field staff will participate via telephone. Prior to training, field staff will be mailed a packet of training materials that will include an overview of the project and its purpose, all forms and surveys, procedures for each task, MPR policies, a schedule, and other documents. In the spring of the same school year, we will conduct a second training for any new staff who may be hired due to attrition.

During the course of the study, some sample members will transfer to schools within district, and others will relocate outside the school district. Students who leave the district will not be tested again. For those who remain within district, we will attempt to test them in their new school during the same time period as those in their original cohort. We will track student mobility through the use of a mid-year classroom roster check in each school. Schools will be asked to send us their current rosters, as of January, and we will crosscheck these against our study sample in each classroom. Follow-up phone calls with the appropriate school administrator will help us determine the location of those students no longer enrolled in the study class.

B. COLLECTION OF TEACHER TEST SCORES

Teachers with varying levels of academic ability may demonstrate various levels of teaching effectiveness, regardless of their particular route to certification. As such, it will be important to control for differences in academic ability. Each sampled teacher will be asked for permission to allow the College Board or ACT to release their SAT or ACT scores, to us. These test scores will provide a basic measure of verbal and math ability. We will ask teachers for this consent at the time of the fall student achievement test administration when MPR staff will be on site. At this time we will address any questions or concerns the teachers may have about the test-score requests. It will be made clear to teachers that if they do not want us to have access to their scores, they may deny such access.

² These estimates are based on our experience with the Teach For America evaluation.

C. CLASSROOM OBSERVATIONS

Measuring classroom practice will provide data on an important link between teacher preparation and student achievement. A key hypothesis of the study is that differences in teacher preparation will lead to differences in classroom practice that will ultimately affect student achievement. Conducting actual classroom observations of teachers in the study sample, rather than using self-reported data, will provide the most reliable source of information on a number of measures of classroom practice. The classroom observations will be conducted to gain first-hand knowledge of each study teacher's approach to instruction in terms of their curriculum coverage, pedagogical practices, and classroom management.

Our plan is to conduct four classroom observations for each teacher in the sample (both AC and TC teachers) during the 2004-2005 and 2005-2006 school years. Staff we hire and train would use a common tool to observe two reading units and two math units over the course of four days. The observers would observe all study classes within a district (anywhere from 10-18 classes). Each observation will last 50 minutes, and will be preceded by a 10-minute interview with the teacher about the objectives for the planned lesson.

We will use the Vermont Classroom Observation Tool (VCOT). This is a proprietary tool available only to individuals who receive training from the Vermont Institutes, which developed the instrument. The VCOT focuses on (1) planning and organization of a lesson; (2) implementation of a lesson; (3) content of a lesson; (4) and classroom culture in which the lesson is conducted. A series of items within each of these areas are then measured using a five-point rating scale.

Vermont Institutes provides an intensive training, which is required before the tool may be used by anyone. The training is based on videotapes of actual classrooms, uses small groups to practice using the tool, and includes time to calibrate scores.

MPR will supplement the VCOT training with our own process to ensure inter-rater reliability. Group leaders will accompany small groups of observers into schools to conduct pre-test classroom observations. All observers will score each protocol item independently. The group leader will facilitate a discussion of each item, spending time discussing items on which there is disagreement about the score. The group will come to a consensus score for each item, and the group leader will compute the percent agreement for each observer against the consensus score. To be certified to collect classroom observation data for the project, observers will be required to have rated items within one scale point of the consensus score on 80 percent of the items.

D. TEACHER SURVEY

The teacher survey is designed to measure many of the items included in the study's conceptual framework. Topics to be covered are the personal and professional background of each teacher, the content of their teacher preparation program, the support activities they have received since becoming a teacher of record, their classroom practices, their commitment to the school and the profession, and their perceptions of the school culture and environment. In some cases it is our only source of information on things such as teacher background characteristics,

and in other cases it provides a critical perspective on issues such as professional preparation that will complement perspectives on similar topics covered in the context studies.

We plan to administer in spring of each study year the teacher survey we developed (see Appendix A). Two weeks prior to the spring student achievement testing, we will mail a survey to each of the participating study teachers, along with a letter requesting the teacher to complete the survey prior to our arrival for spring testing. MPR staff will collect the survey on the day of the test. We expect that 75 percent of the teachers will complete the survey prior to MPR arrival. If the teacher has not completed the survey prior to our arrival, we will ask the teacher to complete the survey while MPR staff are administering the test to the students. We will also bring an extra copy of the survey for completion in the classroom, just in case the teacher left the survey at home.

If the teacher is absent the day of testing, MPR field staff will follow up with the school/teacher to obtain the completed survey. We expect to achieve a 95 percent response rate for this survey. We expect five to seven percent of the classroom teachers present in the fall will have been replaced with a new teacher because of promotion, reassignment, illness or resignation. We will attempt to obtain contact information on the current location of these sample teachers and send a teacher survey to them for completion. In the cover letter to the exiting teacher we will explain the importance of their participation in the study and how they can return the completed survey to MPR using an enclosed postage-paid envelope. We will follow up by telephone, and email whenever possible. We expect to achieve an 80 percent response rate for this effort.³

E. SCHOOL RECORDS

Collecting data from students' school records provides additional outcome measures to supplement the achievement test scores. As depicted in the conceptual model, we plan to also measure student performance by such items as school attendance and disciplinary actions. Schools will be asked to provide records that contain data on each student's demographic characteristics, school-related behaviors, and attendance and promotion.

We will request school records data for each student in the summers of 2005 and 2006. We will mail records collection packages to schools at the end of each academic year. Prior to mailing the forms, we will inform the schools in a letter about their imminent arrival. The letter will also provide a toll-free telephone number school staff can use to call MPR to ask questions. We expect to obtain 90 percent of the records requested for students who remain within the districts in which schools are located. To reduce burden on schools, local field staff will be trained and available to help collect school records if a school chooses this option. MPR recognizes some schools may prefer to grant access to records solely to their own staff.

³ These estimates are based on our experience with the Teach For America evaluation.

F. CONTEXT STUDY INTERVIEWS

A final component of the data collection plan is the context studies of the teacher preparation programs and the schools included in the study. The objective of these context studies is to provide descriptive and qualitative data on the programs and schools, as well as to build up data measures related to program content and methods and school environmental factors, which can then be used in the data analysis.

Program data will be collected primarily through semi-structured interviews of the directors of the teacher preparation programs. The protocols for these interviews are shown in Appendix B. Interviews with directors of all alternative certification program directors will be conducted in person, while interviews with the traditional program directors will be conducted either via telephone or in person. We expect that the in-person interviews will last approximately 60 minutes and will yield data on the context of the preparation program and supplemental support provided by the program. As reflected in the protocols in Appendix C, the interviews will cover five areas in an attempt to differentiate among programs, including curriculum content, math and reading pedagogy, classroom management, student teaching, and mentoring. The questions are designed so that most responses can be coded quantitatively, using dichotomous, continuous, or scale measures. These coded data can then be included in the impact analysis, which is described in the next chapter. The interviews will be supplemented by the collection of documents, such as course lists or syllabi that provided relevant information about the programs.

To collect contextual data from the schools, we will conduct semi-structured, in-person interviews with the school principals as well as teacher mentors, instruction supervisors, or other staff who are involved in providing support for new teachers. Again, we will also collect any relevant documents that provide contextual information on the schools and the support they provide to new teachers. The in-person interviews will occur as part of site visits to school and programs between January and March.

IV. ANALYTIC APPROACH

We will conduct two interrelated types of analyses to address the main impact-related research questions for the evaluation. First, we will compute impacts *within* each school (that is, conduct a series of “mini-experiments” in each school) by comparing the average outcomes of students taught by teachers who came through a particular alternative preparation model to those taught by traditionally trained teachers in the same schools and grades. Second, we will use the school-level impacts to compare the performance of teachers across the two alternative preparation models (programs with high and low course requirements). We will also examine whether impacts differ by teacher, school, and baseline student and family characteristics. Together, these analyses will provide policy-relevant information on the effects of different forms of teacher preparation on student outcomes (such as achievement and standardized test scores, attendance, promotion, suspensions, tardiness, and grades), and on teaching practices.

Next, we discuss these analyses in more detail. The section begins, however, with a discussion of contextual analyses that we will conduct to aid in the interpretation of the impact estimates. Following that discussion is a description of the impact analysis, methods for addressing non-response, and a discussion of attrition and crossovers.

A. CONTEXTUAL ANALYSES

The evaluation will begin with several contextual analyses that will lay the foundation for the impact analysis, and will be crucial for interpreting the impact results. These analyses include:

1. Assessing how well random assignment was implemented to examine the extent to which differences in outcomes between classrooms can be attributed to teachers.
2. Examining the baseline characteristics of children in the classrooms in the study to understand the student population under investigation
3. Examining the selectivity and curriculum requirements of the alternative and traditional certification programs included in the sample and the characteristics of teachers who attended different types of certification programs

1. Assessing the Integrity of the Random Assignment Process

The validity and interpretation of the impact estimates hinge on the integrity of the random assignment process and adherence to its procedures. We will conduct two analyses to gauge the success of the random assignment process.

First, we will examine the mobility of children in the sample into and out of treatment and control group classrooms using follow-up interview and school records data. Such movers complicate the analysis, because to preserve the integrity of the random assignment design,

children who relocate from treatment to control groups must be considered treatment group members in the analysis, and similarly, children who relocate in the reverse direction must be considered controls. As discussed later in this section, we will use statistical procedures to account for these crossovers.

Second, within each school, we will conduct statistical tests to gauge the similarity of the baseline characteristics of children in the treatment and control classrooms. This analysis will be conducted using school records data. We expect that the random assignment used to select the classrooms in the research sample will produce equivalent treatment and control groups.

