

November 2014

Training Our Future Teachers

Easy A's
and What's Behind Them

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FUNDING FROM:

The Abell Foundation, J.A. and Kathryn Albertson Foundation, The Anschutz Foundation, Laura and John Arnold Foundation, Barr Foundation, The Belk Foundation, The Arthur M. Blank Family Foundation, Morton K. and Jane Blaustein Foundation, The Bodman Foundation, The Boston Foundation, The Lynde and Harry Bradley Foundation, The Brinson Foundation, The Eli and Edythe Broad Foundation, The Bruni Foundation, Carnegie Corporation of New York, Chamberlin Family Foundation, Cleveland Foundation, The James M. Cox Foundation, Irene E. and George A. Davis Foundation, Finnegan Family Foundation, Lloyd A. Fry Foundation, Eloise Susanna Gale Foundation, Gleason Family Foundation, The George Gund Foundation, Phil Hardin Foundation, The Heinz Endowments, George Kaiser Family Foundation, Ewing Marion Kauffman Foundation, W. K. Kellogg Foundation, Sartain Lanier Family Foundation, Longfield Family Foundation, The Longwood Foundation, The Lynch Foundation, Foundation for the Mid South, Osa Foundation, The Harold Whitworth Pierce Charitable Trust, Polk Bros Foundation, Arthur & Toni Rembe Rock, Sid W. Richardson Foundation, The Rodel Charitable Foundation of Arizona, Rodel Foundation of Delaware, Charles and Lynn Schusterman Family Foundation, Searle Freedom Trust, William E. Simon Foundation, The Aaron Straus and Lillie Straus Foundation, Sidney E. Swensrud Foundation, Trefler Foundation, Walker Foundation, The Zeist Foundation, Inc.

WE ARE GRATEFUL FOR:

Comments from members of NCTQ's Teacher Advisory Group: Dina Rock

Comments from members of NCTQ's Teacher Candidate Advisory Group: Greta Bowers, Zachary Katz, David Ruby

Helpful critiques from: Ellen Belcher, Dan Goldhaber, Cory Koedel, Thomas Lasley, Linda Patriarca, Suzanne Wilson

Insight from medical students and nursing professionals: Christina Kim, Aparna Kishor, Shannon LeMaster, Will Terrin

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Executive Summary

Easy A's is the latest installment of the National Council on Teacher Quality's *Teacher Prep Review*, a decade-old initiative examining the quality of the preparation of new teachers in the United States.

With this report, we add to NCTQ's growing body of work designed to ensure that teacher preparation programs live up to the awesome responsibility they assume, preparing individuals for teaching. We also seek to provide the consumers of teacher preparation programs, both aspiring teachers and school districts, with much-needed information about program quality. Finally, we hope to educate policy makers and the public about the successes and shortcomings in teacher preparation.

Easy A's looks at two important questions:

- Are teacher candidates graded too easily, misleading them so they believe they are genuinely ready to teach when this may not be the case?
- Is teacher preparation coursework rigorous enough, simulating the complex demands of teaching?

Takeaway Findings

Using evidence from more than 500 higher education institutions that turn out nearly half of the nation's new teachers each year, we find that in a majority of institutions (58 percent), grading standards for teacher candidates are much lower than for students in other majors on the same campus.

Second, we find a strong link between high grades and a lack of rigorous coursework, with the primary cause being assignments that fail to develop the critical skills and knowledge every new teacher needs.

Easy A's

Prospective teachers are almost half again as likely as students in other majors to graduate with grade-based honors. While 30 percent of *all* graduating students at the 509 institutions earn honors, 44 percent of teacher candidates receive this distinction — a substantial 14 point differential. Indeed, that average masks a stunningly large differential of 20 points or more at 141 institutions (28 percent).

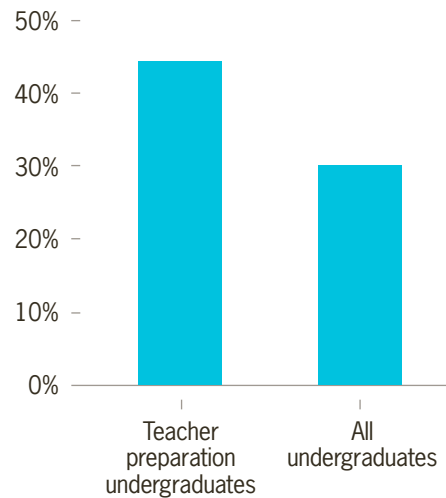
Criterion-referenced example

Design a lesson plan to teach one of the three 3rd grade science objectives given. You are designing this lesson for a class of 25 students, including four ELL students and two gifted students who are already familiar with the material. You need to incorporate the inquiry learning strategy discussed in today's class.

Criterion-deficient example

Design a lesson plan to teach an elementary science objective. Describe the composition and needs of the students in your class. Select one of the learning strategies from the textbook to apply in your lesson.

Who qualifies for honors?



Across the full sample of 509 institutions, teacher candidates were half again as likely to qualify for honors at graduation as other undergraduates.

These results are a wake-up call for higher education and a confirmation of the damaging public perception that, too often, getting an education degree is among the easier college career paths — although it is in preparation for one of the most challenging jobs there is.

It's also notable that at 214 institutions (42 percent), there is *not* a substantial difference between the proportion of prospective teachers and other graduating students earning honors, serving as powerful evidence that teacher preparation programs *can* hold their grading standards in line with those of other majors on the same campus. In fact, 62 universities and colleges (12 percent) in our sample have a *smaller* proportion of teacher candidates than others on their campuses earning honors. Individual ratings for institutions can be found in Appendix A of this report, as well as on [programs' ranking sheets](#).

What's Behind the Easy A's

The second focus of this report is the nature of course assignments that teacher candidates must complete and that serve as the basis of most or all of their course grades. Multiple theories as to why students in education majors might appear to excel so often were also examined (e.g., clinical coursework that lends itself to high grades, too many arts and crafts assignments, too much group work, particularly egregious grade inflation, better quality instruction, more female students who tend to get higher grades, opportunities to revise work, and higher caliber students), but none appears to explain these findings as directly as the nature of the assignments.

We analyzed the course assignments listed on syllabi for 1,161 courses, not just in teacher education but across an array of majors (e.g., business, psychology,



history and nursing). The 7,500 assignments in these courses were then classified as either “**critterion-referenced**” or “**critterion-deficient**.”

Assignments judged to be **critterion-referenced** focus on a clearly circumscribed slice of knowledge and skill-based content, facilitating the instructors’ own ability to provide substantive feedback within a defined area of expertise, as well as enabling comparisons among students as to the relative merit or quality of the completed assignments.

Critterion-deficient assignments, although they may be based in knowledge or skills, cover a broader scope of content, often with an emphasis on student opinion. The expansive content of these assignments makes it more difficult for the instructor, no matter what the subject matter of the course, to offer expert, critical feedback, and to compare the quality of students’ work products.

Criterion-deficient assignments are found to be more common in teacher preparation courses — overwhelmingly so — than in other academic disciplines that we examined. On average, criterion-deficient assignments are used about twice as often in teacher education coursework as in other kinds of coursework on the same campus (71 percent of course grades versus 34 percent).

The prevalence of such assignments could help to explain why new teachers report feeling relatively unprepared for the demands of real teaching, as they have not engaged sufficiently in meaningful simulations of teaching involving specific feedback. When new teachers enter real classrooms, they have to guess at what strategies are likely to be effective, which increases the stress they experience and causes them to lose precious instructional time.

The relationship that emerges between the two types of course assignments and the average course grade is clear and strong. Using a smaller sample of seven institutions (but involving 499 courses) for which the actual average course grade was publicly available, we find a statistically significant relationship. As the percentage of grades based on assignments classified as “critterion-deficient” rises, so does the average course grade — no matter what the course’s subject matter. Courses with *only* criterion-deficient assignments have average grades more than half a letter grade higher than courses with no criterion-deficient assignments. More information on the implications of criterion-deficient assignments can be found in Sections 2 and 3 of this report.

Teacher candidates rely on their preparation programs to prepare them rigorously for the demands of teaching. When programs fail to do so — by providing assignments that give inadequate opportunities to refine their teaching or by awarding grades that give false signals about candidates’ preparedness — these candidates are simply not being prepared. Such programs are, in fact, depriving candidates of essential opportunities to learn and crucial information about their competence. Too often, candidates’ investment in their education — measuring in the tens of thousands of dollars — results in a poor return.

Recommendations

- Teacher educators and the preparation program administrators should work together to identify common standards to define excellence. Work that is merely competent should not be awarded an A.
- Teacher educators and the preparation program should ensure that a greater proportion of assignments are “critterion-referenced,” especially in early teacher-training coursework.

By adopting these practices, teacher preparation programs will deliver on their promise to their students. Serious teacher candidates expect rigorous coursework, authentic training and honest evaluations. That is the only way they can be confident that they are ready to join a profession whose reach is immeasurable and life-changing.



Preface

A core element of the work carried out by the National Council on Teacher Quality (NCTQ) is our ongoing examination of teacher preparation, born out of our unwavering conviction that traditional, university-based teacher preparation *should* and *can* add value — in spite of the fact that currently there is far too little hard evidence that it does. An effective training program should be efficiently designed to graduate novice teachers who, for their own and their students' sake, are competent from their first day in the classroom.

NCTQ's many standards for teacher preparation address specific skills and knowledge (such as teaching children how to read) that new teachers are likely to need from that first nerve-wracking day of school through to the last. Our standards also touch on broader issues, such as the entry requirements for teacher preparation. In this same vein, we have also long been interested in the *rigor* of the coursework in the programs. Majoring in education is often viewed by college students as one of the easier pathways to earn a higher education degree, a perception we quantify here. Given that teaching is among the more challenging choices of careers, teachers pay a heavy price in terms of their own preparedness for the classroom when preparation programs have made it all too easy for them to get in and then complete the program.

Pioneering work by Cory Koedel (2011), an economist specializing in education at the University of Missouri, Columbia, provided the first comprehensive documentation that teacher preparation's lack of rigor isn't just the stuff of folklore and anecdote, but is also real and quantifiable. He provided evidence of the unusually high course grades in education courses compared with course grades in other majors on the same campuses in a small sample of institutions. (For more information on Koedel's study and other research on this important topic, see the textbox on page 5). NCTQ's new report, using evidence from a much larger sample of more than 500 institutions producing approximately 42 percent of the nation's new teachers each year, documents this phenomenon even more conclusively. The findings from this research also launch our newest standard in NCTQ's *Teacher Prep Review*, entitled the "Rigor Standard," examining

Teacher Prep
Coursework =
Easy

Actual
Teaching =
Difficult

– Veteran 7th grade teacher

the rate at which teacher candidates earn honors compared to all graduating students on the same campus. Ratings for the 509 institutions on this new standard are now available on our [website](#) and published [here](#) in Appendix A.

This report also provides suggestive evidence of an intriguing, if not complete, explanation for the higher rate at which teacher candidates earn honors at a majority of institutions. The explanation posed here turns out to be more complex than programs merely asking teacher candidates to complete too many “arts and crafts” assignments or simply having laxer grading standards. Instead, we suggest there is a strong connection between high grades and a dearth of coursework in preparation programs that is designed to train candidates on the most critical elements of teaching. Such training needs to be delivered in manageable chunks, allowing the novice to practice and master the skills inherent to teaching — before being entrusted with an actual classroom of students. An evaluation of programs on the nature of the assignments in their coursework will form the basis of a second component to the Rigor Standard which will make its appearance in *Teacher Prep Review 2016*.

The findings we present here also have implications for all of higher education, as it struggles with the challenge of enhancing the value that students gain from their coursework and with using grading as a meaningful device to signal students' mastery of the subject.





1. The phenomenon of easy A's in teacher prep

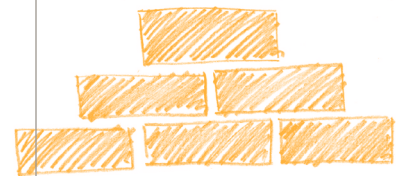
Introduction

We've all heard stories from people — from corporate leaders to battle-hardened military veterans to school district superintendents — who at some point in their lives taught school and call it the hardest job they ever had. Their stories ring true, but why is teaching so hard?

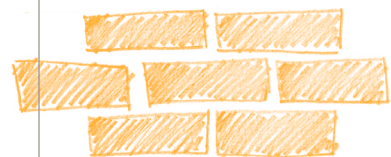
In response to the question, teachers might point to a long list of school and curricular demands, ever-rising expectations for student performance on state tests, and the difficulty of finding the instructional sweet spot in a class with diverse or easily distracted students. Above all, the heaviest lift in teaching may be the relentless decision-making, from the morning bell to dismissal, occurring every school day. Each decision has real consequences for student learning, class behavior, and teachers' job performance — and novice teachers often have little confidence that the decisions they make are the right ones.

New teachers can only be equipped for this daily pressure cooker if they have had preparation that is geared to its demands: learning what works and why, mastering key aspects of the field's knowledge base, and applying that knowledge in realistic scenarios. Without adequate preparation, plenty of practice and clear feedback, the first year of teaching can feel like hitting a brick wall again and again.

This report first looks at whether teacher preparation programs make good use of grades to signal candidates' readiness for the tough job of teaching, and then whether programs are designing assignments to reduce the amount of trial and error their graduates must rely upon in their first year of teaching.



The first year of teaching can feel like hitting a brick wall, again and again.



I actually dropped out of my undergrad teacher prep program (and majored in English lit instead) because it was much too easy to earn an A and wasn't worth the money.

– Naomi Jozovich
Charter school
academic designer

Documenting the problem

Hardly a day goes by without a report in the media questioning the value of higher education or discussing how to improve it. The greatest added value a teacher preparation program can impart is to ensure its candidates will be effective when they enter the classroom. To reach that goal, all coursework for these teacher candidates should build the skills to teach, and the grades given for coursework should reflect teacher candidates' progress in attaining competency. High grades should signify that teacher candidates are equipped to be effective from the moment they enter the classroom. If grades do not provide a clear measure of competency, preparation programs are sending teacher candidates faulty signals about their actual readiness to teach.

