

Testimony - March 12, 2009

Florida House of Representatives, PreK-12 Appropriations Committee

Re: Dale Hickam Excellent Teaching Program

Linda Cavalluzzo, Ph.D.

Chairman Flores and members of the committee, thank you for giving me an opportunity to share my research on the effectiveness of teachers in Dade County, Florida who hold certification from the National Board for Professional Teaching Standards.

My name is Dr. Linda Cavalluzzo. I am employed by CNA, a non-profit, non-partisan research and analysis group with headquarters in Alexandria, VA. CNA specializes in producing high quality, unbiased, empirical analyses to help government leaders make better decisions.

I've worked at CNA since 1994. Before that, I served on the faculty of Union College in Schenectady, NY, where I taught courses in economics and statistical methods.

The research I am reporting on today was funded jointly by grants from the National Science Foundation and the National Board for Professional Teaching Standards. However, the views I express today are mine alone. They do not necessarily reflect the opinions of CNA, the National Board, or the National Science Foundation.

My research focuses on the effects in Miami-Dade County Public Schools on student achievement in 9th and 10th grade mathematics, as measured by gains in FCAT scores.

This morning, I'd like to give you an overview of my findings, and the methods I used to reach those findings.

- First, I found robust evidence that National Board Certification is an effective signal of teacher quality in Miami-Dade county Public Schools.
 - Students with National Board Certified teachers made greater gains in HIGH SCHOOL mathematics than students who had teachers who were in the application process or who never applied.
 - Students in the classes of teachers who were unsuccessful in their attempt to gain certification, made the fewest gains.

I parsed these data many different ways, and analyzed them using a variety of statistical methods. The conclusion I drew from that exploration is that the results hold up quite well to these different approaches and cuts at the data.

- And I believe I can offer a reason for this. I found that the benefits to students of having a National Board Certified Teacher accrued for every subgroup I analyzed: for example, both 9th and 10th graders with National Board Certified Teachers made greater gains than other students in their grade level without a National Board Certified Teacher.
- But the benefits appear to differ across subgroups: the benefits of having a National Board Certified Teacher appear to be greater for struggling students.

For example, I found evidence that students from disadvantaged minority groups, students who were retained in grade the previous year, and students with IEPs made greater gains than their counterparts if they had a National Board Certified Teacher, compared to the additional gains made by non-struggling student groups with National Board Certified Teachers.

This is an important finding in light of the goal of NCLB—to ensure learning for all students.

I'd like to take a step back now, to give you a little background on the study.

I presented the study I am describing today to the National Research Council at the National Academy of Sciences. The research was judged by the NRC as one of only seven studies done nationally that was worthy of consideration in their assessment of the value of National Board Certification.

After examining these studies, the NRC concluded that there is clear evidence that NB certification is an effective signal of teacher effectiveness.

First, let me tell you about the data

The findings I am speaking about today are based on an analysis of four years of student records at the high school level, covering school years 2000 through 2003. The focus of the study is on student performance in the 9th and 10th grades on the mathematics portion of the FCAT. Because of the district's large size (about 355k students in the years of my study), I had 108,000 9th and 10th grade student records in

that time frame to work with. Of those, more than 3,000 had a nationally board certified teacher for their mathematics class. Another 4,700 had a teacher who was applying for board certification at the time of the study. 1,400 had a teacher who had applied and not succeeded or who had withdrawn from the program before qualifying for board certification.

Now the methodology

When estimating the learning gains of students with and without a board certified teacher, it is really important to take into account the characteristics of the students assigned to those teachers. That's because we know that students often are not randomly assigned to teachers. Some kids that are a certain way end up in certain schools, other kids that are a certain way end up in other schools, or with another teacher. If you've got a mom that advocates for you, you might get the teacher that everyone perceives is the best in the school. So it's not random. Therefore the researcher has to take into account the characteristics of the kids, rather than just say Ms. Smith is better than Jones. Smith may have had kids that came more ready to learn than did Jones; therefore you have to take that into account.

The richness of Florida data is one of the things that is so enticing to researchers. You may have heard that a lot of research on the effectiveness of NBCT's takes place in Florida and North Carolina. That's because you folks have funded a very rich data set that can be mined to carefully address questions that are of interest to policy makers. I took full advantage of these data.

In this study, I take into account each student's demographic indicators, but also indicators of their motivation and general academic performance. I was able to control

not only for the standard stuff-- their demographic characteristics, whether or not they were receiving free or reduced lunch-- but also for indicators of student motivation. For example,

- Whether the student is classified as gifted,
- Whether the student is repeating the grade,
- How many days the student was absent during the school year,
- I also take into account the teacher-assigned report card grades for conduct and effort.

Now let me turn to the teachers. We could look at all the teachers and say do they or don't they have National Board Certification, but the fact is those things aren't random either. In fact those things tend to come in bundles. If one is a National Board Certified Teacher, that teacher also is going to have state certification, and is going to be an experienced teacher. These teachers are going to have a lot of qualities that we tend to think of as being high quality. I want to take those things into account. And when I do, that allows me to estimate the unique impact, or association, between National Board Certification and student outcomes, holding these other things constant. So even after we've said they've got a state certified teacher, (they've got their credentials), they teach the right subject matter--that's a big issue-- if they are teaching math, are they a math teacher or (for example) an English teacher? After taking all those things into account, I still find that certification from the National Board separates on teaching effectiveness, as measured by student gains on the FCAT test. So that's about where my research is. Now I would be glad to take any questions.

Addendum: Comments added in response to previous speaker and panel discussion on evidence of whether the National Board Certification process improves instructional practice

If I have another minute, I'd like to add a couple of quick comments related to the testimony you have already heard. These comments are outside my study, and do not reflect findings from rigorous research. Instead, they are a couple of informal observations that I think will be of interest.

The presentation I just gave was all about the numbers, just the numbers. But in my work, I've also had an opportunity to meet National Board Certified Teachers. Now, this is not systematic research, like the findings I presented earlier. But when I meet National Board Certified Teachers, I always take the opportunity to ask them about their experience. The Board Certified teachers I've met tell me that the National Board Certification process was by far the best professional development experience they've ever had. It caused them to reflect on their practice, and to discuss their teaching strategies with other teachers. So the testimony you just heard from the Nationally Board Certified teacher about the value to her of the experience is not unique. It seems to be a commonly held experience.

Another quick point. In my current work, I have had an opportunity to become somewhat familiar with research on the characteristics of effective professional development programs. Such programs are sustained, and job embedded; they focus on content knowledge and on pedagogy. Yet, every year millions of dollars are spent on brief professional development experiences--a couple of hours here, a half-day there. But such programs have not been shown to impact instruction. In contrast, National Board

Certification is a lengthy process. It assesses content knowledge, and it assesses practice. It encourages teachers to collaborate with their colleagues as they prepare their portfolios for evaluation. In short, applicants are doing the things the professional development research suggests, and high school reformers say, effective programs should be doing.

Thank you. I'll be happy to take your questions.