2. Examining Sample Characteristics

We will conduct descriptive analyses of the characteristics of the sample to help us more fully understand the types of children in the research sample, including their backgrounds and risk factors. These results will help us interpret program impact estimates, and indicate which subgroups are large enough to analyze. These analyses will be conducted using school records data. In addition, we will use published data to compare the characteristics of students in our sample to national samples of elementary school students.

3. Examining the Characteristics of Certification Programs and Teachers

A major component of the evaluation will be context studies of 80 schools and the relevant alternative and traditional certification programs of teachers included in the study. These context studies will be based on site visits to the schools and programs, including interviews with principals and program administrators. The study team will also conduct telephone interviews with administrators of the teacher preparation programs from which the traditionally certified teachers in the study originated.

Data from these in-depth interviews, telephone interviews, and document reviews will be triangulated to produce a summary of information relating to the context of teachers certified through different routes of teacher preparation in each school sampled. A synthesis of these summaries will result in the development of cross-site comparisons that describe contextual similarities and differences for teachers certified through these different processes, as well as the nature and extent of their teacher preparation.

An important part of this analysis will be to examine the characteristics of treatment and control group teachers using data from the teacher surveys. This analysis will be crucial for interpreting the impact estimates, because it will help us disentangle program effects due to differences in the backgrounds of treatment and comparison group teachers from program effects due to differences in the types of teacher certification training they received.

B. IMPACT ANALYSES

Our impact analyses are designed to gauge how different aspects of teacher preparation relate to student outcomes and teacher practices. First, we will estimate impacts (that is, average

treatment and comparison group differences) *within* each school, to find the effect of the structural differences between traditional and alternative programs. Second, we will compare impacts from these 90 mini-experiments *across* schools to find the effect of differences in the content of alternative programs (comparing model B to model D). Next, we describe these analyses in more detail, starting with a description of student and teacher outcomes.

1. Student and Teacher Outcomes

The study will examine the effect of different models of teacher preparation on student learning and teacher practices. These outcomes will be measured using a combination of school records, MPR-administered standardized tests, a survey of teachers, and classroom observations. Table IV.1 summarizes the outcome measures and how they will be collected.

The outcome of primary interest is student learning, which may be influenced by such mediating outcomes as teachers' pedagogical practices, curriculum, and classroom management skills. Teachers who have completed their training prior to taking full responsibility for a classroom, and teachers from programs with a greater course requirement, may have better classroom management skills, may have a better command of the curriculum, and may have more effective teaching practices. All three of these factors could contribute to improved student learning.

The outcomes described above are measured using data from a variety of sources. Standardized tests provide a measure of student achievement, while school records provide additional measures such as suspensions and expulsions. The teacher survey is designed to elicit accurate responses from teachers regarding their pedagogical practices, curriculum content, classroom management skills, and commitment to their profession. We have included multiple measures of pedagogical practices and curriculum content to capture important subtleties in these concepts. We will also explore using factor analysis to construct summary measures of these outcomes. Classroom observations will provide an additional perspective on teacher practices that can be used to balance the subjective views of teachers themselves.

2. The Effect of Program Structure: Estimating Impacts from the Mini-Experiments

Random assignment of students will be performed before the beginning of the school year. Thus, unbiased estimates of the impacts of being placed in a classroom taught by a teacher who chose either a type B or D alternative route program (relative to a teacher from the traditional route program) can be computed as the differences in the average outcomes of students in the treatment and comparison group classrooms. This approach yields unbiased estimates of the "intention-to-treat" impacts, because the random assignment design ensures that the primary difference between students in the treatment and comparison group classrooms at the point of random assignment to their teacher. Note, however, that this approach does not disentangle the characteristics of teachers who choose particular certification routes from the teacher training provided in each route, nor are the estimates necessarily representative of the universe of Model B and D programs.

TABLE IV.1

OUTCOME MEASURES FOR THE TEACHER PREP EVALUATION,
BY DOMAIN AND TYPE OF RESPONDENT

Construct	Domain			
	School Records	MPR-Administered Tests	Teacher Survey	Classroom Observation
Student Performance and Classroom Environment				
Student Learning				
Reading Achievement Test Scores		X		
Math Achievement Test Scores		X		
On-Time Promotion	X			
Recommended Attendance at Summer School	X			
Student Behavior				
School Attendance Rates	X			
Disciplinary Events				
Number of days suspended	X			
Number of suspensions	X			
Ever expelled	X			
Teacher Classroom Management				
Classroom Culture ^a				
Quality of the learning environment				X
Level of student engagement				X
Positive working relationships				X
Sensitivity to diversity				X
The Frequency with Which the Following Has Occurred:				
Student tardiness			X	
Student absenteeism			X	
Physical conflict among students			X	
Verbal conflict among students			X	
Verbal abuse of teacher(s)			X	
General misbehavior			X	
Times per Week a Child Is Sent Out of Classroom for Misbehaving			X	
Time Spent Each Day on the Following Tasks:				
Academic instruction			X	
Managing classroom behavior			X	
Managing classroom tasks			X	

TABLE IV.1 (continued)

Construct	Domain			
	School Records	MPR-Administered Tests	Teacher Survey	Classroom Observation
Teacher Practices and Future Plans				
How Many Nights per Week Students Are Given Homework			X	
Average Time Students Expected to Spend on Homework Each Night			X	
Time Spent on Reading/Language Arts Instruction and Homework				
Hours per Week of English/Language Arts Instruction			X	
Students Are Broken Into Reading Groups by Ability			X	
Time Spent in Instructional Modes—Reading/Language Arts:				
Teacher-Directed Whole Class Activities			X	
Teacher-Directed Small Group Activities			X	
Students Working Independently in Small Groups			X	
Students working individually on class assignments			X	
Student-selected individual activities			X	
Time Spent on Mathematics Instruction and Homework				
Hours per Week of Mathematics Instruction			X	
Students Are Broken Into Math Groups by Ability			X	
Time Spent in Instructional Modes—Mathematics:				
Teacher-Directed Whole Class Activities			X	
Teacher-Directed Small Group Activities			X	
Students Working Independently in Small Groups			X	
Students Working Individually on Class Assignments			X	
Student-Selected Individual Activities			X	
Instructional Philosophies^b				
Practices Phonics (Reading/Language Arts)			X	
Practices Whole Language (Reading/Language Arts)			X	
Practices Basic Skills (Mathematics)			X	
Practices Application (Mathematics)			X	

TABLE IV.1 (continued)

Construct	Domain			
	School Records	MPR-Administered Tests	Teacher Survey	Classroom Observation
Qualitative Assessment Of Teacher Performance^a				
Ability of Teacher to Plan/Organize a Lesson				X
Ability of Teacher to Implement Lesson				X
Quality of the Lesson's Content				X
Commitment To Teaching				
Years Teacher Plans to Remain in Teaching			X	
Future Career Plans			X	

^aThese composite measures will be based on classroom observations using the Vermont Classroom Observation Tool.

^bInstructional philosophies will be measured using composites based on teacher responses to statements regarding their approach to teaching language arts and math.

Although we will compute these simple differences-in-means impact estimates, we will focus on regression-adjusted estimates. Regression procedures will be used to improve the precision of the estimates and to adjust for residual differences in the observable characteristics of treatment and control group members, due to small sample sizes, random sampling, and interview non-response. We will estimate variants of the following regression model:

$$(1) \quad Y = \sum_j \beta_j (SG_j * T) + X\gamma + Y_0\delta + e$$

where

$Y =$ Student outcome at a specific follow-up time point, such as standardized test scores

$SG =$ Indicator variable equal to 1 if the student is in school-grade combination j , and 0 otherwise.

$T =$ Treatment indicator equal to 1 if the student is assigned to the treatment classroom (teachers from the selected alternative preparation model), and 0 if the student is assigned to the control group (teachers from a traditional preparation program)

$X =$ Student and family demographic characteristics pertaining to the period prior to random assignment, such as child's gender, race/ethnicity, and family income

$Y_0 =$ Baseline measures of the outcome measures, such as student test scores

$B_j, \gamma, \delta =$ coefficients to be estimated

$e =$ random (and mean zero) error component

In words, equation (1) says that any given child outcome at a point in time is determined by the child's baseline level of development, his or her family background, the intervention (in this case, the opportunity to be taught by a teacher from an alternative preparation program), and a set of other factors that are not related to his or her intervention assignment status. In this formulation, the estimate of β_j represents the regression-adjusted impact estimate for school-grade combination j . Impact estimates across all schools and grades will be obtained by taking the average of the regression-adjusted impacts in each school-grade (that is, the β_j s).¹ The associated t-tests will be used to test the statistical significance of the impact estimates, where the standard errors will reflect design effects due to the clustering of students within classrooms and schools.

¹ If the number of classrooms in each school varies substantially, then this technique will be modified to reflect that difference.

The explanatory variables included in the regression models will be obtained from the baseline tests conducted in the fall of each year, school records collected in the spring, and interviews with school and teacher preparation program officials. We expect that the explanatory variables will substantially increase the precision of the impact estimates, because some (in particular, the baseline test scores) are likely to be highly correlated with the outcomes measured at followup. The statistical methods used to estimate the regression models will depend on the nature of the outcome measure. For example, we will use ordinary least squares methods for continuous outcome measures (such as test scores), and logit maximum likelihood methods for binary ones (such as grade promotion).

Findings from the regression adjusted impact analysis will be presented in easy-to-read tables. Table IV.2 is a sample of the table shells that will be used to present impact findings. The table shows regression adjusted means for the treatment and control groups, the difference between the two, and the p-value corresponding to the statistical test of the hypothesis that the two means are equal.