As a measure of whether programs are realistically signaling candidates' preparation for teaching, this study looks at whether teacher preparation programs are systematically awarding disproportionately higher grades than are awarded to other students on the same campus who are not studying to be teachers. To do so, we looked to a data source offering a proxy for student grades that appears never to have been previously employed: commencement brochures. By using brochures published for spring commencements, it was possible to identify the proportion of students earning grade-based honors in different fields of study at 509 colleges and universities.¹ (A profile of the institutions included in this analysis is found in Appendix A.) Because these brochures frequently identify graduating students' majors, colleges or departments, and honors based on their cumulative grade point averages (GPAs), we were able to compare the grades of teacher candidates with those of all graduating students from each institution.²

Also, because this method (described in full in Appendix B) allows comparisons *within* institutions, it effectively controls for many institution-wide features or contexts that might affect grades. It also largely eliminates the problems that might occur if we set some absolute standard for grades and compared *across* institutions. Effectively, we use each institution's own standard for excellence as the point of comparison.

The results

At a majority of institutions (58 percent), teacher preparation programs are much more likely to confer higher grades than are other majors on the same campus.

This phenomenon has nothing to do with general grade inflation: The boats of all students are lifted by general grade inflation, but boats of most teacher candidates rise higher still due to forces unique to their major.

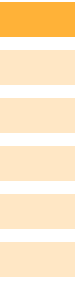
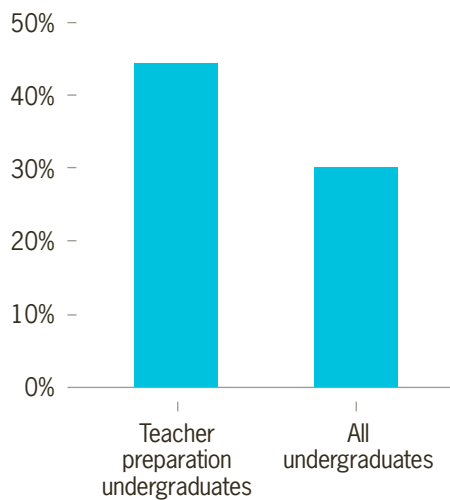


Fig. 1 Who qualifies for honors?



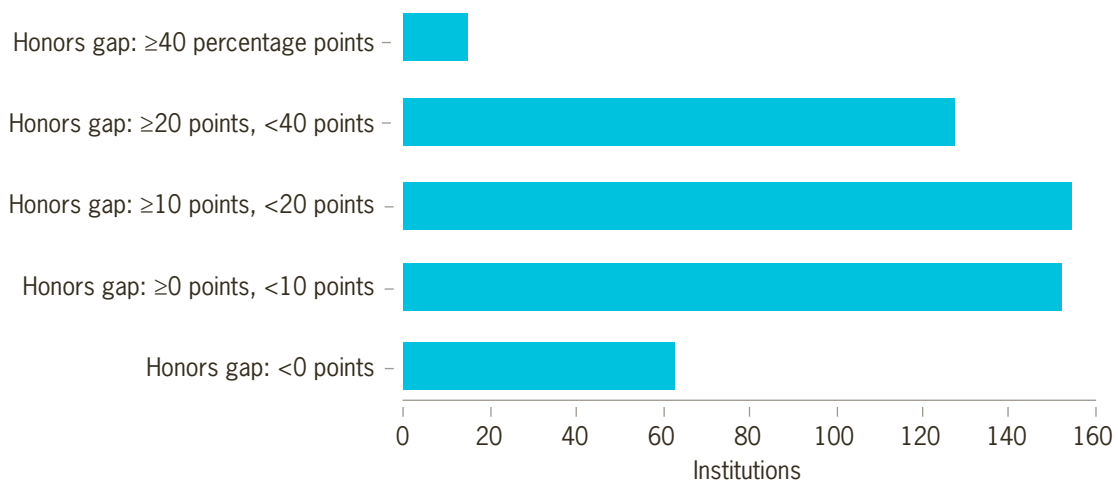
Whereas the proportion of all graduating students qualifying for honors on the 509 campuses averages 30 percent, the proportion of teacher candidates qualifying for honors averages 44 percent, a differential of 14 percentage points. This difference means that teacher candidates are nearly 50 percent more likely to earn honors than are undergraduate students across the campus.

These results provide clear evidence that many teacher preparation programs are far too liberal in awarding high grades rather than reserving them for the teacher candidates who truly do exemplary work and who are ready to hit the ground running.

Across the full sample of 509 institutions, teacher candidates are half again as likely to qualify for honors at graduation as other undergraduates.

As Figure 2 illustrates, teacher preparation programs at 295 institutions (58 percent of the sample) have honors rates that outstrip the honors rate among all graduating students by 10 percentage points or more. Many programs reach differentials of 30 or 40 points or greater.³ At these institutions with the biggest differentials (40 points or more), if 30 percent of the graduating students on the campus earn honors, at least 70 percent of teacher candidates do so.

Fig. 2 Differentials in honors between teacher prep and the institution



A majority of teacher preparation programs in the 509 institutions analyzed has unacceptable differentials in the proportion of teacher candidates earning honors.

However, while a majority of institutions grant disproportionately high grades to teacher candidates, a considerable portion (42 percent of institutions) do not, showing that teacher preparation programs can hold grading standards in line with other departments on campus. For these 214 institutions, there is no worrisome discrepancy between teacher

candidate graduates and other majors in the proportion earning honors. Some even buck the trend entirely: at 62 institutions (12 percent), a smaller proportion of teacher candidates earn honors than do other graduates on the campus.⁴

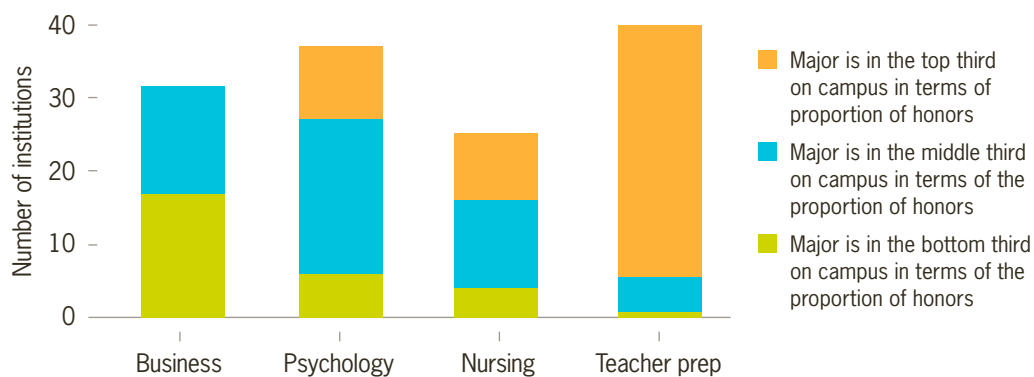
Teacher prep's propensity for awarding high grades is unmatched by other majors

The first finding raises an obvious question: Does any popular major also consistently award such high grades? Apparently not.

To compare teacher preparation to other areas of study, we sorted all majors at an institution by the proportion of graduating students who earn honors, from the highest percentage to the lowest. We created such lists from a sample of 40 institutions (half with an honors differential of 20 percentage points or more and half with an honors differential of less than 10 percentage points).⁵ We then divided the majors into those in the top, middle and bottom third of each list. We tallied the number of times teacher preparation was located in each of the thirds and did the same for the most popular majors in higher education: business, psychology, and nursing.⁶

The graphic below illustrates the results: Looking across the 40 institutions, the three other majors are relatively evenly distributed among the middle and bottom thirds (business), or top, middle and bottom thirds (psychology and nursing).⁷ Meanwhile, teacher preparation is in the top third in fully 34 of the 40 institutions (85 percent). Across the 40 institutions, no other popular major rivals teacher preparation for being *consistently* among the majors in the top third in terms of proportion of honors graduates.

Fig. 3 Where teacher prep and other popular majors rank in the proportion of graduating students earning academic honors



At all but six of the 40 institutions we examined, teacher prep is more likely to award honors than most other majors on campus.

Looking beyond these three most popular majors to all majors, teacher candidates' high grades compared with those of their peers are even more evident. At the 20 institutions with a large honors differential, teacher preparation has a larger proportion of honors graduates than nearly all (94 percent) other majors. Even in the 20 institutions that have small differentials in honors, teacher preparation still has a larger share of honors graduates than two-thirds (68 percent) of all other majors.

For more discussion of NCTQ's new standard based on GPA-based honors differentials, see p. 21 of this report; for the new Rigor Standard ratings of the 509 institutions that support these aggregate findings, see Appendix A.

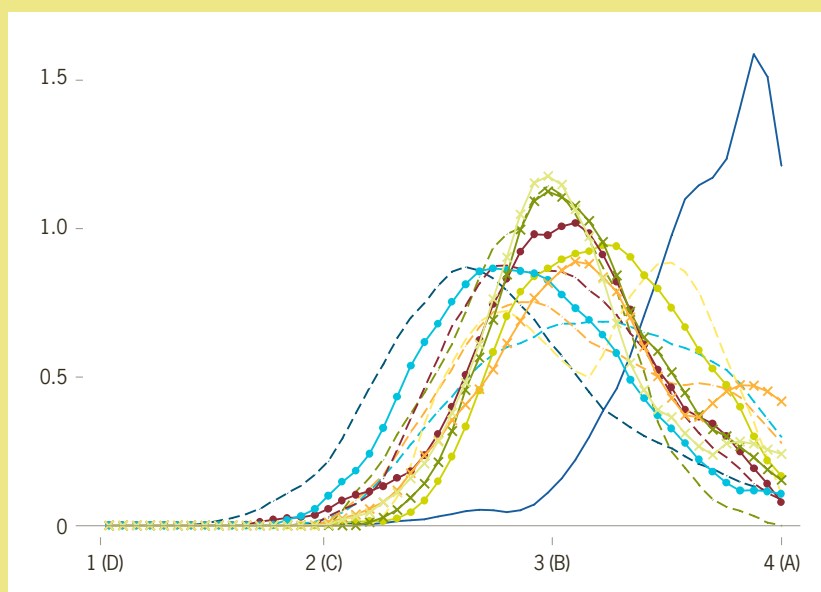
Previous research on the academic performance of teacher candidates

In keeping with the general paucity of strong research on most areas of teacher preparation, there is a relatively small body of research providing the evidence for teacher candidates' high grades. However, the lack of rigor in teacher preparation coursework has long and often been noted, as early as Arthur Bestor's 1953 book *Educational Wastelands: The Retreat from Learning in Our Public Schools*, followed by James Conant's *The Education of American Teachers* and James Koerner's *The Miseducation of American Teachers*, both in 1963, and Rita Kramer's more recent *Ed School Follies* in 1991.

In 1980, David Kapel analyzed data on 600 undergraduate and graduate students (200 education majors, 200 arts and sciences majors, and 200 business majors), finding that teacher preparation majors earned higher grades within their major when compared with the other students, even though teacher candidates earned lower grades in general coursework (the introductory courses across a range of subjects required for all undergraduates) compared with those other students.⁸ Given the limited scope of the study, however, this research was suggestive but not conclusive about the nature of grades in teacher preparation.

Two decades later, Cory Koedel of the University of Missouri, Columbia, reached a similar finding, showing that the GPAs of students in teacher preparation programs at three institutions were consistently higher than in any other department on the campus.⁹ The average GPA in education courses was 3.7, which was 0.5 to 0.8 grade points higher than courses found in other departments.¹⁰

Fig. 4 The education department as GPA outlier



This figure is one of several examples from Koedel (2011) showing that classroom-level grades in education departments (the solid line) far outstrip those of other departments.¹¹

Several institutions have independently examined grades in different majors at their own institutions and found education programs to be incredibly generous with A's. At University of Colorado-Boulder in the 2007-08 school year, 75 percent of the grades awarded in the School of Education were A's, while only 5 percent of grades were C's, D's, or F's (combined). Similarly, in spring of 2013 at the University of Wisconsin-Madison, the Curriculum and Instruction courses in the Education Department yielded an average GPA of 3.891.¹²

This problem of overly high grades may extend beyond the classroom into fieldwork. Barry Bruchlacker (1998) found that student teachers are routinely rated "above average" by their cooperating teachers.¹³ Thus, the research shows that high grades occur in all parts of teacher preparation.

At least one study has looked at high grades at the graduate level, finding it prevalent at an unnamed liberal arts college in the Northeast. In this institution's Master in Teaching Literacy program, researchers found "97 percent of the students had GPAs in the A to A- range."¹⁴ In surveys, faculty affirmed the existence of grade inflation and reported giving students higher grades than they deserved, often to avoid poor evaluations by students and to "keep their jobs."¹⁵





2. What's behind the easy A's: A new explanation

High grades would pose no problem if they represented a genuine recognition by teacher educators that candidates have fully mastered the material at hand and can advance. However, the nearly universal experience of novice teachers is that the first years in the classroom are filled with struggle,¹⁶ and there is hard evidence that students of novice teachers are consistently at a disadvantage when compared with students taught by more experienced teachers.¹⁷ Successful completion of a preparation program clearly does not ensure a successful first year of teaching.

To explore this discrepancy, this study delves into new territory: the nature of course assignments required of teacher candidates.¹⁸ Specifically, we examine whether assignments prepare candidates to succeed in the classroom by giving them critical feedback on their mastery of coursework, or whether assignments' design precludes giving such feedback to candidates.¹⁹ We provide evidence of a connection between teacher preparation's high grades and the type of assignments prevalent in teacher preparation, assignments that do too little to reduce the amount of trial and error awaiting the novice teacher.

A number of alternative theories can be advanced to explain relatively higher grades among teacher candidates, but in Section 5 we examine each of these explanations and how we find them to be unsupported by evidence or insufficient.