TABLE IV.2
IMPACTS OF TEACHER CERTIFICATION ROUTE ON STUDENT OUTCOMES

Outcome	Treatment Group	Control Group	Estimated Impact	Effect Size	p-value ^a
Reading Achievement					
Math Achievement					
On-Time Promotion					
Recommended Attendance in Summer School					
Sample Size					

Source: School Records, MPR-administered standardized tests.

Note: The treatment group consists of children taught by a teacher certified through a model B or D program (see Table II.1). The control group consists of children taught by a teacher certified through a traditional program in which teachers enter the classroom only after completing all training.

^aThe p-value is the smallest level of significance at which the null hypothesis that the impact equals zero can be rejected. If the p-value is less than .01, an impact is significant at the 1 percent level; if the p-value is less than .05, the impact is significant at the 5 percent level, and so on.

**Significantly different from zero at the .05 level, two-tailed test.

***Significantly different from zero at the .01 level, two-tailed test.

Finally, we will use methods very similar to those described above to examine the extent to which the teaching practices of teachers from different preparation routes differ. For these models, the dependent variables will be the specific teacher practices, defined using data from the teacher surveys and classroom observations. We will use both binary dependent variables that correspond to specific survey or classroom observation items as well as composite variables that we will construct based on multiple survey or observation items. Confirmatory factor analysis will be used to verify that the composite measures are appropriately constructed. Thus, the models will contain one observation per teacher, rather than one per student.

3. The Relationship Between Program Content and Key Outcomes: Comparing Mini-Experiments Across Schools

This non-experimental analysis will use regression adjustment to examine the relationship between the content of different teacher preparation programs and key outcomes. Specifically, this analysis will address the following research questions: (1) Are relative program impacts correlated with the coursework requirements of alternative teacher certification programs? (2) Are impacts correlated with key teacher characteristics and practices? (3) Are impacts correlated with students' baseline characteristics? This analysis will also help us to disentangle the effects of specific aspects of certification programs from teacher characteristics.

To address these questions, we will conduct analyses that attempt to explain the variation in the 90 impact estimates from the mini-experiments as a function of key program features, teacher characteristics, and student characteristics. These analyses will rely on regression adjustment and will be non-experimental in nature.

Assessing Variation in Impacts for Subgroups Defined by Key Program Features and Teacher Characteristics. Impact results for the programs and teachers with different characteristics can provide important information on how to improve or expand teacher preparation programs. By disentangling the effects of teacher characteristics from program characteristics, the findings can help policymakers assess the types of teachers who become successful and which program characteristics are associated with successful outcomes. Specifically, by comparing the impacts for teachers from Model B programs to the impacts from Model D, we can infer the relationship between coursework requirements and student outcomes. By focusing on the impacts for teachers from Model D programs (relative to TC teachers), we can infer the relationship between the timing of course taking (either before or after certification) and student outcomes. It is important to note, however, that any correlation between impacts and program, teacher, or student characteristics is not necessarily causal. That is, the variation in impacts may be due to unobserved program, student, or teacher characteristics that happen to be correlated with the factors we do observe.

Data used to define these subgroups will be obtained from the context studies (in-depth interviews during site visits, telephone interviews with program administrators, and document reviews), as well as the teacher surveys. We expect the program subgroups to include measures of the intensity and nature of the required coursework and the overall quality and cost of the

program. The teacher subgroups will be defined by the characteristics of the AC teacher² in each match and are likely to include teachers' test scores, teaching experience, and employment history. The final set of subgroups will be made in consultation with IES. The benefits of examining each of these subgroups are:

Coursework. Analyzing subgroups of teachers defined by the coursework requirements of their certification program can inform the ongoing development of certification programs, by investigating whether there is a link between course requirements and student outcomes.

Program Quality/Cost. A consistently applied definition of program quality, combined with a measure of the cost associated with higher quality, could help policymakers understand the trade-off between the benefits to students and the costs of a higher quality program. The definition of "quality" will be developed in consultation with IES.

Teacher Test Scores. There may be important interactions between teacher preparation routes and teachers' own academic abilities. If the impacts of AC programs vary by teachers' academic ability, then programs might reconsider their entrance requirements.

Teaching Experience. We can create subgroups based on two types of teaching experience. First, we can define subgroups based on experiences where a teacher did not have primary responsibility for a classroom, such as student teaching or short term substitute teaching. Second, we can define subgroups based on experience as the person with primary responsibility for a classroom. Both analyses can help policy-makers understand the tradeoffs between teaching experience and other factors, such as coursework. However, both analyses are also subject to selection bias, since those who have greater experience may be systematically different in unobserved ways from those who do not.

Employment History. AC teachers who have spent several years working in another occupation may differ from those with less work experience. For example, they might benefit from a greater overall level of maturity and professionalism. There are two implications of a differential effect of AC programs by employment history. First, employment history could be a factor to consider when admitting applicants to an AC program. Second, if we find that employment history is related to student outcomes, then we will need to take care to disentangle the effects of employment history from the effect of the AC program itself. As with teaching experience, estimates of the effect of employment history are also subject to selection bias, since those who choose to work in other occupations for an extended period of time could be inherently different from those who enter the teaching profession at a younger age.

To start our analysis, we will estimate these subgroup relationships one at a time. We will group programs and teachers with a particular feature and estimate relationships separately for each group. For example, to estimate the impacts for programs with minimal course

² Using descriptive analyses, we will look for differences in the characteristics of the TC teachers between subgroups defined by AC teacher characteristics. If differences in TC teachers' characteristics are systematically related to differences in AC teachers' characteristics, we will attempt to regression adjust for the TC teachers' characteristics.

requirements, we will estimate the impacts in those schools with treatment group teachers who were certified in programs with minimal course requirements. Similarly, to estimate the relationships between teacher preparation and outcomes for teachers that have two years of teaching experience, we will compare the outcomes of treatment and control group teachers with two years of teaching experience. We will estimate these relationships using the regression model in equation (1) and conduct statistical tests to gauge whether the relationships differ across levels of a subgroup (for example, across programs with intensive and minimal course requirements, or across teachers with different experience and age profiles).

These relationships may be difficult to interpret if there is a high degree of correlation across key program features and teacher characteristics. For example, teachers with greater work experience may be concentrated in programs with a specific program model, making it difficult to disentangle the effects of each feature. Thus, we also will estimate hierarchical linear models (HLM) to simultaneously estimate the parameters associated with key program and teacher characteristics. These models will isolate the relationships between the outcomes and a particular program or teacher characteristic, holding constant the influence of other observable factors. These models cannot control for unobserved factors, however

The HLM models will be estimated by regressing the impact estimates from each school (that is, the β 's in equation (1)), on the program and teacher measures (denoted by Z) as follows:

$$(2) \hat{\beta} = \alpha + Z\gamma + u,$$

where α and γ are parameters to be estimated and u is a mean zero term. The results from these models can be used to disentangle particular program or teacher features from others. Clearly, however, equation (2) can be estimated only if there is variation across the Z variables (that is, if the Z variables are not collinear). Thus, an important part of our initial analysis will be to conduct a detailed descriptive analysis to examine the correlation among potential Z variables and include only those variables that can yield meaningful results.

We will also use an alternative, but complementary analytic approach to isolate the relationships between the outcomes and particular program features by estimating equation (1) for the full sample where the X variables include not only student characteristics but also measures of *teacher* characteristics. This approach will adjust for observable differences in the baseline characteristics of teachers who chose alternative certification routes, and hence, will attempt to isolate the effectiveness of programs' training curricula on student outcomes.

Findings from these subgroup analyses will be presented in easily interpretable tables. Table IV.3 is a sample of the table shells that will be used to present subgroup findings. The first two columns show the estimated impacts for the subgroups of students who are taught by teachers from programs with substantial and minimum course requirements. The third column shows the difference in those impacts, which can be interpreted as reflecting the relationship between program course requirements and student outcomes.

TABLE IV.3

IMPACTS ON STUDENT ACADEMIC OUTCOMES OF TEACHER TRAINING WITH
MINIMAL AND SUBSTANTIAL COURSE REQUIREMENTS

Outcome	Estimated Impact			Effect Size
	Substantial Coursework	Minimal Coursework	Difference in Impacts	
Reading Achievement				
Math Achievement				
On-Time Promotion				
Recommended Attendance in Summer School				
Sample Size				

Source: School Records, MPR-administered standardized tests.

Note: For each estimated impact, the treatment group consists of children taught by a teacher certified through a model B or D program (see Table II.1). The control group consists of children taught by a teacher certified through a traditional program in which teachers enter the classroom only after completing all training.

**Significantly different from zero at the .05 level, two-tailed test.

***Significantly different from zero at the .01 level, two-tailed test.

Assessing Variation in Impacts for Subgroups Defined by Student Characteristics. The relative effects of teacher preparation programs may vary across students with different characteristics because of the diversity in educational needs across students and the extent of teacher training required to effectively address these diverse needs. For example, it is possible that teachers from a given program may be less successful than teachers from a different program in promoting student achievement for students with low ability or for students in particular grades. Thus, understanding differences in program effects across student subgroups can help us determine what types of program models work best in different settings or for different types of teacher candidates.

We will use the fall test scores and school records data to define the student subgroups. We expect that the subgroups will include grade, race and ethnicity, gender, and fall test scores, although the final list of subgroups will be selected in consultation with IES. We will assess how the estimated impacts vary across student subgroups using procedures similar to those described above for the program- and teacher-related subgroups. Specifically, we will estimate equation (1) to compute regression-adjusted impacts for students in a particular subgroup. For example, we will estimate impacts for male students by comparing the mean outcomes of male students taught by treatment and control group teachers. In addition, we will include student subgroup indicator variables in the HLM models, to help disentangle the relationships between the outcomes and student, program, and teacher characteristics.

4. Accounting for Interview Non-response

We expect high response rates to the interviews and assessments, because we expect that most children and teachers in the research samples will remain in the schools for the full year, and because we will track down and test any students who leave their schools during the year, as long as they remain in the same school district. Nonetheless, it will be important to test and correct for potential interview non-response bias.

We will examine the extent of non-response bias by comparing the baseline characteristics of respondents and non-respondents using school records and baseline test score data. We will also compare the characteristics of respondents in the treatment and comparison groups. We will conduct statistical tests (t-tests and chi-squared tests) to gauge whether the differences in characteristics are statistically significant.

We will account for potential non-response bias in several ways. First, as discussed, we will use regression models to adjust for differences in the observable baseline characteristics of respondents in the treatment and comparison groups. Second, we will construct non-response weights that weight respondents according to their similarity to non-respondents. The more similar a respondent is to non-respondents, the more heavily he/she will be weighted in our analyses.

These weights will be constructed using baseline characteristics to predict response at followup. Specifically, we will run a logistic regression of follow-up response status on baseline variables. Using the parameter estimates from this regression, we will calculate the predicted probability of responding at followup for every member of the baseline sample. The inverse of these predicted probabilities will be the non-response weights. Thus, this propensity scoring procedure will yield large weights for those respondents with characteristics that are associated with low response rates. Similarly, the procedure will yield small weights for those respondents with characteristics that are associated with high response rates. A different non-response weight will be calculated for each follow-up instrument. That is, missing follow-up grades will be modeled separately from missing test scores.

Finally, we will explore the sensitivity of our impact estimates to non-response by calculating impacts with and without the non-response weights.

5. Accounting for Sample Attrition and Crossovers

Our research design assumes that random assignment will be implemented with reasonably high fidelity to the intervention design, with most treatment group children remaining with the assigned treatment teacher and most control group children remaining with the control teacher. While impacts are straightforward to estimate under these assumptions, there are two sorting mechanisms that may confound the results. First, some students may fail to participate for the entire year in their assigned class; that is, of the students who are randomly assigned and were enrolled in the class at the time of the baseline test, some may leave the school at mid-year. The inclusion of these leavers in the analysis could lead to diluted impact estimates. The other sorting mechanism is that some students who are assigned to a treatment teacher may “cross

over” into a class with a control teacher, or vice versa. To preserve the integrity of the random assignment design, these crossovers will retain their original research status in the analysis.

We will employ various statistical procedures to account for leavers and crossovers in the analysis, and compare the robustness of findings using these various approaches. First, we will estimate impacts using the full sample. This approach will yield uncontaminated impact estimates if, as expected, there are only a small number of leavers and crossovers in our sample. A second approach is to estimate impacts while excluding the leavers and crossovers in both the treatment and the comparison groups. This approach, however, will produce unbiased estimates only if the (observable) characteristics of the leavers and crossovers in the two research groups are similar (which will occur if mobility decisions are not influenced by differences in the quality of the treatment and comparison group teachers). Thus, we will compare the characteristics of leavers and crossovers (and stayers) in the two research groups to assess the appropriateness of this approach.³

Third, if attrition is large and appears to differ by research status, we will use propensity scoring methods to generate impact estimates that control for attrition. To implement these methods, we will estimate a logit model of whether a sample member is a stayer using baseline test score and school records data that will be available for both the movers and the stayers. The predicted probabilities (propensity scores) from these models will then be used to select members of the comparison group, with replacement, who are most similar to members of stayers in the treatment group. We will then estimate impacts by comparing the outcomes of treatment group stayers to those of their matched comparison group members.

³The estimates under this approach will be calculated using sample weights to account for differences in the characteristics of movers and stayers. The weights will be constructed using propensity scoring methods and will be constructed so that the weighted characteristics of the stayers in the treatment and comparison groups will be similar to the characteristics of the full population.

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APPENDIX A

SELF-ADMINISTERED TEACHER SURVEY

OMB No.: 1850-0794
Expiration Date: 07/31/07

BARCODE LABEL

STUDY OF TEACHER PREPARATION MODELS

The United States Department of Education wants to protect the privacy of individuals who participate in surveys. Your answers will be combined with other surveys, and no one will know how you answered the questions. This survey is authorized by law (20 U.S.C. 1221e.1). You may skip questions you do not want to answer. We hope, however, that you will answer as many as you can.

The questions on this form ask about your background, your current teaching experiences, and your plans for the future. For each item, please mark only one answer, unless instructions say to "CHECK ALL THAT APPLY." Thank you very much for helping us to learn more about teacher preparation.

CONFIDENTIALITY

We want you to know that:

- 1. We are asking you these questions in order to gather information about your preparation and experiences as a beginning teacher.**
- 2. You may skip any questions you do not wish to answer, however, we hope that you answer as many questions as you can.**
- 3. Your responses will be combined with those of other teachers, and the answers you give will never be identified as yours.**

**Mathematica Policy Research, Inc.
Princeton, NJ**

ajohnson@mathematica-mpr.com

www.mathematica-mpr.com

For questions, call 800-568-8535

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INSTRUCTIONS

Thank you for taking the time to complete this survey. Your responses are very important to us.

- When answering questions that require marking a box, please use an “X.”
- Follow all “GO TO” instructions *after* marking a box. If no such instruction is provided, you should continue to the next question.
- Either a pen or pencil may be used.

DEFINITIONS FOR THIS SURVEY

Teaching Certificate (*also called Teaching Credential or License*) – A document issued by a State Board of Education which permits the holder to be employed in the public school system as an educator. Teaching certificates may be obtained through either ***traditional*** or ***alternative*** education programs.

Traditional teacher certification program – An educational program in which a candidate completes the necessary initial study leading to an entry level teaching certificate prior to beginning employment as a teacher in a school. Higher education institutions deliver the training, as part of a bachelor’s or master’s degree program.

Alternative teacher certification program – A program designed for individuals who already have a post-secondary degree. Minimal to no education courses or training are required prior to beginning employment in a school. Candidates often take courses and receive training while teaching. Training is delivered by higher education institutions, state agencies, or local school districts. Full certification is received one to three years after beginning the first teaching job.

Student teaching (*also called practice teaching*) – A full day school-based experience for students enrolled in a post-secondary education institution that is supervised by both a certified experienced teacher and a university or college supervisor. It is a requirement of pre-service teachers who have completed the education coursework leading to a degree and are seeking certification or licensure to teach in a public school.

Professional development activities – Educational activities in which teachers participate to enhance their career growth. Such activities may be formal or informal experiences in the form of inservice workshops or continuing education courses. They are designed for teachers to develop their knowledge in a variety of areas, such as in-depth study of a content area, teaching strategies, education standards, student assessment, applications of technology to instruction, or classroom management.

A. PROFESSIONAL BACKGROUND CHARACTERISTICS

A1. Please describe your postsecondary education by completing the chart below.

Name of College or University	Year	Name of College or University	Major field of study	Minor field of study
a. Bachelor's degree				
1 <input type="checkbox"/> Yes →	_ _ _ _	_____	_____	_____
0 <input type="checkbox"/> No		_____	_____	_____
b. Master's degree				
1 <input type="checkbox"/> Yes →	_ _ _ _	_____	_____	_____
0 <input type="checkbox"/> No		_____	_____	_____
c. Other completed degree (Please Specify)				
_____ →	_ _ _ _	_____	_____	_____
		_____	_____	_____

A2. Are you currently working toward an advanced degree (for example, Master's or PhD) or additional credits?

- 1 Yes →
0 No

Degree: _____

NAME OF COLLEGE OR UNIVERSITY:

MAJOR FIELD OF STUDY:

A3. **Since graduating from college, have you held a paying job other than your current teaching job?**

- 1 Yes
- 0 No, this is my first job since college → GO TO A6

The next few questions are about jobs you've held since graduating from college.

A4. **Since graduating from college, please tell us about the most recent job you held PRIOR TO your current teaching position.**

DO NOT include a job that was an official part of your Teacher Preparation program (for instance, student teaching).

a. What was your job title?

b. What were your responsibilities? What did you do in this job? *(Please Be Specific)*

c. Did you work directly with children in this job?
1 Yes
0 No

d. Was this job in the public sector, the private sector, or the non-profit sector?

MARK (X) ONE ANSWER ONLY

- 1 Public
- 2 Private
- 3 Non-profit

e. How many years did you work in this job?
|_|_| NUMBER OF YEARS
(Enter "01" if worked less than one year)

A5. **Again since graduating from college, tell us about the job you held prior to your current teaching position that LASTED THE LONGEST.**

DO NOT include a job that was an official part of your Teacher Preparation program (for instance, student teaching).

0 **I ALREADY REPORTED MY LONGEST JOB SINCE COLLEGE IN THE QUESTION ABOVE → GO TO A6**

a. What was your job title?

b. What were your responsibilities? What did you do in this job? *(Please Be Specific)*

c. Did you work directly with children in this job?
1 Yes
0 No

d. Was this job in the public sector, the private sector, or the non-profit sector?

MARK (X) ONE ANSWER ONLY

- 1 Public
- 2 Private
- 3 Non-profit

e. How many years did you work in this job?
|_|_| NUMBER OF YEARS
(Enter "01" if worked less than one year)

A6. Which of the following statements most accurately describes the type of teaching certificate/license/ credential that you currently hold?

States vary in the types of certificates they issue. Please select from the list below the statement that BEST describes the certificate/license/ credential that you hold.