The importance of feedback

The fundamental importance of a course grade is the signal it gives — to the student and others — about the student's performance in the course. The quality of the feedback underpinning these grades can have a tremendous influence on students' achievement and ability to refine their work; its influence on teacher candidates is no exception.²⁰ Just as assignments range in purpose and quality, so too does the feedback given for those assignments, with some kinds having a greater impact than others. In 2007, John Hattie and Helen Timperley argued that for feedback to be effective, it should be based on tasks with specific goals, because such goals will “focus students' attention, and feedback can be more directed.”²¹

Given the importance of feedback, two important questions arise: Are the course assignments in teacher preparation designed to require candidates to complete tasks with specific goals that facilitate effective feedback and help the teacher candidate to progress? In the absence of effective feedback, are assignments more likely to lead to higher grades?

I didn't feel like I got enough feedback. What I did get was almost always positive, and I can't imagine I was that good just starting out. I would've preferred to have more constructive criticism.

-Veteran high school teacher

We used a sample of coursework syllabi to categorize assignments by type (e.g., exams, academic writing, fieldwork, assignments resembling the work of teaching — such as writing lesson plans and developing assessments), whether assignments were completed in groups or individually, whether revisions to earn higher grades are allowed, and most important for our analysis, the scope of assignments' content requirements.²² This final classification identified essentially two types of assignments, which we label below. This classification can apply to assignments in any academic discipline, but in our discussion we generally focus on teacher preparation.

1. Criterion-referenced assignments:

Assignments that deal in a *clearly circumscribed* scope of knowledge or a specific skill, enabling or even encouraging instructors to provide a high level of critical feedback because 1) the content is more likely to fall within their areas of expertise and 2) clearer comparisons of relative quality can be made among students' work. These kinds of assignments should maximize a teacher candidate's ability to master content and reduce the need for future trial and error in teaching.

Examples of common **criteria-referenced** assignments in teacher preparation:

All of the candidates in a class:

- use a single rubric to evaluate the instructional strategies in a video of a lesson;
- interpret the same K-12 student assessment data to identify students' areas of deficiency;
- choose from a limited number of articles to report to the class on the latest findings about teaching approaches for students with special needs.

Example of a **criteria-referenced** assignment in a business management course:

- Participate in a simulation project managing a digital camera company.

2. Criterion-deficient assignments:

Assignments that deal in a *broad* scope of content and/or involve content that may not be entirely knowledge or skill based, making it harder for instructors to offer high-level feedback. In these assignments, not only might the range of content represented fall well outside instructors' areas of expertise, but judging relative merit among candidate work products is more difficult because the work products vary greatly or rely on



candidates' opinions. These features force grading decisions based less on substance than on superficial features such as completeness, presentation qualities, and so on.²³ These assignments provide scant opportunities for productive feedback on content mastery and are unlikely to reduce teacher candidates' reliance on trial and error when they have their own classrooms.

Examples of common **critterion-deficient** assignments in teacher preparation:

All of the candidates in a class:

- *develop a lesson plan on any objective for a fieldwork course;*
- *write reflections, personal philosophies or independent field observations;*
- *analyze data from a K-12 student assessment that each teacher candidate individually developed and administered;*
- *report on any educational research article they personally select.*

Example of a **critterion-deficient** assignment in a nursing program:

- *Provide a synopsis of your outpatient experience the clinical day following the observation.*

Note that the distinction between these two categories of assignment is not based on whether a substantial investment of time or critical thinking is required.

This distinction between assignment types is not entirely of our invention. In a similar argument, Hall (2012) suggests that grade inflation may stem in part from a lack of valid and reliable assignments, defined as those that ensure that the content of assignments aligns with course objectives, and that the assessments will give “the same or similar results over and over, time and time again.”²⁴ Our work here attempts to take this distinction to a more pragmatic level by creating the categories of criterion-referenced and criterion-deficient, and developing a methodology to measure whether an assignment enables valid and reliable assessments of students' mastery of defined skills and specific content by the design of its scope.

Assignment examples in Section 4 show how easily the two types of assignments can be distinguished.

My prep program's feedback included lots of sound general advice, but not enough on what specifically I could do to improve my practice as a beginner teacher, so I wonder if I walked out with a lot of bad habits in planning, instruction, management, etc. that I still don't know need correcting.

– First year math teacher

A Criterion-REFERENCED assignment

Candidates will develop a transition plan for a secondary student with a disability based on the case scenario and transition assessment information provided by the instructor. Performance on the key assessment reflects the extent to which the candidate has gained the knowledge and skills associated with the three Content Standards covered in the course — Instructional Planning (Standard 7), Assessment (Standard 8), and Collaboration (Standard 10). Candidates who receive an unacceptable score on the key assessment will be provided with a plan for remediation.

Why is this assignment criterion-referenced?

This assignment deals with a topic that is important for special education teachers and has presumably been designed by an instructor to present common and important transition plan issues with which they will need to grapple in practice. It has several of the hallmarks of a criterion-referenced assignment:

- While the teacher candidate can be resourceful and creative in responding to the situation presented in the case study, the parameters of the situation are established. This allows the instructor to know whether the candidates are appropriately applying to the situation the special education knowledge and skills they have learned.
- The content of each candidate's work will vary, but the range of variation is limited by the specifics of the case study. This limited range allows the instructor to make comparisons of quality across candidates' work.

The right assignments can reduce trial and error in the first year of teaching

Teaching is a very complex activity, so it always entails some trial and error, even for the experienced teacher. But it's important to keep the trial and error of the first year to a tolerable level so that student progress is not impeded. Completing criterion-referenced assignments provides teacher candidates with an opportunity to receive explicit feedback on what is likely to be effective (or not) in the greatest possible number of specific situations. Developing an understanding of how to teach effectively in various scenarios can form a foundation of knowledge on which teachers can build when they enter their own classrooms.

Criterion-deficient assignments are unlikely to yield any critical feedback on honing successful teaching practices. Because such assignments yield less feedback, teacher candidates miss out on numerous opportunities to learn what is likely to work or not in a range of scenarios. They lose the opportunity to develop a strong foundation for teaching, so rather than having a base of best practices on which to build, they must test approaches for the first time with each new lesson. Every class becomes an experiment as teachers employ trial and error to learn what they could have (and should have) learned in preparation.

The right assignments can make grades accurately signal readiness to teach

An example illustrates why the structure of an assignment has such an impact on grades. Consider an assignment asking first-year elementary teacher candidates to write a lesson plan designed for the different elementary classes they are observing in their fieldwork. As the focus of the lesson plan, they are asked to select from one of the many reading objectives in the state's elementary learning standards.

Allowing candidates to choose from a long list of state reading standards will give rise to many different configurations of lesson objectives and result in candidates applying many teaching strategies. Each lesson plan will be designed for a class that has a different composition from all the others in terms of student reading levels, the number of students with special needs, and/or the number who are English language learners (ELLs). Practically speaking, the variations possible in the completed lesson plans are endless.

Given these unlimited variations, an instructor grading the lesson plans may want to carefully consider the merits of every one of the many instructional strategies when assessing each candidate's unique lesson plan, but it is simply impossible to do so. Instead, the instructor may comment on a strategy or two, warning that they are patently ill-advised or lauding their creativity, but



the instructor will grade largely based on the degree to which candidates have written something coherent in every field of a lesson planning template. Those who complete the assignment will earn high grades. Due to the criterion-deficient structure of the assignment, the instructor's evaluation simply cannot discriminate on much more than the fact that the candidate completed the assignment and followed directions. Consequently, the teacher candidates will have little guidance about whether their approaches to an assignment would be successful.

Note that presumably the instructor in this situation is attempting to have candidates prepare a lesson relevant to their unique fieldwork placements. Given the varied expectations that will be placed on a novice teacher, this broad scope may seem preferable to a more circumscribed assignment in which the instructor selects a few extremely important learning objectives as choices and specifies the student composition of the class in which they will be taught. However, laying the foundation from which candidates will be able to generalize later requires incisive, specific feedback on the fundamentals and a grade that accurately signals the relative quality of the candidate's instructional choices.

CRITERION-DEFICIENT ASSIGNMENTS THAT WASTE PRECIOUS TRAINING OPPORTUNITIES

The following are real course assignments, modified only for length or to remove institutional identifiers.

From a course on how to teach reading:

Literary History/Timeline: *Visual display and written paper of your personal reflections/memories about reading and writing from early childhood through your current life.*

It's unlikely that one's memories from early childhood accurately reflect how a teacher candidate actually learned to read – and even less likely that this recollection could help one more effectively teach others to read.

From a course designed to introduce teacher candidates to diversity:

Social Class Investigation: *Diversity exists even in a seemingly homogeneous society like [this one]. You will leave [the] campus and venture into the greater realm of [this town] to investigate differing social classes and will report your findings in a written summary of your experiences.*

However well-intentioned, this assignment is more likely to promote stereotypes and surface-level judgments rather than to develop a deeper understanding of diverse members of the community.

From a mathematics course aimed at teaching elementary teachers how to teach math:

Mathematics Poem: *You are to write a poem that paints a picture of your personal attitudes/feelings about mathematics. Feel free to embellish your poem with color, designs, pictures, etc. as if this was a class assignment for young people and you are a student in this grade span.*

This assignment, which is one of several in the class related to exploring candidates' feelings (especially anxiety) toward math, is not supported by research about what type of writing can reduce anxiety.

A Criterion-DEFICIENT assignment

Analyze a sample of student work from a student in your field placement. Identify the student's mathematical misconceptions. Select and read 2-3 professional articles related to this mathematical topic. Design a remediation plan for the student to be implemented over the course of one month. Write a rationale for the intervention strategies and sequence selected. Use professional articles to support your plan.

Why is this assignment criterion-deficient?

While this assignment deals with a topic that is important for elementary teachers, it has several of the hallmarks of a criterion-deficient assignment.

- Every work product will be based on a candidate's choice of a misconception and several professional articles. Beyond the fact that the value of the exercise can be seriously diminished if the misconception chosen is a trivial one and/or the articles of low quality, even an accomplished instructor would be hard-pressed to determine if candidates are appropriately applying to the multitude of unique combination of misconceptions and remediation plans the math education knowledge and skills they have learned.
- The content of each candidate's work will vary so greatly depending on the student and misconception chosen and the articles consulted that the instructor cannot realistically make comparisons of quality across candidates' work.





3. The connection between course assignments and grades

Lenient grading appears to result (in part) from too many criterion-deficient assignments in which grades are based on completion and stylistic elements rather than content.

The sample for the analysis of the connection between criterion-deficient assignments and grades

To determine if a clear connection between assignment types and grades exists, we looked at 1,161 courses offered at 33 institutions of higher education,²⁵ including 862 courses preparing elementary, secondary and special education teachers and 299 courses in academic disciplines outside of teacher preparation (i.e., business, psychology, history, nursing, economics and biology).²⁶ Nearly 7,500 assignments were coded as either “criterion-referenced” or “criterion-deficient.”

Fig. 5 The sample: Institutions analyzed for syllabi and course grades

	Teacher prep assignments	Teacher prep average course grades	Assignments and grades in other academic disciplines
1,161 courses (33 institutions)	449 courses (5 institutions)	✓	✓
	50 courses (2 institutions)	✓	
	662 courses (26 institutions)	✓	

We have sets of matching syllabi and grades for 449 courses across teacher prep and other academic disciplines, matching syllabi and course grades for 50 courses across only teacher prep, and teacher prep syllabi only for 662 courses.

Findings

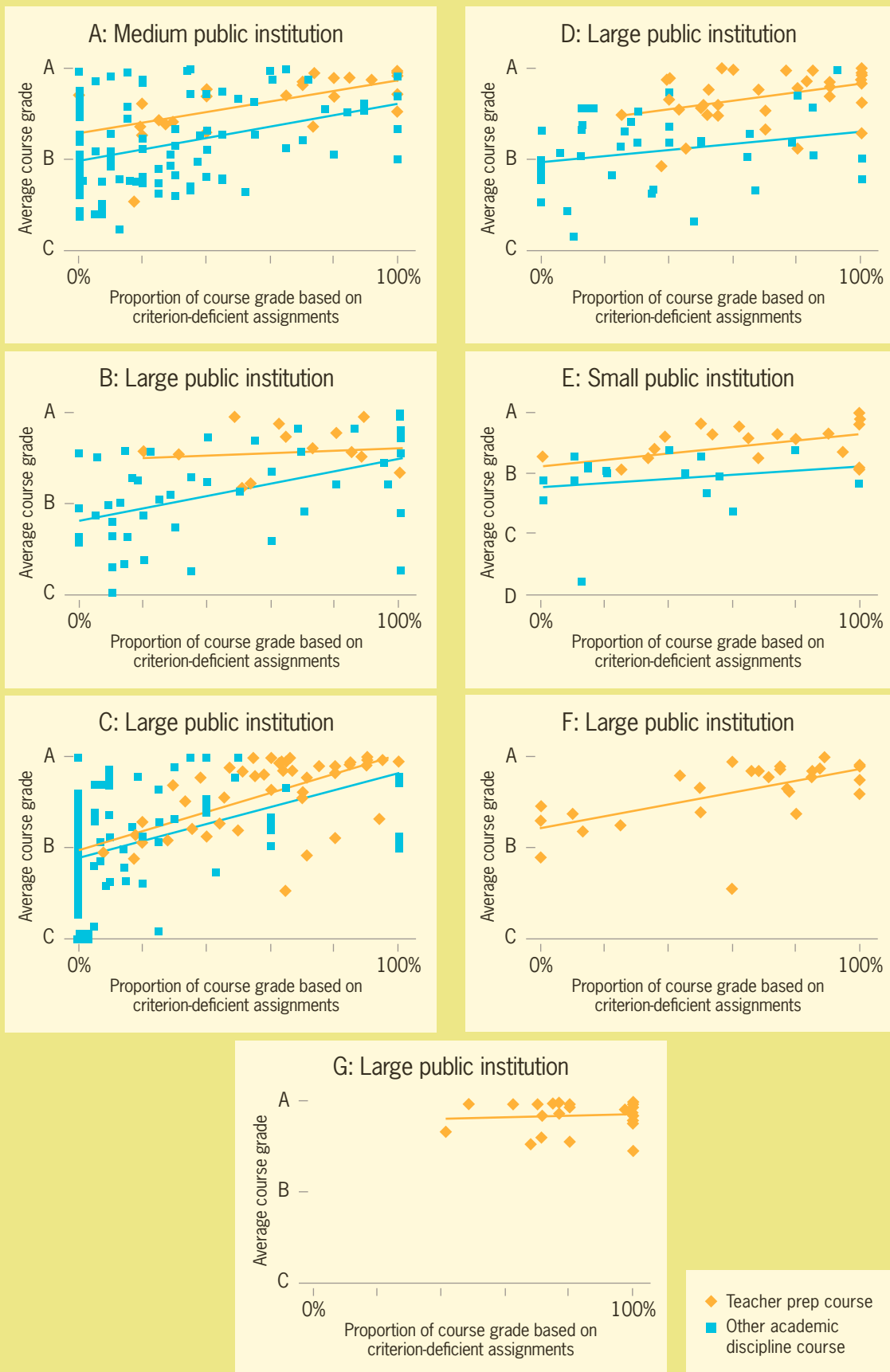
The types of assignments in a course are clearly related to the average grade in that course.