MARK (X) ONE ANSWER

1 A **regular** or **standard state certificate**

Year certified |__|__|__|__|

2 A certificate that is issued to candidates after satisfying all requirements except the completion of a probationary teaching period

Year certified |__|__|__|__|

3 A certificate that is issued to candidates with the expectation that additional requirements be completed, such as passing a test or coursework

4 An **emergency certificate** or **waiver** that is issued for a specified time period to persons with insufficient teacher preparation

5 Other (*Please Describe*)

6 I am not certified

A7. From the list below, select the areas in which you are certified, or are pursuing certification.

MARK (X) ALL THAT APPLY

1 General elementary education

2 Bilingual education

3 A specific subject area or areas
(*Please Specify*)

4 Special education (*Please Specify*)

5 Other (*Please Specify*)

6 NOT CERTIFIED AND NOT PURSUING
CERTIFICATION → **GO TO A13**

A8. Which of the following statements best describes how you earned and/or are earning your teaching certificate?

**MARK (X) ONE ANSWER AND INDICATE
NAME OF PROGRAM/SCHOOL**

- 1 In a **traditional teacher certification program** (see below for definition) as part of a bachelor's degree → **GO TO A10**
- 2 In a **traditional teacher certification program** (see below for definition) as part of a "5th year" or master's degree
- 3 As part of an **alternative teacher certification program** (see below for definition).
- 4 Other (Please Specify)

Name of Program/School

Traditional teacher certification program – An educational program in which a candidate completes the necessary initial study leading to an entry level teaching certificate prior to beginning employment as a teacher in a school. Higher education institutions deliver the training, as part of a bachelor's or master's degree program.

Alternative teacher certification program – A program designed for individuals who already have a post-secondary degree. Minimal to no education courses or training are required prior to beginning employment in a school. Candidates often take courses and receive training while teaching. Training is delivered by higher education institutions, state agencies, or local school districts. Full certification is received one to three years after beginning the first teaching job.

A9. Why did you choose this particular route to becoming certified?

MARK (X) ALL THAT APPLY

- 1 a. As an undergraduate, I planned to be a teacher and so took all necessary courses to become certified.
- 2 b. As an undergraduate, I planned to teach but did not want to take the necessary courses to become certified.
- 3 c. As an undergraduate, I didn't have plans to teach.
- 4 d. As an undergraduate, I was intent on pursuing a specific, non-teaching career.
- 5 e. I pursued teaching as part of my master's studies.
- 6 f. I chose a route to becoming a certified teacher that required coursework and training that fits my schedule.
- 7 g. I chose a route to becoming a certified teacher based on a program that was conveniently located.
- 8 h. I chose a route to becoming a certified teacher based on financial considerations.
- 9 i. I chose a route to becoming a certified teacher based on the requirements of the school, district, or state in which I wanted to teach.
- 10 j. I chose a route to becoming a certified teacher that would allow me to become certified while working full-time.
- 11 k. Other reason (*Please Specify*)

A10. Are you currently pursuing state certification OR additional advanced, professional certification?

- 1 Yes
- 0 No → GO TO A13

A11. Have you completed all of your coursework?

- 1 Yes → GO TO A13
- 0 No

A12. Please indicate when you began the program, how much of your coursework is completed, and when you expect to finish.

Date you began the program (Month/Year)	MARK (X) ONE ANSWER			Expected date of completion (Month/Year)
	Amount of Coursework Completed			
	Less than 1/4	1/4 to 3/4	More than 3/4	
_ _ / _ _ _ _ _ Month Year	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	_ _ / _ _ _ _ _ Month Year

A13. Indicate the number of years you've worked in schools, INCLUDING THIS SCHOOL YEAR, in any of the following positions (either part-time or full-time).

NUMBER OF YEARS WORKED (Enter "01" if worked less than one year) (Enter "00" if you have never worked in this capacity)	
INDICATE NUMBER OF YEARS IN EACH POSITION	
In this school	In a different school
_ _	_ _
_ _	_ _
_ _	_ _
_ _	_ _
_ _	_ _
_ _	_ _

- a. Certified teacher.....
 - b. Emergency certified teacher
 - c. Teacher aide.....
 - d. Long-term substitute teacher
 - e. Substitute teacher
 - f. Other (*Please Specify*).....
-

A14. Before beginning your first teaching position, did you complete any student/practice teaching (see *page i* for *definition*) that was part of your teacher preparation program?

- Yes
- No → GO TO B1

A15. How long did your practice teaching last?

MARK (X) ONE ANSWER

- 1 5 weeks or less
- 2 6-9 weeks
- 3 10 weeks or more

B. CONTENT OF YOUR TEACHER PREPARATION PROGRAM

B1. In the grid below, indicate how much emphasis each of the topics received in coursework taken in your teacher preparation program.

	How much emphasis did the program coursework place on each topic?				
	MARK (X) ONE FOR EACH				
	No emphasis	←—————→			Strong emphasis
a. Using computers in classroom instruction	0 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
b. Planning daily lessons	0 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
c. Planning extended blocks of instruction.....	0 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
d. Assessing students formally (through tests, etc.)	0 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
e. Assessing students informally, through daily monitoring	0 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
f. Interacting with parents.....	0 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
g. Understanding child development.....	0 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
h. Teaching reading/language arts	0 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
i. Teaching math	0 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
j. Classroom management.....	0 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
k. Locating resources; setting up classrooms.....	0 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
l. Working with children with special needs	0 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
m. Instructional strategies.....	0 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
n. Providing you with moral/psychological support	0 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>

B2. Overall, how well did your teacher preparation program prepare you to begin your first year of teaching?

- 0 It did not prepare me well at all
- 1 It provided me with some preparation, but not in all areas or to the extent needed
- 2 It provided me with most of the preparation I needed for teaching
- 3 It provided me with all the preparation I needed for teaching

C. SUPPORT ACTIVITIES FOR TEACHERS

C1. Since becoming a full-time teacher, how many days, if any, have you spent in school- or district-supported professional development activities (see page i for definition)?

NOTE: DO NOT INCLUDE pre-teaching experiences or training as part of your teacher preparation program or coursework.

a. Number of days spent in first year of teaching

- 0 0
- 1 1-5
- 2 6-10
- 3 11 or more

b. Number of days spent in second year of teaching

- 0 0
- 1 1-5
- 2 6-10
- 3 11 or more
- 4 I've only taught for one year

c. Number of days spent in third year of teaching

- 0 0
- 1 1-5
- 2 6-10
- 3 11 or more
- 4 I've only taught for two years

C2. Which of the following content areas were covered in the professional development activities you reported in question C1?

MARK (X) ALL THAT APPLY

- 1 Standards (content and performance) in an area that you teach
- 2 Methods of teaching/pedagogy
- 3 Selecting exemplary instructional materials
- 4 Applications of technology to instruction
- 5 Student assessment, such as methods of testing, evaluation, performance assessment, etc.
- 6 Student discipline and classroom management
- 7 Study of a content area you teach: READING/ LANGUAGE ARTS
- 8 Study of a content area you teach: MATH
- 9 Other area #1 (Please Specify)

- 10 Other area #2 (Please Specify)

- 11 Other area #3 (Please Specify)

C3. In your first year of teaching, did you work with a master or mentor teacher (or field supervisor)?

- 1 Yes
- 0 No → GO TO C10

C4. Using the chart below, describe your interactions with the master or mentor teacher (or field supervisor) in your first year of teaching.

	How often did each of the following occur . . .				How helpful was it . . .				
	MARK (X) ONE FOR EACH ITEM				MARK (X) ONE TO INDICATE HELPFULNESS				
	Never	One time only	2-3 times a term	At least once a month	At least once a week	Not at all	Slightly	Somewhat	Very
a. The mentor observed your classroom teaching?.....	0 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	0 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>
b. You observed the mentor's classroom teaching?.....	0 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	0 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>
c. You met formally with the mentor?.....	0 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	0 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>
d. You received written feedback from the mentor?.....	0 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	0 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>
e. You met informally with the mentor?.....	0 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	0 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>
f. You engaged in some other activity with a master/mentor? <i>(Please Specify)</i> _____ _____	0 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	0 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>

C5. If you met formally with the mentor, what was the average length of your meetings?

- 15 minutes or less
- 15 to 30 minutes
- 30 to 60 minutes
- More than 60 minutes

C6. The master or mentor teacher (or field supervisor) described in C4 above was:

MARK (X) ONE ANSWER ONLY

- 1 A requirement of your teacher preparation program
- 2 Something your school/principal provided, but NOT related to your teacher preparation program
- 3 Both
- 4 I'm not sure if having the mentor was a program requirement or just provided by the school

C7. Did you have a second master or mentor teacher (or field supervisor) when you were a first year teacher?

- 1 Yes
- 0 No → **GO TO C10**

C8. Using the chart below, describe your interactions with this second master or mentor teacher (or field supervisor) in your first year of teaching.

	How often did each of the following occur . . .				How helpful was it . . .				
	MARK (X) ONE FOR EACH ITEM				MARK (X) ONE TO INDICATE HELPFULNESS				
	Never	One time only	2-3 times a term	At least once a month	At least once a week	Not at all	Slightly	Somewhat	Very
a. The mentor observed your classroom teaching?	0 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	0 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>
b. You observed the mentor's classroom teaching?	0 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	0 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>
c. You met formally with the mentor?	0 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	0 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>
d. You received written feedback from the mentor?	0 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	0 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>
e. You met informally with the mentor?	0 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	0 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>
f. You engaged in some other activity with a master/mentor? (<i>Please Specify</i>)	0 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	0 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>

C9. The master or mentor teacher (or field supervisor) described in C8 above was:

MARK (X) ONE ANSWER ONLY

- 1 A requirement of your teacher preparation program
- 2 Something your school/principal provided, but NOT related to your teacher preparation program
- 3 Both
- 4 I'm not sure if having the mentor was a program requirement or just provided by the school

C10. Using the chart below, please indicate whether you received the following kinds of support WHEN YOU WERE A FIRST YEAR TEACHER.