The results prove to be startlingly clear and convincingly supportive of our hypothesis. A positive relationship emerges between the proportion of criterion-deficient assignments and course grades: As the percent of grades based upon “criterion-deficient” assignments rises,²⁷ so does the average course grade.²⁸ We found that the relationship is positive and statistically significant across teacher preparation coursework in five of the seven institutions for which we have course syllabi and average course grades. The relationship is also positive and statistically significant across the aggregated other academic disciplines for three of the five institutions. Each correlation has a moderate to strong statistical significance. (Again, while not statistically significant, the relationship for the remaining programs and academic disciplines is also positive.) Across all seven institutions, the average difference in a course grade (for any course, not just teacher preparation) when moving from a course with no criterion-deficient assignments to only criterion-deficient assignments is more than half of a letter grade (0.68 points) on a 0-4 GPA scale.

Figure 6 shows the average course grades and share of criterion-deficient assignments, both in teacher preparation courses and in coursework in other academic areas, at the seven institutions for which we have grades for specific courses. There is a positive relationship between criterion-deficient assignments and grades — and the parallel trend lines (at institutions A, C, D, and E) show that the relationship between criterion-deficient assignments and course grades is remarkably similar for both teacher preparation courses and other academic coursework.²⁹



Fig. 6 Relationship between the average course grades and the proportion of grades based on criterion-deficient assignments in a course



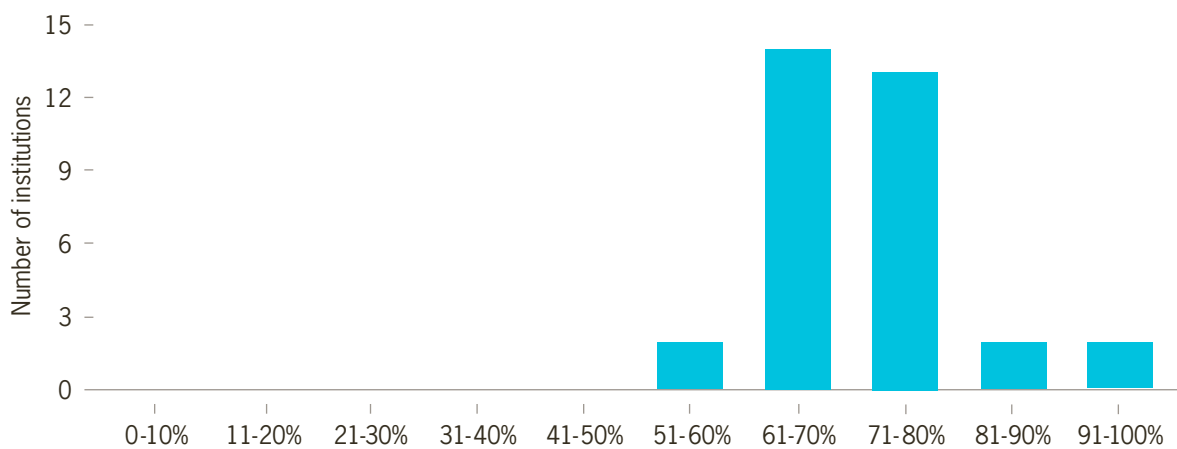
The relationship between criterion-deficient assignments and course grades is statistically significant for the teacher preparation courses at institutions A, C, D, E, and F. The relationship is statistically significant for the other academic areas at institutions A, B, and C. For all programs analyzed, the relationship is positive (i.e., as the proportion of grades based on criterion-deficient assignments increases, so do course grades).

A detailed statistical analysis for each of these seven institutions is available in Appendix F.

Assignments that lead to higher grades overwhelmingly dominate in the field of teacher preparation, far more than in other academic disciplines.

When we expand our sample to include all 33 institutions for which we have teacher preparation syllabi, encompassing more than 6,000 assignments in 862 courses,³⁰ we find that, on average, a course taught in teacher preparation almost always relies heavily on criterion-deficient assignments (accounting for 71 percent of course grades), the type of assignment that we assert increases potential for trial and error in novice teaching.³¹ As Figure 7 shows, at each institution, the proportion of the course grades attributed to criterion-deficient assignments across teacher preparation courses in an institution ranges from 55 percent to 94 percent.

Fig. 7 The proportion of grades based on criterion-deficient assignments in teacher prep coursework

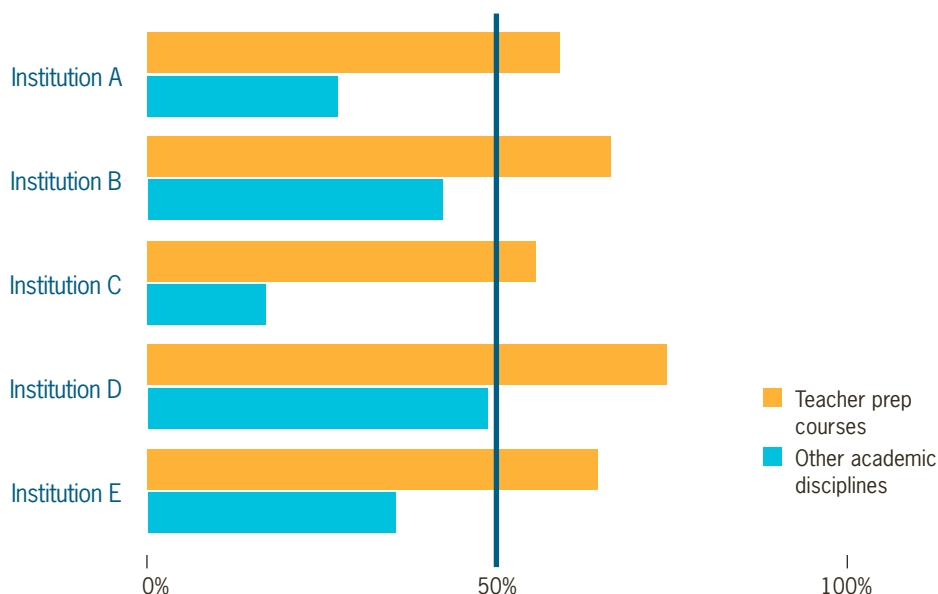


Criterion-deficient assignments account for more than half of course grades in ALL of the teacher preparation programs we examined in 33 institutions.

Moreover, comparing teacher preparation coursework with coursework in other academic areas at the same institution reveals a stark difference in the proportion of grades based on criterion-deficient assignments. We reviewed syllabi in other disciplines (i.e., business, psychology, economics, history and nursing) at five institutions using data from 299 courses and approximately 1,390 assignments. In these disciplines, only an average of 34 percent of course grades could be attributed to criterion-deficient assignments, 37 percentage points less than the 71 percent found in teacher preparation. In each institution, teacher preparation courses have a higher proportion of criterion-deficient assignments than do the other academic disciplines in the sample.



Fig. 8 Proportion of course grades based on criterion-deficient assignments



For 449 courses at five institutions, we analyzed syllabi from both teacher prep and other academic coursework and found that criterion-deficient assignments account for more than half of course grades in teacher prep courses, whereas in other academic areas, they account for less than half of course grades.

Assignments on planning and delivering instruction are filled with missed opportunities to give critical feedback.

For purposes of training, teacher candidates need assignments that mirror the work of teaching. Such assignments should refine teacher candidates' ability to plan lessons, deliver instruction, assess students and manage classrooms. However, to reduce the potential for trial and error by novice teachers, those assignments — especially at the start of training — should be carefully crafted to focus on critical slices of the work of teaching: planning a lesson on a topic that the instructor knows is particularly hard for primary students who struggle with English, engaging the attention of physics students who are using intriguing lab equipment for the first time, knowing when to ignore behavior of a particularly challenging student and when to praise it. A limited scope allows candidates to concentrate on applying knowledge and skills and then receive concrete feedback and accurate grade signals.

About a fifth of course grades in teacher preparation are based on assignments that fall under the category of “planning and teaching.” These include tasks like designing lesson plans, writing assessments, analyzing assessment data, and

I think teacher prep courses did prepare me for a more utopian classroom. It took grad school to learn more on dealing with day to day.

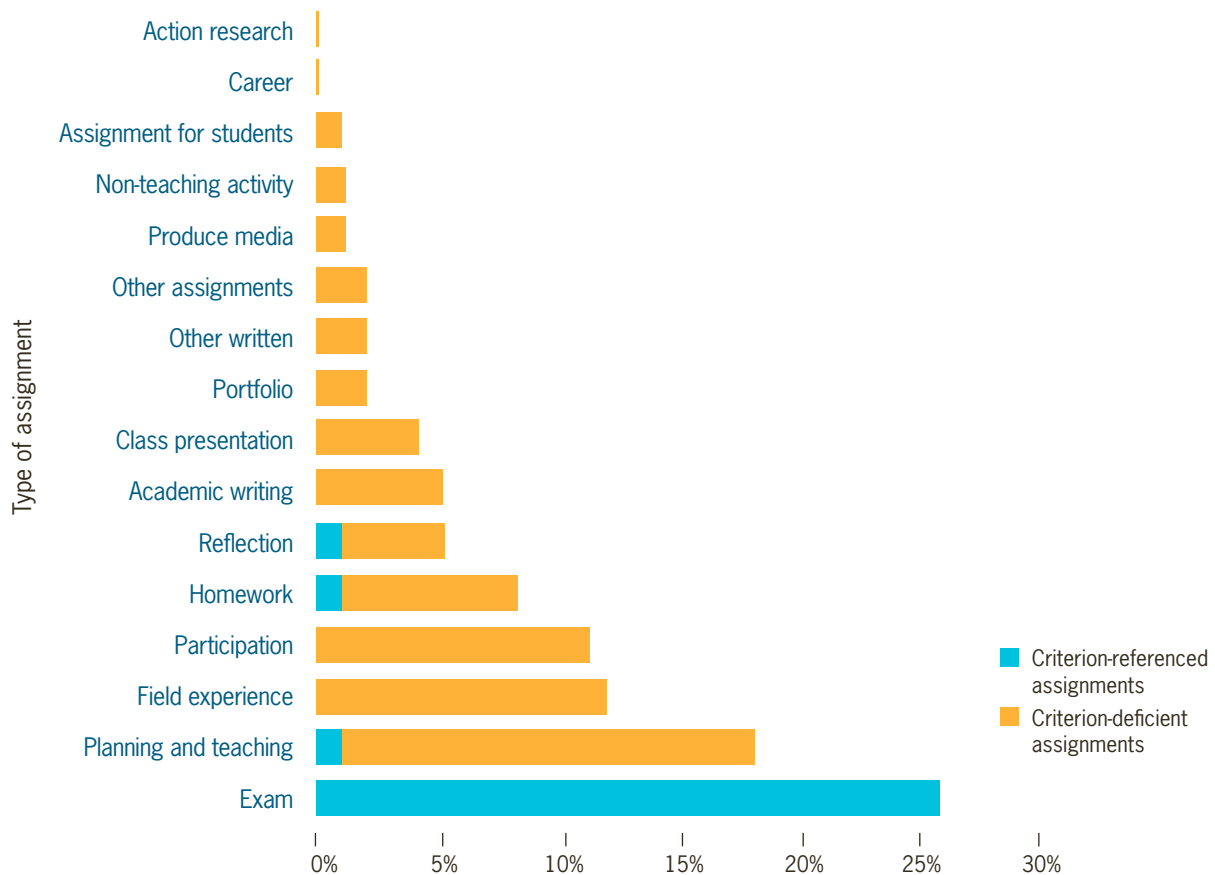
– Curriculum designer and former teacher

teaching practice and real lessons. However, instructors tend to structure these assignments as criterion-deficient rather than criterion-referenced, thereby missing a prime opportunity to design assignments that allow teacher candidates to practice skills and receive in-depth feedback. Although 18 percent of course grades in the sample are based on planning and teaching activities, only about 1 percent of all grades are for assignments that involve planning and teaching activities *and* are also criterion-referenced. As a result, teacher candidates receive little feedback on whether they have effectively applied their skills in the context of assignments that mirror the work they will soon do in the classroom.

Where does teacher preparation utilize criterion-referenced assignments? Almost entirely in exams, with exams accounting for 26 percent of course grades. Certainly assessments have value, but they take on more value when they are not used in isolation from practice. For example, it is more helpful to pair a quiz probing appropriate use of praise in a classroom with an assignment in which teacher candidates identify effective and ineffective uses of praise in a videotape of instruction, rather than assigning the quiz in isolation.

Unfortunately, when exams are excluded from consideration, only 4 percent of remaining course grades (for any type of assignment) can be attributed to criterion-referenced assignments in the 862 teacher prep courses.

Fig. 9 Average proportion of course grades based on criterion-referenced or criterion-deficient assignments, across 862 teacher prep courses



Only a small fraction of course grades are attributable to the types of criterion-referenced assignments that would facilitate practice that gets to the heart of tasks teachers will do in the classroom. For examples of each type of assignment, see Appendix C.



Teacher preparation programs frequently rely on reflection assignments

Some criterion-deficient assignments may take even more of a teacher candidate's time than the proportion of course grades attributed to them (Figure 9) would suggest. Specifically, a prevalent type of criterion-deficient assignment is the "reflection assignment" (which can take the form of teacher candidates keeping a journal or developing their personal education philosophy). Many reflection assignments require entries multiple times throughout the course, which could require a considerable amount of time. Reflection assignments only constitute an average of 5 percent of grades, but 34 percent of teacher preparation courses include at least one reflection assignment. In contrast, only 12 percent of courses in other academic areas include any reflection assignments.

The ability to critically reflect on one's teaching practice is an important skill, but whatever value reflection assignments have is likely to diminish because the assignments are either very similar from course to course rather than increasing in their level of sophistication, or they fail to require a structured focus on one's own performance.

REFLECTION ASSIGNMENTS

These examples (modified for the sake of clarity and conciseness) show the types of activities under the umbrella of "reflection assignments." Although assignments such as these may add some value to a teacher candidate's preparation, virtually all of them could be made more useful if they were anchored in specific experiences. Moreover, if programs that overuse them were to reduce their role in coursework, there would be more room for more valuable assignments.

Reflections

Students will be asked to write reflections after listening to speakers in class.

Writing reflections

Ten-minute writing sessions in which you reflect, speculate and analyze about a given idea or reading selection. The reflections are graded for "doneness."

Final activity

As the final activity in this class, you will be asked to write and revise a 3-5 page reflective essay which contrasts what you knew and expected of the field before you began this course, with what you know and believe after completing the course. This essay should be well written and specific in its claims and supporting detail; any references to other sources should be documented by citation.

Beliefs and Understandings Paper #1

Paper to describe your beliefs and understandings about how children learn to read.

Field Placement Reflections

Your field placement is a critical component to your growth as a professional in the teaching field. With this in mind you will be required to submit 3 field placement reflections where you will think deeply about issues relating to teaching and learning that will further help to connect what we are doing in class with what you are seeing in the field.

Philosophy of Education collage/poster

Formulate your personal philosophy of education. You must create a poster containing pictures, words, etc. (be creative) to convey a sense of your personal philosophy. You must include a creative title depicting your beliefs and have 5 pictures/graphics with a label for each. Submit a one page double-spaced concrete and concise declaration of your educational philosophy before you present. The following questions should be answered in your philosophy: (1) What is the purpose of education? (2) What is the role of the teacher and the student? (3) What knowledge, skills and dispositions should be taught? (4) How should teachers impart knowledge, skills and dispositions? (5) How should student progress be assessed/evaluated?

Math anxiety

Math anxiety is shared by a large percentage of the population, especially those who teach in the elementary school. From your readings and the class information, I'd like you to prepare a document dealing with math anxiety. Tell me how math anxiety has affected your life. What struggles did you encounter? What did it cause you to do or not do? How has it affected you as a teacher? Include information as to how you've overcome this anxiety.

Supervisor feedback was very important, especially when there was constructive criticism/praise so I could clearly understand how I needed to improve, or what I had done well.

– Veteran special education teacher

Limitations

Several limitations of this analysis stem from the nature of course syllabi themselves. First, syllabi do not provide a window into whether an instructor tends to be a more or less demanding grader, although this becomes more clear when we examine syllabi and course grades in the aggregate. Also, syllabi often give only very general descriptions of course assignments, so our analysts could only make a broad distinction between criterion-deficient and criterion-referenced assignments.³² In fact, more detailed course descriptions would enable more nuanced coding, reflecting the variation in the degree to which assignments are circumscribed in scope. Furthermore, we would be able to identify the potentially miscoded assignment. For example, we automatically code exams as criterion-referenced; however, an exam asking teacher candidates to articulate their final personal philosophies of classroom management would instead be better labeled criterion-deficient. Based on reviewing thousands of assignments, we maintain that more nuanced coding would yield an even stronger relationship between this assignment characteristic and course grades.

A second limitation is that we are unable to evaluate all undergraduate programs at the 1,668 institutions included in the *Teacher Prep Review* due to our inability to obtain or analyze some institutions' commencement brochures. We are also unable to evaluate any graduate programs because institutions rarely offer institution-wide GPA-based honors recognition when awarding a degree. Nonetheless, we have no reason to believe that the grading practices revealed by the sample are unique to the undergraduate programs analyzed. The ratings we are able to provide on the Rigor Standard illuminate the prevalence of disproportionately high grades in undergraduate teacher preparation programs nationwide. Moreover, Nikolakakas (2012) indicates that this imbalance of grades is also found in graduate programs.³³

Implications of this research for the NCTQ *Teacher Prep Review*

Only the combination of criterion-referenced assignments *and* stricter grading standards ensures adequacy of preparation and accurate signaling to candidates of that adequacy.



Fig. 10 Integrating high grading standards and effective assignments

	Strict grading standards	Lax grading standards
Criterion-referenced assignments	Assignments are designed to maximize productive feedback, and instructor ensures that grades accurately reflect mastery of important content	Assignments are designed to maximize productive feedback, but instructor is overly forgiving toward subpar work, so grades do not accurately reflect mastery of important content
Criterion-deficient assignments	Assignments are not designed to maximize productive feedback, so while the instructor has high grading standards, they are largely based on superficial characteristics and do not reflect mastery of important content	Assignments are not designed to maximize productive feedback and the instructor is very generous with grades, so grades do not accurately reflect mastery of important content

An ideal teacher preparation course requires criterion-referenced assignments and ensures that high grades are only awarded to teacher candidates who demonstrate mastery of those assignments.

The research into the relative laxity or strictness of grading practices of teacher preparation programs described in this report has generated the first component of a new standard (the 19th) for the *Teacher Prep Review*, the Rigor Standard. The individual ratings for the 509 institutions assessed on the first component of the Rigor Standard are available in Appendix A and on the [program ranking sheets](#). The methodology for the first component of the new standard is described in Appendix B of this report. A description of the ways in which we tested this new analysis for sources of bias is found in Appendix E.

Adequate preparation

Future iterations of the Rigor Standard will have a second component that will directly examine the proportion of criterion-referenced coursework in teacher preparation courses. This component will apply not only to undergraduate programs (as does the current Rigor Standard), but also to graduate programs.³⁴

Failing the first component of the standard definitely means that grades given to teacher candidates are so high, relative to those of their campus peers, that they are unlikely to serve as meaningful signals of candidates' relative readiness for the demands of teaching and — given the ubiquity of criterion-deficient assignments in teacher preparation — likely means that there is too heavy a reliance on criterion-deficient assignments. Passing the Rigor Standard definitely means that the program has grading standards in line with the rest of the institution, but does not necessarily mean that coursework grades rely sufficiently on criterion-referenced assignments. The end result of these facts is that we will postpone our usual practice of lauding programs that satisfy the standard until we have identified programs that satisfy *both* of its components.





4. Design matters: Assignments which do and don't prepare teachers

The following examples illustrate the nature of these two categories of assignments. Although the coding of some assignments is a judgment call, we believe that in the vast majority of cases readers will make the same categorizations we do. We have provided nine examples, all from real assignments (modified only for the sake of clarity or conciseness) in teacher preparation courses and nursing, psychology, and business courses. Read each assignment and determine if it is:

A. Criterion-referenced

- The assignment builds mastery of identifiable discrete knowledge or skills.
- The assignment has an objective element, applying a teacher candidate's skills and knowledge.
- Each candidate's work product can be measured against other teacher candidates' work products.
- The assignment's grade depends heavily on the student's mastery of content.

B. Criterion-deficient

- The knowledge and/or skills required are too broad to target.
- The assignment often relies on the teacher candidates' beliefs, opinions, or feelings.
- Teacher candidates' work products are so different that comparison across candidates on anything beyond superficial measures is impossible.
- The assignment's grade is likely based on assignment completion, adherence to directions, quality of writing, neatness, and other features that have little to do with the knowledge and skills at hand.

Is the assignment criterion-referenced or criterion-deficient?

1. Teacher prep course – Observations of a social studies class

You will write a summary of your observations of social studies concepts on your assigned campus this semester. Focus on opportunities that were utilized to help advance social studies standards. Also include any opportunities that you felt were missed.

2. Nursing course – Standardized encounters

Successfully perform each of the three encounters within two attempts. One will be performed on a student classmate and two on standardized patients. Each will be filmed. The encounter will include the performance, documentation and self-evaluation of the encounter.

3. Teacher prep course – Case study project (Parts 1 & 2)

Complete a simulated literacy case study assignment based on literacy data given by the instructor. For this task, you will select one of six hypothetical students to use as a case study student. The six students represent a variety of learning needs, with two (2) students who are struggling readers and two (2) students who are English Language Learners. Specifically, you will analyze writing samples, plan future instruction from the data, include appropriate Common Core Standards, and incorporate complementary literacy activities for one elementary-aged student.

4. Psychology course – Therapy sessions on DVD/video

These three assignments are intended to familiarize you with the process of psychotherapy and assessment by viewing psychotherapy demonstrations available digitally through Black Board course shell. For each paper, you will review one assigned therapy session and write a paper on a given topic.

5. Teacher prep course – Child assessment/running records

Assessment is an integral part of teaching and learning that is used to inform and direct instruction. Students will select and complete at least one running record (depends on reading level) and/or other early literacy assessments for a child in your field placement. (Student must be able to read at least Level A books). Administer and score the assessment(s) using forms provided in class.

6. Teacher prep course – Lesson plan workshop-midterm

Using the state Course of Study, you will be given an objective and write an inquiry-based lesson plan using the three social studies lesson plan components that include exploratory introduction, lesson development, and expansion. Your plan will also include accommodations for English Language Learners. This is a time to practice writing and editing an actual plan before your required lab placement social studies lesson.

7. Business course – Negotiation scenarios/plans

I am going to divide you up into teams over the course of the semester. At times you will work as an individual, and other times you will work with the group. You will be presented with a brief scenario in which you will be given a negotiation objective. Your opponent will be presented with the same scenario and constraints prior to entering the classroom. You will then enter into negotiations with your opponent. We are here to learn so don't think you'll win every time. I want to see evidence that you can apply what we've learned and make sense and use of it.

8. Psychology – Personality test

"Google" Institute of Personality and Social Research. Click on "related links" and then on "Personality Lab-Online Personality Tests." WOW! Look at all the tests! Choose two that interest you and take them. Write up your results for each test. First, look them over and summarize them. Give data results if provided, and then summarize the scales/results and tell what this says about you. In the next paragraph talk about your reaction to these results: Are they accurate? Are you surprised? Did you learn something you did not know, or did this confirm what you always knew? How might this change/not change your behavior? In the final paragraph, talk about what you experienced taking this test. Fun? Boring? Worth the time? Confusing? Would you recommend this to a friend?

9. Teacher prep course – Reflective Blog

Blogs for reflective journaling will be created. The blog will share posts about your personal growth in technology integration as well as how you plan to use the technology in your classroom.

We wish to recognize **East Carolina University** for a strong criterion-referenced assignment for teacher preparation (Example 3).



5. Popular theories for so many A's and why they don't add up

We carefully considered a number of other theories to explain the disproportionately high grades in teacher preparation, unrelated to grading standards and the types of assignments:

1. Grade inflation

Rampant grade inflation has been documented in higher education, but as mentioned earlier, this theory is not applicable because our comparison of the grades of teacher candidates to those of their campus peers already accounts for the tide of general grade inflation.³⁵ In other words, the boats of all students are lifted by general grade inflation, but the boats of the majority of teacher candidate rise higher still due to forces unique to their major. If anything, general grade inflation simply makes our findings that much more stark: Even during a period of rising grades, teacher candidates still stand out as having excessively high grades.

2. A preponderance of low-level work

Rita Kramer, a writer who spent a year in the early 1990s visiting 15 teacher preparation programs across the country, described one course that “often seemed like a parody of a grade-school class,” and another in which teacher candidates gave a presentation in which they acted out a classroom scene with many “pretending to be children, a lot of giggling.” Our early working theory, which ultimately proved to be wrong, was that the assignments given to teacher candidates resembled those designed for K-12 students rather than college students, making it all too easy to earn an A. Although such examples certainly exist, we field-tested this theory in 2010 only to find that the prevalence of low-level assignments did not explain higher grades.³⁶ Data from that field test have been supplemented by this new analysis in which we find that less than 1 percent of course grades can be attributed to what we termed “assignments better suited to K-12 students.” (Examples of this type of assignment are found in Appendix C.)

3. A reliance on collaborative work or work that can be revised

Teacher preparation coursework may involve a lot of group assignments that could allow stronger candidates to pull up the grades of group members who might otherwise struggle,³⁷ or assignments that can be revised and resubmitted for a higher grade. However, to the extent that course syllabi accurately reflect such assignments, neither seems to be driving higher grades. Individual teacher candidates, not groups, completed the vast majority of the teacher preparation assignments that we examined (accounting for an average of 94 percent of course grades). Further, other academic areas we examined appear to use group work just as often as teacher preparation.

Likewise, an analysis of opportunities to revise assignments did not find this practice to be more prevalent in teacher preparation courses than in other disciplines, and found no relationship between the opportunity to revise work and higher course grades. For more, see Appendix C.

4. More effective instructors

An explanation for higher grades offered by some in teacher education is that professional teacher educators may be more capable instructors than other college faculty.³⁸ However, a national survey of more than 1,500 colleges and universities suggests otherwise. In a question about effective teaching practices, teacher candidates' evaluations of their instructors put the instructors in the middle of the pack: Their ratings fell below four disciplines (including arts and humanities, and health professionals) and above five others (including business and engineering).³⁹

5. Higher caliber of teacher candidates

Typically, college students take one to two years of general coursework to fulfill basic requirements in math, science, and the humanities before embarking on coursework for their majors. If teacher candidates were to enter their preparation program (generally halfway through college) with higher grades from general coursework, it's plausible that they would graduate with higher grades as well. Studies comparing teacher candidates' grades in general education coursework with the grades of their campus peers date back to the 1980s and have mixed findings.⁴⁰ More recent data suggest that teacher candidates do not perform much better than their peers in general coursework: National Center for Education Statistics data on a cohort of approximately 16,100 students entering college in 2003 found that education students' GPAs in their first year of college were roughly average.⁴¹ This evidence fails to support the argument that teacher candidates enter their programs with substantially higher grades.