	MARK (X) ONE IN EACH ROW	
	1 <input type="checkbox"/> Yes	0 <input type="checkbox"/> No
a. Reduced teaching schedule.....	1 <input type="checkbox"/> Yes	0 <input type="checkbox"/> No
b. Seminars or classes for beginning teachers	1 <input type="checkbox"/> Yes	0 <input type="checkbox"/> No
c. Extra classroom assistance (e.g., teacher aide, team teaching).....	1 <input type="checkbox"/> Yes	0 <input type="checkbox"/> No
d. Regular supportive communication with your principal, other administrators, or department chair	1 <input type="checkbox"/> Yes	0 <input type="checkbox"/> No
e. Opportunities to observe other teachers.....	1 <input type="checkbox"/> Yes	0 <input type="checkbox"/> No

Now we'd like to ask some questions about this school year.

C11. DURING THIS SCHOOL YEAR, have you had an assistant teacher, teacher's aide, or tutor who assists you in providing academic instruction to students in your class during the regular school day?

Do not include student teachers, or Special Education or Resource Room teachers who provide remedial instruction to students.

- 1 Yes
- 0 No → GO TO C13

C12. For each subject listed below, please indicate whether the assistant teacher, teacher's aide, or tutor provides or provided instruction to students. If yes, approximately how many hours per week did this assistant typically work with students on that subject? Also, what percentage of the students receive instruction from this assistant?

Subject	Taught?		Number of hours per week	MARK (X) ONE IN EACH ROW			
	No	Yes		Percent of students taught			
				Less than 1/4	1/4 to 1/2	1/2 to 3/4	More than 3/4
a. Mathematics	0 <input type="checkbox"/>	1 <input type="checkbox"/> →	_ _	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
b. Reading/language arts	0 <input type="checkbox"/>	1 <input type="checkbox"/> →	_ _	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
c. Science	0 <input type="checkbox"/>	1 <input type="checkbox"/> →	_ _	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
d. Social studies	0 <input type="checkbox"/>	1 <input type="checkbox"/> →	_ _	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>

C13. DURING THIS SCHOOL YEAR, has another teacher at your school (not an assistant or aide or special education teacher) provided instruction in mathematics, reading/language arts, science, or social studies to some or all of the students in your class?

- 1 Yes
- 0 No → GO TO C15

C14. For each subject listed below, please indicate whether another teacher provides or provided instruction to students in your class. If yes, approximately how many hours per week do students receive instruction from this other teacher? Also, what percentage of the students receives instruction from this teacher?

Subject	Taught?		Number of hours per week	MARK (X) ONE IN EACH ROW			
	No	Yes		Percent of students taught			
				Less than 1/4	1/4 to 1/2	1/2 to 3/4	More than 3/4
a. Mathematics	0 <input type="checkbox"/>	1 <input type="checkbox"/> →	_ _	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
b. Reading/language arts	0 <input type="checkbox"/>	1 <input type="checkbox"/> →	_ _	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
c. Science	0 <input type="checkbox"/>	1 <input type="checkbox"/> →	_ _	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
d. Social studies	0 <input type="checkbox"/>	1 <input type="checkbox"/> →	_ _	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>

C15. Did you have a student teacher assigned to you at any time during THIS SCHOOL YEAR?

- 1 Yes
- 0 No

D. CLASSROOM PRACTICES

D1. How many nights per week do students in your class typically have homework?

- 0 Zero nights per week → **GO TO D3**
- 1 One night per week
- 2 Two nights per week
- 3 Three nights per week
- 4 Four nights per week
- 5 Five nights per week

D2. Estimate the amount of time, in minutes, an average student in your class is expected to spend doing HOMEWORK on each weeknight it is assigned. Please report all assigned activities.

|_|_|_| MINUTES PER TYPICAL WEEKNIGHT HOMEWORK IS ASSIGNED

The next few questions ask about the instruction you provide in reading.

D3. During a typical WEEK, how many hours do you spend on READING/LANGUAGE ARTS instruction?

|_|_| HOURS PER WEEK

D4. In terms of your READING/LANGUAGE ARTS INSTRUCTION, do you use different groupings of students in your classroom to teach students who learn at different rates?

- 1 Yes
- 0 No

D5. How much time during a TYPICAL SCHOOL WEEK do students in your class spend in the following reading/language arts activities?

	MARK (X) ONE FOR EACH ITEM				
	No time	Less than 1 hour	1-2 hours	2-4 hours	Over 4 hours
a. Teacher-directed whole class activities	0 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
b. Teacher-directed small group activities	0 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
c. Students working independently in pairs/teams/small groups	0 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
d. Students working individually on class assignments.....	0 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
e. Student-selected individual activities	0 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>

D6. How often do students in this class do each of the following reading/language arts activities?

NOTE: Some of the activities may not be appropriate for the grade you teach. If that is the case, mark "0" for Never.

	MARK (X) ONE ANSWER FOR EACH ACTIVITY					
	Never	Once a month or less	2-3 times a month	Once/twice a week	Nearly every day	Daily
a. Work on learning the names of the letters	0 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
b. Listen to you read stories where they see the print (e.g., Big Books).....	0 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
c. Perform plays and skits.....	0 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
d. Read text with strong phonetic patterns.....	0 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
e. Retell stories	0 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
f. Do an activity or project related to a book or story.....	0 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
g. Read text with patterned or predictable text ..	0 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
h. Work in a reading workbook or on a worksheet	0 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
i. Compose or write stories or reports.....	0 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
j. Engage in peer tutoring.....	0 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
k. Read text with controlled vocabulary	0 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
l. Read thematic or literature-based text.....	0 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
m. Publish their own writing	0 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>

The next few items ask about the instruction you provide in math.

D7. During a typical WEEK, how many hours do you spend on MATH instruction?

____|____ HOURS PER WEEK

D8. In terms of your MATH INSTRUCTION, do you use different groupings of students in your classroom to teach students who learn at different rates?

- 1 Yes
- 0 No

D9. How much time during a TYPICAL SCHOOL WEEK do students in your class spend in the following number skills and mathematics activities?

MARK (X) ONE FOR EACH ITEM					
	No time	Less than 1 hour	1-2 hours	2-4 hours	Over 4 hours
a. Teacher-directed whole class activities	0 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
b. Teacher-directed small group activities	0 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
c. Students working independently in pairs/teams/small groups.....	0 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
d. Students working individually on class assignments.....	0 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
e. Student-selected individual activities	0 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>

D10. How often do students in this class do each of the following number skills and mathematics activities?

NOTE: Some of the activities may not be appropriate for the grade you teach. If that is the case, mark "0" for Never.

MARK (X) ONE ANSWER FOR EACH ACTIVITY						
	Never	Once a month or less	2-3 times a month	Once/twice a week	Nearly every day	Daily
a. Play math-related games.....	0 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
b. Do math problems from their textbook.....	0 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
c. Work in mixed-achievement groups on math activities.....	0 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
d. Explain how a math problem is solved.....	0 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
e. Complete math problems on the chalkboard .	0 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
f. Work on math problems that reflect real-life situations	0 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
g. Work on learning rules and steps to solve problems.....	0 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
h. Do worksheets or workbook pages emphasizing routine practice or drill.....	0 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
i. Solve math problems in small groups or with a partner	0 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
j. Work on problems for which there are several appropriate methods or solutions.....	0 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
k. Work on problems for which there is a single right answer.....	0 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
l. Work on memorizing math facts	0 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>

D11. To what extent, if any, has each of the following hindered student learning in your classroom since the start of the school year?

MARK (X) ONE ANSWER FOR EACH				
	Not at all	To a slight extent	To some extent	To a great extent
a. Student tardiness	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
b. Student absenteeism/class cutting	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
c. Physical conflicts among students	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
d. Verbal conflicts among students	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
e. Verbal abuse of teacher(s).....	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
f. General misbehavior (e.g., students talking in class, refusal to follow classroom rules).....	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>

D12. During a TYPICAL WEEK OF TEACHING, how many times do you have to send a child out of the classroom (i.e., to the principal's or guidance counselor's office) because of misbehavior or disruption?

____ TIMES

D13. During a TYPICAL SCHOOL DAY, what percentage of your classroom time do you spend in the following tasks?

NOTE: Total should equal 100 percent.

<u>Teacher Activity</u>	<u>Percent of Time</u>
a. Academic instruction	____ %
b. Managing classroom behavior	____ %
c. Managing classroom tasks (e.g., handing out papers, transitions between activities, etc.)	____ %

TOTAL = 100 PERCENT

E. TEACHING AS A CAREER

E1. Approximately how many years do you think you will remain in teaching?

I will probably teach for . . .

|__|__| more years

E2. Which of the following statements best describes your plans?

MARK (X) ONE ANSWER

- 1 I plan to teach at least until I am eligible for retirement
- 2 I will probably continue teaching unless something better comes along
- 3 I plan to leave teaching as soon as I can
- 4 I plan to pursue another education-related career at some point
- 5 I plan to pursue another career outside of the field of education at some point
- 6 I am undecided at this time
- 7 Other (*Please Specify*)

E3. How satisfied are you with EACH of the following aspects of the TEACHING PROFESSION?

	MARK (X) ONE FOR EACH ITEM			
	Very dissatisfied	Somewhat dissatisfied	Somewhat satisfied	Very satisfied
a. Opportunities for professional advancement	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
b. Salary and benefits	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
c. Professional prestige	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
d. Intellectual challenge	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>

E4. How satisfied are you with EACH of the following aspects of teaching at THIS SCHOOL?