We also conducted analyses of the relationships between honors graduation rates and 1) high standards for admission to teacher preparation programs, and 2) evidence on program graduate effectiveness. We found none.⁴²

6. Programs of study involving clinical practice require mastery

Higher grades may be inherent to any professional program that entails clinical practice in fieldwork or student teaching. The grading philosophy involved may dictate that only those candidates who have demonstrated the competence necessary to deliver actual services in the profession should be deemed to have successfully completed the practice exercise — and that successful completion is legitimately represented by an A.⁴³ In other words, in this view, only after a teacher candidate has successfully led classroom instruction, or a nursing student shows herself to be skilled at drawing blood, should each be considered to have completed the relevant assignment; an A signifies completion.⁴⁴ Certainly, what constitutes a “mediocre” grade in clinical coursework is not easily defined. If a nurse drawing blood comes close to a vein but does not quite reach it, is that a B? If a teacher candidate's lesson on measuring angles results in half of students performing adequately, is that a C?

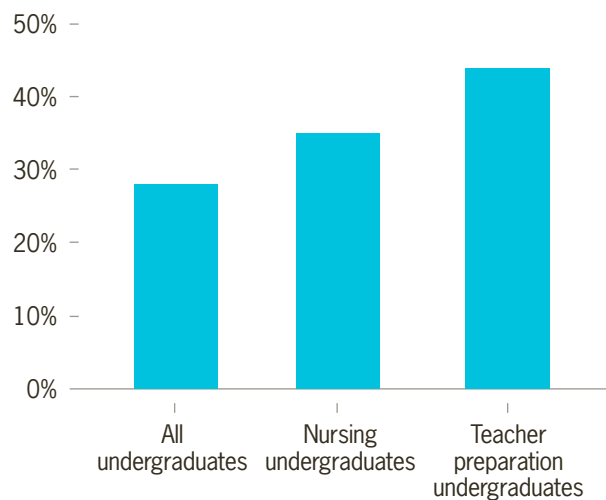
Other features of clinical practice may also affect student grades. For example, the supervisor for clinical practice (e.g., student teaching in teacher preparation) is often responsible both to mentor and to evaluate the student — and this blending of the roles of support and assessment may serve to increase grades.⁴⁵

To explore whether these distinguishing features of clinical coursework explain the higher grades in teacher preparation, we compared a small sample of 29 institutions housing both teacher preparation and nursing programs to determine if both of these clinically based programs had similarly high rates of honors. We found that although



the nursing programs tend to have higher rates of honors than the institution as a whole (the average rate of honors in nursing is 35 percent, while the average rate of honors across these same institutions is 29 percent),⁴⁶ the proportion of honors in nursing is still far less than the proportion of honors in the institutions' teacher preparation programs (averaging 44 percent). This finding echoes the comparison of honors in different majors in Section 2. Teacher candidates have higher rates of honors than nursing programs in 20 of the 29 institutions in the sample.

Fig. 11 Who qualifies for honors?



Although 29 percent of all undergraduates in this sample of 29 institutions earn honors, the honors rate is higher for nursing students, 35 percent. However, the proportion of teacher candidates earning honors is even higher, at 44 percent.

These findings suggest that while the clinical nature of teacher preparation and nursing programs may indeed boost the grades of teacher candidates and nursing students relative to their campus peers, teacher candidates still earn grades well above those that can be attributed to the grading practices inherent to clinical coursework.

7. Higher proportion of women in teacher preparation

Since women tend to earn higher grades in college,⁴⁷ it is possible that the fact that teacher preparation candidates are predominantly women may account for higher GPAs.⁴⁸ To test this possibility, we collected data in 23 institutions on the proportion of women in colleges of education or teacher preparation departments (depending on the information publicly available on institutions' websites).⁴⁹ We tested whether a correlation exists between the proportion of women and the raw percentage point difference in honors and found no relationship.

Summary of the theories

After reviewing these different hypotheses, none seems to be a potentially significant driver of higher grades in teacher preparation programs, with the possible exception of clinical practice, whose effect is equivocal.⁵⁰ In contrast, the findings regarding the proportion of grades based on criterion-deficient assignments provide a tangible, measurable explanation for teacher preparation's disproportionately higher grades.





6. Recommendations and conclusion

How could teacher preparation assignments be revised to produce both greater validity in assessing the range in the quality of candidates' work and grades that more accurately recognize exceptional work? Essentially, *the remedy lies in limiting the scope of the assignments.*

The value of limiting the scope of assignments to maximize the potential for productive feedback is by no means restricted to teacher candidates who are learning how to teach; it applies to anyone learning how to do almost anything. For example, a football team learning how to strategize for an upcoming game might do so by shared viewing of videotapes of its opponent's last few games, followed by discussion. If the coach were following the example often set by instructors in teacher preparation, he would instead ask everyone individually to watch a different football game that night and return to the locker room the next day to propose strategies that the team might use — and the team could figure out how to run each play once the game had started.

Limiting assignment possibilities does not mean “dumbing down” assignments

Demonstrating understanding of content and practicing skills in a situation with constrained conditions allow teacher candidates to refine their understanding based on narrative and grading feedback from an expert. This process ensures that by the time the candidate is thrust into a live and far more complex classroom situation, the understanding and skills to address this situation have become second nature.

This approach of limiting possibilities already works in training settings that have analogs to teacher preparation. Perhaps the best example of how professional programs “control” for content is the classic business school “case study,” demonstrating the power of using thoughtfully selected and carefully crafted assignments that build a common foundation for the growth of professional skills.

Similarly, few people would argue that training programs for medical professions “dumb down” their assignments — and this field commonly employs criterion-referenced assignments in training to ensure that nurses and doctors acquire content and skills.⁵¹ An example is the use of “standardized patients,” actors who are each trained to present as a patient with a specific ailment. Medical students are asked to conduct an exam to determine the ailment. Often, these examinations are videotaped to allow the student to watch the video with an instructor and get feedback. The student may be asked to perform the examination a second time to ensure proficiency.

It is very disturbing to me that we are not measuring the work ethic and challenging candidates to realize that there is the right way and wrong way of doing things. Correction is not criticism and students today need to be challenged and expect a challenging program. One reason our profession is not respected is because it is NOT seen as a challenging experience.

- Jennifer M. Quick
former teacher

Limiting assignment possibilities does not mean stifling candidates' creativity

Narrowing the scope of an assignment does not exclude the possibility of multiple valid approaches to complete assignments. In this vein, cognitive psychologist Dan Willingham has likened the teaching profession to architecture: Teachers should know the fundamental principles of instruction and classroom management, just as architects apply physics and materials science to design a structurally sound building. But like an architect, a teacher “then also uses creativity and ingenuity to go beyond any strictures that science can offer, to create something wholly original, functional, and enduring.”⁵² Criterion-referenced assignments allow for ample creativity while setting reasonable boundaries to focus the assignment.

Recommendations

For teacher educators and administrators of teacher preparation programs:

- ➔ Convert a high proportion of assignments in early teacher preparation coursework from criterion-deficient to criterion-referenced.

Individual instructors can make this change easily in their own course assignments. Our analysis found that frequently the only criterion-referenced assignments in a teacher preparation course are quizzes and tests. Assignments that involve developing, delivering, and assessing instruction as well as managing a classroom could be easily converted to criterion-referenced assignments. A heavy dose of criterion-referenced assignments earlier in the preparation process will better prepare teacher candidates for student teaching, which is inherently (and appropriately) an experience in which assignments cannot be circumscribed but instead emerge from classroom circumstances (which is why student teaching coursework is excluded from this analysis).⁵³

Converting a **criteria-deficient** assignment:

You will revise a lesson that you observed in fieldwork. Explain the changes you would make to it so that it closely resembles the learning cycle method of teaching that we have discussed in class.

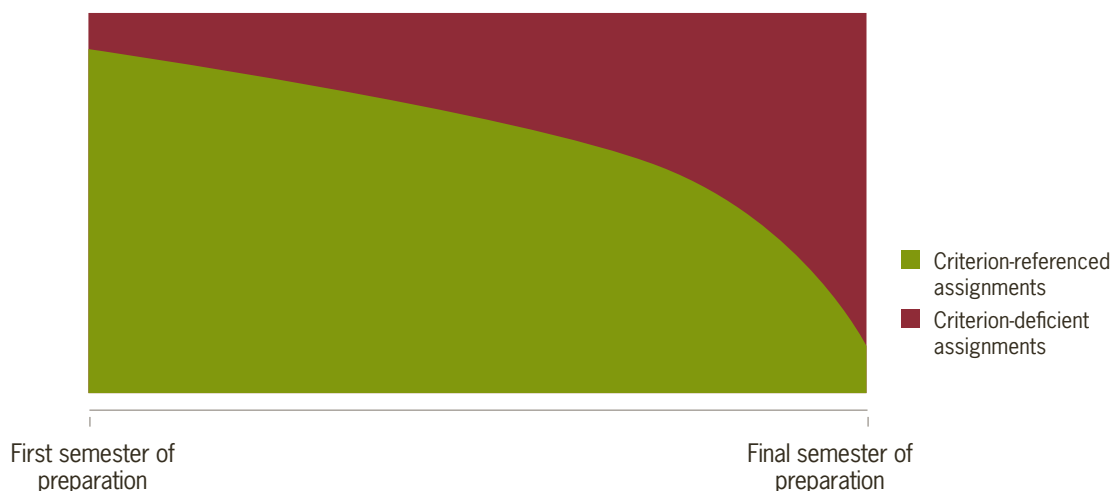
Transformation to a **criteria-referenced** assignment:

You will respond to the lesson plan and classroom scenario described and explain changes you would make to it so that it closely resembles the learning cycle method of teaching that we have discussed in class.



Teacher preparation program administrators can review course syllabi across a program to look at the categories of assignments given, whether they are criterion-referenced or not, and whether they are clearly related to the work of teaching. Doing so may produce a clearer picture of the overall experience teacher candidates have and may identify gaps in training or areas that are saturated with criterion-deficient assignments.

Fig. 12 Ideal trend for assignments during training



Courses early in a training program should contain primarily criterion-referenced assignments. These can slowly taper off and give way to an increasing proportion of less circumscribed assignments. By the end of the training program (i.e., in student teaching), assignments can be almost completely as broad in scope as necessitated by the classroom placement.

For more examples of how criterion-deficient assignments can easily be converted to criterion-referenced assignments, see Appendix D.

➡ Provide scaffolded criterion-referenced assignments that prepare teacher candidates for clinical work.

Early exposure to the classroom is increasingly seen as important to teacher candidates' preparation. However, if each candidate in a class observes teaching in a different classroom or teaches a lesson observed only by the teacher in whose classroom fieldwork is conducted, assignments based on the findings of their observations or the success of the lesson are inherently criterion-deficient.

The training value of fieldwork can be augmented if teacher preparation programs provide criterion-referenced scaffolding assignments. For example, early in training, programs should have teacher candidates evaluate videos of effective teachers employing different instructional strategies. After candidates successfully identify the strategies, they could then teach lessons employing the same techniques in real classrooms while being frequently observed (in person or on video) by their university supervisors. Only after completing these important steps in a number of areas would candidates be ready for student teaching, when more of the work and its evaluation are based on the unique circumstances of the classroom rather than the requirements set by the instructor.⁵⁴

○ Strengthening fieldwork

Some institutions have found ways to make fieldwork assignments more closely fit the definition of criterion-referenced assignments. For example, **Hunter College – CUNY** requires that teacher candidates videotape themselves teaching and document specific instructional decisions they make at different points in time (e.g., at 5:37, I noticed that Josh wasn't paying attention, and so I employed a low-profile desist of standing next to his desk). This arrangement allows the professor to take in the situation and how the teacher candidate responded to it, as well as the rationale behind that response.

Although this method requires a much greater time commitment from both the teacher candidate (who must review the video and annotate it) and the professor (who must watch at least segments of the video), it allows everyone to make sure that the teacher candidates really are learning and practicing the skills to become effective teachers.

➡ Work with fellow teacher educators to develop a shared standard for high-quality work.

Program administrators can lead the effort to norm grading standards across the teacher preparation faculty. Discussing examples of teacher candidates' work and how it should be graded can help instructors develop a common understanding of how to distinguish between higher and lower quality work products. Looking at work that others consider exemplary can help instructors determine which work products truly merit an A grade.

This exercise should include redefining how to grade "competent" work, especially competent clinical work. Certainly there are gradations in teacher quality, from inadequate to competent to exceptional. An A should be reserved for those teacher candidates who go beyond competence to do exemplary work.

The rating structure of the edTPA, an increasingly widely used standardized "teacher performance assessment," demonstrates how this differentiation is possible even in evaluating clinical performance. Its rubric, which rates teacher candidates from one to five, defines the average score, Level 3, as "the knowledge and skills of a candidate who is ready to teach." However, teacher candidates can achieve higher levels of readiness with a Level 4, "a candidate with a solid foundation of knowledge and skills for a beginning teacher," or Level 5, "the advanced skills and abilities of a candidate very well-qualified and ready to teach."⁵⁵ The edTPA does not treat all passing scores as a Level 5; likewise, teacher preparation should not consider all work deemed "competent" to be worthy of an A.



For higher education institutions:

- ➔ Track average grades by course or major and institute a commencement honors policy that restricts honors to graduating students in an established top percentile of a college or department rather than those achieving a GPA minimum.

The “honest transcript” movement proposes that transcripts include both the student’s grade and the average grade in the course. This move toward transparency is one of several ways that higher education institutions can track average grades and maintain their institutions’ quality.⁵⁶

A system that awards honors for graduating students in, for example, the top 20th percentile of a college — or even better, a department — ensures that students are compared only to other students taking similar coursework. This approach may reduce the pressure on more challenging departments to award unwarranted A’s, and ensures that only the exceptional students from each department are recognized. For more information about the effect that high grades may have on students, see Appendix G.

It would not be advisable to restrict honors to a top percentile across the entire institution because this creates incentives for the more challenging programs to raise students’ grades in order to compete with the less challenging programs.

🟡 The **Metropolitan State University of Denver** restricts honors to the top 15 percent of students within each college, so long as they meet a 3.65 GPA minimum. The teacher preparation program is housed within the School of Professional Studies, which has the second-most rigorous GPA requirements in the institution for students graduating with honors. The program’s graduating students have an honors rate in line with the student body as a whole, with a percentage point difference in honors of only 3 percent.

- ➔ Review coursework across academic disciplines for its proportion of criterion-referenced assignments.

The purpose of this report is to draw attention to improving teacher training, but its analysis can be applied more broadly. Increasing the proportion of criterion-referenced assignments may seem most applicable for training programs (e.g., teacher preparation, nursing), but this approach to assignments can be used in any subject where students must learn to employ skills, techniques, or content knowledge.

It was never easy to get an A. The coursework helped weed out those who could teach and those who could not.

– Felicia Gray
Veteran 2nd grade teacher

The challenge of training for the classroom must be commensurate with the challenge of effectively teaching within it.

Conclusion

The profession of educating teachers frequently fluctuates between two roles: training teacher candidates in a set of skills that can be mastered and guiding teacher candidates toward building professional identities and becoming lifelong seekers of knowledge that is “too fluid to be achievable.”⁵⁷ The first approach rests on the idea that many aspects of teaching can be learned and practiced before a new teacher enters the classroom, and that techniques vary in effectiveness in a fairly predictable manner across a range of scenarios. In contrast, the second approach rests on the notion that each classroom is a unique situation, and that teachers must learn to adjust — or come up with new approaches — for each new class, building on their own personal philosophies of teaching. This latter approach, which assumes that learning on the job is the only way to become effective, often dominates the profession. It tacitly, if not explicitly, condones the fact that each and every year more than 1,500,000 children endure at least nine months as a test subject for teachers “learning on the job.”⁵⁸

The perceived need of teacher candidates to “discover” the best way to teach their students rather than relying on the instructor to transmit this knowledge is a natural outgrowth of the profession’s emphasis on forming an identity. This approach assumes there are no “wrong” techniques for a candidate to employ and no best practices to use as guides. Furthermore, assignments that ask teacher candidates themselves to identify what they did or did not do well rely on the candidates’ very rudimentary understanding of effectiveness. Although it is absolutely essential for teacher candidates to go through exactly this process in the latter part of their preparation, it is hardly be the best way to begin preparation.

The analysis of coursework found in this report speaks to the heart of the debate between these two camps. If one believes in *training* teachers by equipping them with effective techniques, then having more criterion-referenced assignments is essential. Programs cannot help teacher candidates hone their skills if the programs do not demand that teacher candidates demonstrate specific techniques, and without such demonstrations, the programs cannot give specific, constructive feedback about whether candidates are using appropriate techniques and doing so effectively.

If, on the other hand, the purpose of teacher preparation is to develop teachers’ professional identities, then criterion-deficient assignments seem quite adequate. Assignments can be completely open-ended if instructors only want teacher candidates to explore their own approaches to teaching lessons, to choose which topics they want to teach, and to develop their own personal philosophies toward various aspects of education. In these assignments, however, little



discrimination among work products on their merits is possible — or even seen as desirable. Unfortunately, this latter approach, to which many teacher educators subscribe, does not adequately prepare teachers for the demands of the classroom.

Even for teachers with years of experience, the daily business of teaching is difficult. The challenge of training for the classroom must be commensurate with the challenge of effectively teaching within it. Just as an athlete training for a triathlon would never invest in a program of exercises that takes time and energy but doesn't make her a better runner, biker or swimmer, so too a teacher candidate should not have to invest in coursework that may require hard work, but delivers little in the way of actual training. Likewise, no athlete would want a watch that inaccurately, if flatteringly, shaves minutes off his training times — and yet teacher preparation programs regularly give grades that fail to accurately represent teacher candidates' readiness to teach.

Teachers entering the classroom on day one without having had the opportunity to practice with — and learn from — assignments designed to ensure mastery of content and skills begin their careers at a disadvantage, and they will likely spend their entire first year or more trying to catch up. After earning high marks on assignment after assignment, they may walk into the classroom on their first day feeling confident. And then the students walk in, teaching begins — and new teachers realize how little they actually know and how many decisions they're unprepared to make.

Teacher preparation can be better. With a few easily made but highly significant changes in the nature of tasks required of candidates (particularly in their first year) and stricter grading, preparation programs could immensely strengthen the value of the training and signaling they offer.

Teacher candidates deserve to be given detailed critiques of every lesson plan they write or teach because when they become teachers, their jobs and their students' academic achievement will depend on the efficacy of their lesson plans. Teacher candidates deserve to be told that the way they learned to read may not work for everyone, and so they need to learn the core components of reading instruction that research has proven are effective. Teacher candidates deserve to be challenged by the substance of their coursework rather than to be given easy A's, because the days of rating all teachers above average are ending — instead teachers will be judged by the quality of their students' work. Any program that offers its teacher candidates anything less diminishes the value of their investment in their education and shortchanges those candidates and their future students.

Teacher preparation
can be better.
Teacher candidates
deserve better.

Endnotes

- 1 To build this sample, we found commencement brochures online or requested them from every institution included in our *Teacher Prep Review* that houses an undergraduate teacher preparation program. We received brochures from virtually all of these institutions. However, nearly half of the brochures were missing information that was critical to conducting the analysis (e.g., there was no way to identify teacher candidates), or had fewer than 20 teacher candidates who could be identified. Few California institutions were included because these institutions almost never offer undergraduate teacher preparation degrees; they offer post-baccalaureate or graduate degrees in teaching.
- 2 Honors were only counted when based on students' GPA, which could include being in a top percentile of the graduating class based on GPA. We did not include honors designations given on the basis of taking honors courses, writing a thesis, or joining an honors society. Teacher candidates are generally identifiable in commencement brochures based on their majors, minors, or an indication that they earned a teaching certification. We compared teacher candidates to the entire institution rather than comparing teacher candidates to all other students *exclusive of teacher candidates* for two reasons. First, some smaller institutions have a large share of students enrolled in teacher preparation programs, so there may be few other students. Second, comparing to the entire institution inclusive of teacher candidates establishes a baseline for what is common across the entire institution. However, the implication is that as institutions have a greater proportion of teacher candidates, differences between the proportion of honors among teacher candidates and all graduating students are reduced.
- 3 Using the 10-percentage-point differential to distinguish between institutions is reasonable in the context of the data we are measuring. Specifically, the average proportion of students earning honors at an institution is 30 percent—so a 10-percentage point difference above this would mean that at an average institution, a third more teacher candidates earn honors compared with the average.
- 4 These 62 institutions where the pattern is reversed offer up an additional finding of interest: They manage to keep the overall rate of honors lower than the “industry average” reported here. Only about 26 percent of all students at these institutions earn honors, compared with 30 percent across all institutions in the sample. The difference in the percent of all undergraduate students earning honors is statistically significant based on a two-sample t-test ($p=0.001$).
- 5 To build this sample, we randomly selected 20 institutions that had a differential of 20 points or more and 20 institutions with differentials of less than 10 points (stratified to include more institutions that are among the top 200 producers of teacher candidates). When reviewing majors, we removed any major with fewer than five students because each student's individual honors status could skew the results too greatly. We considered all core teacher candidates in aggregate and removed non-core teacher candidates (e.g., those who were certified in teaching physical education or art) from analysis.
- 6 The Princeton Review identifies business, psychology, and nursing as the three most popular majors in college. The Princeton Review. (2014). *Top 10 College Majors*. Retrieved November 7, 2014 from <http://www.princetonreview.com/college/top-ten-majors.aspx>.
- 7 Note that not every institution offers all majors, leading to unequal sample sizes across majors.
- 8 Kapel, D. E. (1980). A Case History of Differential Grading: Do Teacher Education Majors Really Receive Higher Grades? *Journal of Teacher Education*, 31(4), 43-47.
- 9 Koedel, C. (2011). Grading Standards in Education Departments at Universities. *Education Policy Analysis Archives*, 19(23).
- 10 Comparison departments include “(1) math, science, and economics departments: biology, chemistry, computer science, economics, mathematics and physics; (2) social-science departments: political science, psychology, and sociology; and (3) humanities departments: English, history and philosophy.”
- 11 Adapted from Koedel, C. (2011), page 8.
- 12 American Council of Trustees and Alumni. (2014). *Getting what you pay for? A look at America's top-ranked public universities*. Washington, DC: American Council of Trustees and Alumni.
- 13 Brucklacher, B. (1998). Cooperating teachers' evaluations of student teachers: All “A's”? *Journal of Instructional Psychology*, 25(1), 67-72.
- 14 P. 6, Nikolakakos, E., Reeves, J. L., & Shuch, S. (2012). An examination of the causes of grade inflation in a teacher education program and implications for practice. *College And University*, 87(3), 2-13.
- 15 Grades given by adjunct and non-tenured faculty tended to be higher than those given by full-time and tenured faculty. Nikolakakos, E., Reeves, J. L., & Shuch, S. (2012). However, education colleges do not appear to have a much higher proportion of adjuncts than other departments. Coalition on the Academic Workforce. (2012). *A portrait of part-time faculty members*. Accessed 17 September 2014 from http://www.academicworkforce.org/CAW_portrait_2012.pdf



- 16 Met Life. (2006). *The MetLife Survey of the American teacher: Expectations and experiences*. Accessed 11 September 2014 from <http://files.eric.ed.gov/fulltext/ED496558.pdf>. TNTP. (2013). *Leap year: Assessing and supporting effective first-year teachers*. Accessed 11 September 2014 from http://tntp.org/assets/documents/TNTP_LeapYear_2013.pdf.
- 17 Rivkin, S. G., Hanushek, E. A., & Kain, J. F. (2005). Teachers, schools, and academic achievement. *Econometrica*, 73(2), 417-458. Gordon, R., Kane, T.J., & Staiger, D.O. (2006, April). *Identifying effective teachers using performance on the job* (Hamilton Project Discussion Paper). Washington, DC: Brookings Institution.
- 18 Some limited research suggests that certain types of assignments may promise greater efficacy for training, but scant research gives an overarching theory for how to distinguish between more and less effective assignments, or connects these assignments with course grades. A 1985 review of research on teacher preparation identified the technique of “microteaching” (in which teacher candidates practice attaining specific learning objectives by teaching brief lessons) as an effective opportunity for a teacher candidate to attempt a specific learning objective and to be evaluated, and explained that “one of the virtues of microteaching appears to be its facilitation of immediate feedback.” (Evertson, C. M., Hawley, W. D., and Zlotnik, M. (1985). Making a difference in educational quality through teacher education. *Journal of Teacher Education*, 36(3). Pages 2-12.) Katherine Merseth’s 1991 analysis of case studies suggests that their use as a teaching tool has languished in education coursework while flourishing in business courses for several reasons, including the rationale that business programs defined business administration as a “decision-making process” while teacher preparation lacked the same clarity of purpose. Merseth argues that case-based instruction could actually serve a number of purposes in teacher preparation, including applying existing education theories, exploring one’s “personal orientation” to teaching, and practicing making decisions in complex situations. (Merseth, K. K. (1991). The early history of case-based instruction: Insights for teacher education today. *Journal of Teacher Education*, 42(4), 243-249.)
- 19 We use the term “candidate” when referring specifically to students in a teacher preparation program (i.e., teacher candidates). When we refer to undergraduate students across any and all programs in an institution, we use the term “students.”
- 20 Hattie, J., & Timperley, H. (2007). The power of feedback. *Review of Educational Research*, 77(81). P. 81-112.
- 21 Ibid.
- 22 The design features we examined do not connect to whether the assignment’s content conforms in any way to NCTQ’s standards.
- 23 We do not wish to imply that these other qualities of a student’s work product — completeness, use of correct grammar and spelling, etc. — do not matter. However, the purpose of teacher preparation coursework is not to teach teacher candidates grammar and spelling — it is to train them in how to teach. Thus, the most essential parts of the assignments, in our view, are those related to the substance of the task and not the style.
- 24 p. 160, Hall, R. A. (2012). A neglected reply to grade inflation in higher education. *Global Education Journal*, 2012(3), 144-165. Our approach is in accordance with Hall’s perspective: If assignments are open to too wide a range of content and approaches, then they do not become effective measures of what all students have learned about any specific content or approach.
- 25 These institutions were selected from the top 200 producers of teacher preparation programs for which we have full sets of syllabi in our database, plus some institutions that were included in the sample because they posted publicly available grading data online. We were unable to collect syllabi for another 116 teacher preparation courses that should have been included in the sample. However, we do not think that these missing syllabi significantly skew our findings.
- These institutions were selected as a convenience sample because they posted either recent syllabi or course and section-level grading data on their websites, and because we could obtain relevant materials via open records requests. Some institutions post course grade data on their websites, possibly in an effort to give students information about instructors’ grading habits and course difficulty, or to address grade inflation. For those institutions that do not make these data publicly available, we used open records requests.
- 26 Because of our focus on teacher preparation, we most often provide examples related to the assignments common to teacher education coursework and refer to students as “teacher candidates.” However, even when we do not draw explicit analogies to coursework for other students, it should be assumed that the categorizations we make of assignments and the connections we propose between coursework and grades extend to coursework anywhere on campus.
- 27 For this analysis, we refer not to the percent of assignments but rather to the percent of course grades attributed to assignments. We do this for several reasons. First, one assignment may be given multiple times — such as a weekly quiz or a reflection after each fieldwork assignment — and it makes more sense for the analysts to group all of these assignments together rather than to separately code each reflection or quiz (especially if the syllabus is unclear as to how many such assignments are required). More important, using the percent of course grades attributed to assignments factors in the relative importance placed on different assignments. For example, a course may include 20 reflections, but these may only contribute to 10 percent of the total course grade.