	MARK (X) ONE FOR EACH ITEM			
	Very dissatisfied	Somewhat dissatisfied	Somewhat satisfied	Very satisfied
a. Recognition and support from administration	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
b. Availability of resources and materials/ equipment for your classroom.....	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
c. Your influence over school policies and practices	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
d. Autonomy or control over your own classroom.....	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
e. Student motivation to learn	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
f. Student discipline and behavior.....	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
g. Opportunities for professional development	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
h. The principal's leadership and vision.....	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
i. Procedures for performance evaluation.....	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
j. Professional caliber of colleagues	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
k. Parental involvement in the school.....	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>

E5. During the first semester of the current school year, approximately how many days of teaching did you miss for any reason?

|_|_|_| NUMBER OF DAYS MISSED IN FIRST SEMESTER (SEPTEMBER TO DECEMBER)

F. PERSONAL BACKGROUND CHARACTERISTICS

F1. In what year were you born?

____|____|____| YEAR

F2. What is your ethnic background?

- 1 Hispanic or Latino
 0 Not Hispanic or Latino

F3. Check the box or boxes that describes your race or ethnicity.

MARK (X) ONE OR MORE

- 1 White
 2 Black or African American
 3 Asian
 4 Native Hawaiian or Other Pacific Islander
 5 American Indian or Alaska Native

F4. Are you:

- 1 Male?
 2 Female?

F5. Do you have any children? Include birth, adopted, foster, or stepchildren.

- 1 Yes
 0 No → **GO TO F7**

F6. How many of your children are . . .


- a. under the age of 5?|____|
 b. between the ages of 5 and 11?|____|
 c. between the ages of 12 and 18?|____|
 d. over the age of 18?|____|

F7. How far in school did your parents go?

ANSWER FOR BOTH A AND B BELOW

	(MARK ONE)	(MARK ONE)
	A Father (or male guardian)	B Mother (or female guardian)
Did not finish high school	<input type="checkbox"/>	<input type="checkbox"/>
Graduated from high school or equivalent.....	<input type="checkbox"/>	<input type="checkbox"/>
After graduating from high school, attended a vocational school, a junior college, a community college, or another type of two-year school	<input type="checkbox"/>	<input type="checkbox"/>
After graduating from high school, went to college but did not complete a four-year degree	<input type="checkbox"/>	<input type="checkbox"/>
Graduated from college.....	<input type="checkbox"/>	<input type="checkbox"/>
Master's degree or equivalent.....	<input type="checkbox"/>	<input type="checkbox"/>
Ph.D., M.D., or other advanced professional degree	<input type="checkbox"/>	<input type="checkbox"/>
Don't know.....	<input type="checkbox"/>	<input type="checkbox"/>

F8. We may wish to contact you for further information that would be helpful to this study. Would you be willing to speak to a member of the research team over the telephone?

- 1 Yes
 - 0 No
- 

F9. Please provide us with contact information in the spaces below. This information will remain completely confidential.

HOME PHONE NUMBER

(|_|_|_|_|)-|_|_|_|_|-|_|_|_|_|_|_|_|_|_|
Area Code Number

WORK PHONE NUMBER

(|_|_|_|_|)-|_|_|_|_|-|_|_|_|_|_|_|_|_|_|
Area Code Number

EMAIL ADDRESS

SOCIAL SECURITY NUMBER

|_|_|_|_|-|_|_|_|_|-|_|_|_|_|_|_|_|_|_|

THANK YOU FOR COMPLETING THIS SURVEY.

APPENDIX B
CONTEXT STUDY PROTOCOLS

AC PROGRAM DIRECTOR INTERVIEW GUIDE

A. PROGRAM DESCRIPTION

1. What were the admission requirements and process for students who entered this program in 199_/200_? For example, GPA, recommendation letters, interviews, timing, experience, etc.?
2. Outline the elementary teacher training program for us as it existed for students who entered in 199_/200_. When did candidates enter? What were the required activities/courses before they become teacher of record? What about during first year of teaching? After first year of teaching? How long did program take to complete (e.g., years/months). [*If they refer to units or credit hours, get an understanding of that metric.*]
3. How many students were in this program, training to become basic elementary teachers (regular or bilingual), in the fall of 199_/200_? (*Be sure to count all cohorts enrolled at one time; when a given cohort was new, some students were probably still enrolled from previous cohort.*)

B. PROGRAM STAFF

During the academic year beginning in fall 199_/200_,

1. How many total instructors did your program have?
2. How many field supervisors and/or mentors were on the staff, if any? (*Overlap is okay—some class instructors may also serve as field supervisors/mentors—but probe to understand its extent.*)
3. What was the average class size (*number of students per course*)?
4. What proportion of staff (instructors, field supervisors, mentors) were certified or previously certified as teachers?

C. PROGRAM CONTENT

During the academic year beginning in fall 199_/200_,

1. Did the program suggest or recommend that teacher candidates use any specific strategy or approach in teaching reading? (E.g., phonics, whole language, etc.)
2. Did the program suggest or recommend that teacher candidates use any specific strategy or approach in teaching math? (E.g., drill and practice, real-life/applied?)

D. PROGRAM DURATION AND AMOUNT OF INSTRUCTION/TRAINING

For elementary teacher candidates who entered your program in 199_/200_ how many hours of instruction/training were required overall and how were those hours distributed over time? (Complete row 1). And how many total hours were provided in each of the areas listed below? (Complete column A; their best estimates are fine; rows 2-6 do not need to equal row 1.)	Number of hours provided...			
	(A) Total	(B) Before becoming teacher of record	(C) During first year of teaching	(D) After first year of teaching
1. Overall, to complete the program	____	____	____	____
2. Classroom management	____			
3. Reading/language arts-specific pedagogy	____			
4. Math-specific pedagogy	____			
5. Student assessment	____			
6. Child development	____			

- 7. How many hours, if any, were they required to spend in field work (e.g., doing observations)?
- 8. How many hours, if any, would they have spent in self-paced or self-directed instruction (e.g., computer modules, as opposed to classes with an instructor present)?

E. MENTORING AND OBSERVATIONS OF FIRST-YEAR TEACHERS

- 1. Did this program provide a mentor for...*teacher name*...during his/her first year of teaching? For future reference during this conversation, would you happen to know his/her name? _____ *If no mentor, skip to Section F.*
- 2. Can you briefly describe the support activities and services that the mentor from this program would have provided to...*teacher name*...during his/her first year as teacher of record, such as mentoring or being observed? (E.g., get specifics on number/length of observations, class meetings, solo meetings with mentor, etc.)

F. OTHER ACTIVITIES

- 1. For elementary teacher candidates who entered in 199_/200_, were there any other formal instructional or support activities that we have not already talked about? Please tell me about those. (Contact hours/courses/workshops, at what point in the training program, type of instructor, etc.?)

G. CLOSING (FINAL QUESTION ABOUT PROGRAM DURING TIME STUDY TEACHERS WERE IN IT)

1. Is there anything else I should know about the program requirements or how it operated?

H. QUESTIONS ON CURRENT PROGRAM COSTS

Substantive Questions

(If respondent does not know answers, get referral to someone who would be able to answer.)

For candidates who entered this AC program during the current academic year (2004-05), what would be the total cost for them to complete the program, including tuition, mandatory fees, books and supplies, and any other required expenses?

(Look for full “sticker price,” not out-of-pocket expected costs. If program takes more than one academic year to complete, make sure cost estimates cover full period.)

Considering grants or scholarships or other financial arrangements (*rebates? bonuses?*) **provided by this institution (not federal/state financial aid)**, how much of the full cost would typical participants really expect to pay?

Do you know what the “real cost” of the program is to train a teacher—factoring in any subsidies the institution receives? *(If not, OK!)*

TC PROGRAM DIRECTOR INTERVIEW GUIDE (Revised)

A. PROGRAM DESCRIPTION

1. What were the admission requirements and process for students who entered this program in 199_/200_? For example, GPA, recommendation letters, interviews, timing, experience, etc.?
2. Outline the elementary teacher training program for us as it existed for students who entered in 199_/200_. When did candidates enter? What were the required activities/courses before they become teacher of record? What about during first year of teaching? After first year of teaching? How long did program take to complete (e.g., years/months). [*If they refer to units or credit hours, get an understanding of that metric.*]
3. How many students were in this program, training to become basic elementary teachers (regular or bilingual), in the fall of 199_/200_? (*Be sure to count all cohorts enrolled at one time; when a given cohort was new, some students were probably still enrolled from previous cohort.*)

B. PROGRAM STAFF

During the academic year beginning in fall 199_/200_,

1. How many total instructors did your program have?
2. How many field supervisors and/or mentors were on the staff, if any? (*Overlap is okay—some class instructors may also serve as field supervisors/mentors—but probe to understand its extent.*)
3. What was the average class size (*number of students per course*)?
4. What proportion of staff (instructors, field supervisors, mentors) were certified or previously certified as teachers?

C. PROGRAM CONTENT

During the academic year beginning in fall 199_/200_,

1. Did the program suggest or recommend that teacher candidates use any specific strategy or approach in teaching reading? (E.g., phonics, whole language, etc.)
2. Did the program suggest or recommend that teacher candidates use any specific strategy or approach in teaching math? (E.g., drill and practice, real-life/applied?)