- 28 An unavoidable limitation of our analysis is that we cannot assert that having criterion-deficient assignments causes higher grades. We do find a relationship between these components, and we believe that the criterion-deficient assignments provide a plausible and compelling reason for higher grades. However, because we cannot feasibly design an experiment in which we randomly assign some instructors to give more criterion-deficient assignments than others, we cannot claim to have found causality.
- 29 Other points of interest:
- The courses taken by teacher candidates in senior year have a higher proportion of grades based on criterion-deficient assignments, with the percentage of assignments coded as criterion-deficient increasing from 67 percent prior to senior year to 82 percent in senior year (excluding student teaching). Although the proportion of criterion-deficient assignments is too high early in training, the shift makes sense since teacher candidates *should* have more broadly scoped assignments as they increase in competency and complete more fieldwork (illustrated on page 31). We find a similar shift in other academic disciplines as well, which have 29 percent of course grades attributable to criterion-deficient assignments prior to senior year, whereas the proportion senior year rises to 48 percent.

It's less clear what may be driving two other points of interest:

- Criterion-deficient assignments are more prevalent in secondary courses than elementary courses: An average of 69 percent of elementary course grades can be attributed to criterion-deficient assignments, while 74 percent of secondary course grades can be attributed to these assignments. This difference is small, but moderately statistically significant ($p=0.06$).
- Few special education programs (only seven) are included in the sample, but they have a lower average proportion of criterion-deficient assignments, accounting for 63 percent of overall course grades rather than an average of 71 percent for all teacher candidates.

Further research would be necessary to determine what is driving these differences (or whether the difference in special education would persist if we reviewed assignments in a larger sample of special education programs).

- 30 We were unable to collect syllabi for another 116 teacher preparation courses across the 33 institutions that should have been included in the sample. However, we do not think that these missing syllabi significantly skew our findings.
- 31 This analysis omits all student-teaching coursework, which is an integral part of teacher preparation training but is inherently criterion-deficient.
- 32 Those assignments that did not fall easily into one category were generally coded as "criterion-deficient," with a few exceptions (e.g., exams and quizzes are coded as criterion-referenced unless the description suggests that criterion-deficient is more accurate).
- 33 In fact, Nikolakakos, Reeves, and Shuch (2012) found grade inflation in teacher preparation coursework at the graduate level.
- 34 These programs would include all of California's post-baccalaureate programs for which data is unavailable for evaluation on the first component of the standard.
- 35 Rojstaczer, S. & Healy, C. (2012). Where A is ordinary: The evolution of American college and university grading, 1940-2009. *Teachers College Record*, 114, 1-23; Nikolakakos, E., Reeves, J. L., & Shuch, S. (2012); Hall, R. A. (2012). A neglected reply to grade inflation in higher education. *Global Education Journal*, 2012(3), 144-165. Babcock, P., & Marks, M. (2010). Leisure College, USA: The decline in student study time. *Education Outlook*, 7. American Enterprise Institute for Public Policy Research. Accessed 11 August 2014 from <http://www.aei.org/article/education/higher-education/leisure-college-usa/>. Weber, W. L. (2012). Grade inflation or productivity growth? An analysis of changing grade distributions at a regional university. *Journal of Productivity Analysis*, 38(1), 95-107. Bombardieri, M. (2013, December 05). Harvard, other schools still fighting grade inflation. *The Boston Globe*. Levine, A. & Dean, D. (2013, December 20). Why grade inflation (even at Harvard) is a big problem. In Strauss, V. *The Answer Sheet*. *The Washington Post*. Retrieved 20 December 2013 from www.washingtonpost.com/blogs/answer-sheet/wp/2013/12/20/why-grade-inflation-even-at-harvard-is-a-big-problem/. Novy, C. (2011, November 18). Fighting grade inflation, real or imagined: Latin honors changes a short fix. *The Brandeis Hoot*. Retrieved 20 May 2013 from thebrandeishoot.com/articles/11235. Menton, J. D. (2012, October). Faculty scrutinizing grading trends. *Yale Daily News*. Retrieved 20 May 2013 from <http://yaledailynews.com/blog/2012/10/11/faculty-scrutinize-grading-trends/>.
- 36 Greenberg, J. and Walsh, K. (2011). *Ed school essentials: A review of Illinois teacher preparation*. National Council on Teacher Quality: Washington, DC. Retrieved September 25, 2014 from http://www.nctq.org/dmsView/Ed_School_Essentials_IL_Teacher_Prep_NCTQ_Report.
- 37 We recognize and endorse the importance of group projects, but teacher candidates also need to receive feedback on their own individual work, so an abundance of group work can be problematic.



- 38 This argument was put forth by several respondents to Stephen Sawchuk's blog about Koedel's 2011 study on inflated grades in teacher preparation programs. These respondents argued that one would expect that courses being "taught by trained educators" would lead to greater student success. Nancy Illing MS MEd (commenter ID). (2011, June 13). Response to: Sawchuk, S. (2011, June 10). Do education schools give too many A's? *Education Week*. Retrieved April 10, 2014 from http://blogs.edweek.org/edweek/teacherbeat/2011/06/do_education_schools_give_too.html. DRJEN (commenter ID). (2011, June 13). Response to: Sawchuk, S. (2011, June 10). Do education schools give too many A's? *Education Week*. Retrieved April 10, 2014 from http://blogs.edweek.org/edweek/teacherbeat/2011/06/do_education_schools_give_too.html.
- 39 National Survey of Student Engagement. (2013). *A Fresh Look at Student Engagement – Annual Results 2013*. Bloomington, IN: Indiana University Center for Postsecondary Research. This category includes questions about whether course goals and requirements were clearly explained, whether the course was taught in an organized way, whether examples were used to illustrate difficult points, and whether students received prompt feedback on assignment drafts and final products. Although the overall rating of "effective teaching practices" was roughly average, this survey does find that students in education programs report above-average rates of discussing grades and assignments with instructors (education students are seven percentage points more likely than average to do this "often" or "very often") and to receive prompt feedback on academic performance (again, seven percentage points above average), though several other disciplines also report above average experiences in these areas.
- 40 These studies each had a small sample consisting of students from only one institution. Kapel (1980) studied students at an unidentified medium-sized state university and found that teacher candidates' general education grades were lower than students in arts and sciences or business majors. Fisher & Feldmann (1985) compared students at Illinois State University and found that teacher candidates had slightly higher average grades in selected general education courses (a difference ranging from 0.02 to 0.08 points on a 4.0 GPA scale), although the study does not indicate if this difference is statistically significant. Fisher, R. L. & Feldmann, M. E. (1985). Some answers about the quality of teacher students. *Journal of Teacher Education*, 36(3), 37-40. Matczynski, Siler, McLaughlin, & Smith (1988) looked at students from Clarion University and found that teacher candidates earned higher grades in general education than students from other majors (a difference of 0.12 on a 4.0 GPA scale), although their grades were not statistically different from those earned by arts and sciences majors and were lower than those earned by nursing students. Matczynski, T. J., Siler, E. R., McLaughlin, M. L., & Smith, J. W. (1988). A comparative analysis of achievement in arts and science courses by teacher education and non-teacher education graduates. *Journal of Teacher Education*, 39(3), 32-36.
- 41 57.5 percent of education majors had a 3.0 GPA or higher, while 57.1 percent of all students had this GPA. Notably, by the end of their college careers, education students had much higher than average GPAs (23 percent earned a 3.75 GPA or higher, compared with 20 percent of all college students, and 42 percent earned a GPA between 3.25 and 3.74, compared with 39 percent of all college students). National Center for Education Statistics. (2009). BPS: 2009 Beginning Postsecondary Students. Computation by NCES QuickStats on 9/11/2014. Accessed <http://nces.ed.gov/datalab/quickstats/createtable.aspx> on 11 September 2014.
- 42 On the theory that standards for junior year admission to teacher preparation programs would be higher if prospective candidates were relatively more qualified than their campus peers based on their general education grades, we conducted an analysis looking at this relationship, combining the rigor of programs' admissions criteria performance (using NCTQ's Selection Criteria Standard) with the graduation data collected for this report. As it turns out, there is no relationship: Teacher preparation programs with higher numbers of students who graduate with honors are no more likely to have more rigorous admissions requirements. If teacher preparation programs graduating a disproportionately large share of candidates with honors are doing so only because they are admitting a disproportionately large share of applicants who have GPAs above the average, they are doing so without the benefit of admissions standards that would select for high GPAs.
- We also looked at those institutions with disproportionately high rates of honors to find any evidence that their teachers are more effective after they leave the program. Using available value-added data in both Ohio (N=15 institutions, t-test reveals a difference of less than one percent, $p=0.82$) and Tennessee (N=12 institutions, t-test reveals a difference of less than one percent, $p=0.44$), we found no difference in those institutions with disproportionate levels of honors. Admittedly, this small sample is not conclusive, but can be expanded as more value-added data in more states become available. We also have value-added (VAM) data available for Louisiana, Florida, New York City, and North Carolina, but could not use these data because they either were on the program rather than the institution level, or there were too few institutions with both VAM and honors data available.
- 43 This approach is much like a "mastery learning" model, wherein if a teacher candidate does not successfully master the content or skills on the first try, the instructor should reteach the concepts and allow the teacher candidate to rework the assignment until it meets expectations and merits a high grade. Block, J. H. & Burns, R. B. (1976). Mastery learning. *Review of Research in Education*, 4, 3-49. Retrieved from https://faculty.unlv.edu/jensen/html/Doctorate/CIT620/materials/block_burns_1976.pdf.

- 44 Given that clinical coursework purports to use a “mastery learning” approach, assignments used to assess mastery must have clear objectives and specific criteria that must be met for mastery to be achieved. As we will explore in Section 3, this feature is often absent from teacher preparation coursework.
- 45 Student teachers also tend to receive above-average evaluations from their cooperating teachers, Brucklacher, B. (1998).
- 46 This difference is moderately statistically significant when using a one-tailed T-test ($p=0.08$), testing whether nursing has a higher proportion of honors than the institution overall.
- 47 NCES's 2012 data set reveals that while undergraduate GPAs below 2.50 are split almost evenly between men and women, GPAs of 3.50 or higher (generally the minimum to earn honors) are earned almost twice as often by women (62 percent). U.S. Department of Education, National Center for Education Statistics, 2011-12 National Postsecondary Student Aid Study (NPSAS:12). Accessed 10 July 2014 from <http://nces.ed.gov/datalab/quickstats/createtable.aspx>.
- 48 Since the 1950s, roughly three-fourths of education bachelor degrees have gone to women. U.S. Department of Education, National Center for Education Statistics, (2012). “Table 350. Degrees in education conferred by degree-granting institutions, by level of degree and sex of student: Selected years, 1949-50 through 2010-11.” *Digest of Education Statistics*. Accessed 10 July 2014 from http://nces.ed.gov/programs/digest/d12/tables/dt12_350.asp.
- 49 These institutions were chosen by a stratified random sample based on scores on the Rigor Standard, and then based on whether they had publicly available data about the proportion of women in their program.
- 50 We also considered other less compelling hypotheses. For example, while instructors giving high grades for weak work (which we termed “lax grading standards” in a previous version of this footnote) could be part of the cause for the differential in honors, evidence does not suggest that this problem is worse in teacher preparation than elsewhere in an institution. Some have noted that giving high grades for weak work may result from policies requiring teacher candidates to maintain a minimum GPA for entry into student teaching. This “No C's” policy could put pressure on instructors to give students higher grades or else risk standing in the way of students' academic and career goals. However, since this policy occurs in other majors (such as in a physics program that requires students to earn B's or better in all courses), it would not account for the higher grades in teacher preparation.)
Likewise, high grades apparently make student evaluations of faculty more positive, so the use of contingent faculty in teacher preparation (who might be presumed to need to obtain favorable candidate evaluations to maintain employment and who might be “easy graders” as a result) may be driving higher grades. However, it is not clear that the teacher preparation programs utilize contingent faculty to a greater extent than do other departments: Available data suggest that the distribution of contingent faculty teaching courses in teacher preparation programs is, on average, not drastically higher than (and is often lower than) the distribution elsewhere within institutions. (Coalition on the Academic Workforce. (2012).)
- 51 We interviewed a small group of nurses and medical residents about how their training compared to teacher preparation and found that while they confirmed the greater density of criterion-referenced assignments, they generally felt that it would be productive to inject more reflection into medical training. All but one respondent agreed that as part of their training they would like to have developed a personal “philosophy of medical care,” but they rarely if ever had such an assignment. Respondents wanted to develop a philosophy regarding very specific situations, including dealing with difficult patients, providing care in a multicultural environment, and clarifying one's values and goals. Only the nurse practitioner reported writing some reflections during training.
- 52 Willingham, D. (2012, May 29). *Is teaching an art or a science?* Retrieved April 17, 2014 from https://www.youtube.com/watch?v=wJrqM7Rx_FY.
- 53 Members of our Teacher Candidate Advisory Group likened this approach to having “training wheels on a bike” — when teacher candidates are starting out, they need far more support. As they learn more and become more skilled and confident, they can become more independent in their work.
- 54 Student teaching coursework is not included in this analysis because by its nature, it should be criterion-deficient. Student teaching requires that each candidate is assigned to a separate classroom to observe and then teach, often for weeks or months at a time. While their cooperating teachers should consistently observe them, it would be unrealistic to expect an instructor to watch every lesson of every candidate. Lessons are planned based on the needs of each individual classroom in collaboration with cooperating teachers, so it would be unreasonable to standardize them across all candidates' placement classrooms.
- 55 Pecheone, R. L., Shear, B., Whittaker, A., Darling-Hammond, L. (2013). *2013 edTPA Field Test: Summary Report*. Stanford Center for Assessment, Learning and Equity.
- 56 The recommendation to track student grades by program is echoed by the American Council of Trustees and Alumni: ACTA. (n.d.) *Implementing governance for a new era*. Retrieved from www.goacta.org/images/download/Implementing_Governance_for_a_New_Era.pdf



- 57 Walsh, K. (Summer 2013). 21st-Century teacher education: Ed schools don't give teachers the tools they need. *Education Next*, 13(3). Retrieved from <http://educationnext.org/21st-century-teacher-education>
- 58 Greenberg, J., McKee, A., and Walsh, K. (2013). *Teacher Prep Review*. Washington, DC: National Council on Teacher Quality. Retrieved from http://www.nctq.org/dmsView/Teacher_Prep_Review_2013_Report.

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