D. PROGRAM DURATION AND AMOUNT OF INSTRUCTION/TRAINING

<p>For elementary teacher candidates who entered your program in 199_/200_, how many hours of instruction/training were required overall and in each of the areas listed below? (Rows 2-6 do not need to equal row 1.)</p>	<p>Total number of hours provided...</p>
1. Overall, to complete the program	_ _ _
2. Classroom management	_ _ _
3. Reading/language arts-specific pedagogy	_ _ _
4. Math-specific pedagogy	_ _ _
5. Student assessment	_ _ _
6. Child development	_ _ _

7. How many hours, if any, were they required to spend in field work (e.g., doing observations) not including their student teaching assignment?

8. How many hours, if any, would they have spent in self-paced or self-directed instruction (e.g., computer modules, as opposed to classes with an instructor present)?

9. How many weeks long was student teaching?

10. How many hours per day were they at their assigned school for student teaching?

11. When student teaching, how many full-length school days were they expected to be solely in charge of their classrooms? (Typically they build up to this level of responsibility at the end.)

E. STUDENT TEACHING AND OBSERVATIONS OF CANDIDATES

Please provide the information requested in the following table.

During the time when ... <i>teacher name</i> ... was engaged in student teaching...	(a) Number of times	(b) Average length (in minutes)
1. How many times would he/she have been observed in action in his/her classroom by his/her field supervisor?	_ _	
2. How long would have been the average observation, including discussions immediately before or after?		_ _ _
3. How many times would... <i>teacher name</i> ...have attended a required class/seminar while student teaching?	_ _	
4. How long would have been the average class/seminar?		_ _ _
5. How many other times would he/she have met with his/her field supervisor besides those observations, and excluding any required classes/seminars for student teachers?	_ _	
6. How long would have been the average meeting?		_ _ _

F. OTHER ACTIVITIES

1. For elementary teacher candidates who entered in 199_/200_, were there any other formal instructional or support activities that we have not already talked about? Please tell me about those. (*Contact hours/courses/workshops, at what point in the training program, type of instructor, etc.?*)

G. CLOSING (FINAL QUESTION ABOUT PROGRAM DURING TIME STUDY TEACHERS WERE IN IT)

1. Is there anything else I should know about the teacher training program requirements or how it operated?

H. QUESTIONS ON CURRENT PROGRAM COSTS (*for teacher training program, not for all costs associated with getting bachelor's degree*)

Screening Questions:

Does this institution offer a 5th-year or master's program for people who already have a bachelor's degree in some subject other than education, but who want to become elementary teachers?

If yes, continue; If no, end now.

Is it a program in which candidates take all their coursework and earn certification before beginning a regular teaching assignment?

If yes, continue; If no, end now.

Substantive Questions

(If respondent does not know answers, get referral to someone who would be able to answer.)

For candidates who entered this 5th-year or master's program during the current academic year (2004-05), what would be the total cost for them to complete the program, including tuition, mandatory fees, books and supplies, and any other required expenses?

(Look for full "sticker price," not out-of-pocket expected costs. If program takes more than one academic year to complete, make sure cost estimates cover full period.)

Considering grants or scholarships or other financial arrangements (*rebates? bonuses?*) **provided by this institution** (*not federal/state financial aid*), how much of the full cost would typical participants really expect to pay?

Do you know what the "real cost" of the program is to train a teacher—factoring in any subsidies the institution receives? (*If not, OK!*)

PRINCIPAL INTERVIEW GUIDE (Revised)

A. SOURCES OF NEW TEACHERS

1. How many classroom teachers are on your staff?
2. How many classroom teachers are from alternative certification programs (were teaching while still receiving training, before full certification)?
3. What are your main sources of new teachers (e.g., which programs) and what is the recruitment and hiring process?
4. What are the key factors you like to consider in hiring new teachers? (*priority or importance?*)
5. Do you have preferences about the types of teacher programs you hire from? (*AC/TC, why?*)
6. Did you have a role in hiring any of the teachers in our study? Which one(s)? [*If none, skip to section C*]
7. Did any other factors, besides those we just discussed, come into play when the teacher(s) were hired here? (*Probe on number, type of candidates to choose from, and level of need for new teachers at the time these two were hired.*)

B. SUPPORT FOR NEW TEACHERS

Determine which study teachers, if any, principal knew/observed here during their first year of teaching; question is only relevant for them. (If none, skip to section D.)

1. Can you briefly describe the support activities and services that would have been provided to the study teacher(s) during their first year teaching here, such as mentoring or observations? (*Distinguish whether activities are part of requirements associated with certification program.*)

C. PEDAGOGICAL PRACTICES AND CLASSROOM MANAGEMENT THIS YEAR

Seek ratings from person with best knowledge of each teacher’s current performance; if not the principal, consider assistant principal, instructional supervisor, lead teacher, mentor, etc.

Compared with other teachers in the school, how well does— <i>teacher name</i> —do the following?	<i>Teacher name (AC)</i>					<i>Teacher name (TC)</i>				
	MARK (X) ONE FOR EACH ROW					MARK (X) ONE FOR EACH ROW				
	Substantially below average	Average			Substantially above average	Substantially below average	Average			Substantially above average
READING/LANGUAGE ARTS										
1. Accurately discern the specific learning needs of individual students in reading/language arts ?...	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
2. Use advance planning to meet student-learning needs in reading/language arts ?...	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
3. Lead instructional activities during reading/language arts ?...	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
4. Modify instruction during a reading/language arts lesson when necessary to meet individual needs?...	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
MATH										
5. Accurately discern the specific learning needs of individual students in math ?	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
6. Use advance planning to meet student-learning needs in math ?	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
7. Lead instructional activities during math ? ...	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
8. Modify instruction during a math lesson when necessary to meet individual needs?.....	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>

Compared with other teachers in the school, how well does— <i>teacher name</i> —do the following?	<i>Teacher name (AC)</i>					<i>Teacher name (TC)</i>				
	MARK (X) ONE FOR EACH ROW					MARK (X) ONE FOR EACH ROW				
	Substantially below average	Average			Substantially above average	Substantially below average	Average			Substantially above average
CLASSROOM MANAGEMENT										
9. Establish and enforce classroom rules and procedures?	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
10. Manage classroom time to keep students on-task?	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
11. Encourage desired student behavior through praise, support, etc.?	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
12. Engage students in learning?	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
GENERAL										
13. Utilize parents and school resources?	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>

C. PEDAGOGICAL PRACTICES AND CLASSROOM MANAGEMENT THIS YEAR
(Continued, if more than 2 study teachers at this school)

Seek ratings from person with best knowledge of each teacher’s current performance; if not the principal, consider assistant principal, instructional supervisor, lead teacher, mentor, etc.

Compared with other teachers in the school, how well does— <i>teacher name</i> —do the following?	Teacher name (AC)					Teacher name (TC)				
	MARK (X) ONE FOR EACH ROW					MARK (X) ONE FOR EACH ROW				
	Substantially below average	Average		Substantially above average		Substantially below average	Average		Substantially above average	
READING/LANGUAGE ARTS										
1. Accurately discern the specific learning needs of individual students in reading/language arts ?..	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
2. Use advance planning to meet student-learning needs in reading/language arts ?..	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
3. Lead instructional activities during reading/language arts ?..	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
4. Modify instruction during a reading/language arts lesson when necessary to meet individual needs?....	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
MATH										
5. Accurately discern the specific learning needs of individual students in math ?	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
6. Use advance planning to meet student-learning needs in math ?	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
7. Lead instructional activities during math ? ...	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
8. Modify instruction during a math lesson when necessary to meet individual needs?.....	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>

Compared with other teachers in the school, how well does— <i>teacher name</i> —do the following?	<i>Teacher name (AC)</i>					<i>Teacher name (TC)</i>				
	MARK (X) ONE FOR EACH ROW					MARK (X) ONE FOR EACH ROW				
	Substantially below average	Average		Substantially above average		Substantially below average	Average		Substantially above average	
CLASSROOM MANAGEMENT										
9. Establish and enforce classroom rules and procedures?	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
10. Manage classroom time to keep students on-task?	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
11. Encourage desired student behavior through praise, support, etc.?	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
12. Engage students in learning?	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
GENERAL										
13. Utilize parents and school resources?	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>

D. READING/MATH INSTRUCTION AND OTHER INITIATIVES

1. How do teachers in the study grades address instruction and assessment in reading and math? Does this school have any particular emphasis or initiatives in these areas? What, why, when, whose initiative (*school, district, state*), how relate to study teachers?
2. Are there any other school or district or state initiatives, such as a major reform or restructuring, that may affect what the study teachers are doing in their classrooms?

E. CLOSING (END OF QUESTIONS ABOUT CURRENT YEAR STUDY TEACHERS)

1. Is there anything else I should know about... *study teachers' names*... or about school-based support for new teachers?

F. QUESTIONS ABOUT WILLINGNESS TO PARTICIPATE NEXT YEAR

Mention our goal of getting more matches this year and that each school that participates will get \$5,000 (overall, not per match). If they ask about data collection/burden, it would be generally the same as this year, except that teachers would not need to fill out the same survey again in full.

1. Do you anticipate that the pair(s) of teachers included in the study this year will be teaching the same grade next year? *If yes:* Would you be willing to have us use the same lottery process and include those teachers' students in the study next year? *(Note any concerns/questions/conditions.)*
2. Do you anticipate any pairings of relatively new AC and TC teachers (less than 4 years of experience) at this or any other grade levels next year? If so, would you consider participating in the study again next year with those other potential paired classrooms? *(Note any concerns/questions/conditions.)*

(If possible bring back a copy of the school staff roster and forward it to lead recruiter. If you feel comfortable, use and annotate it during discussion of possible matches.)

(If the answer to either of the two main questions is yes or maybe, thank them and indicate that another study team member will be calling to talk further about participating in the study next year. Regardless of the specific answers, tell the lead recruiter for this district what you learned ASAP. (Do not wait until completing full write-up.)