

The Role of Value-Added Measures in an Evidence-Based Framework for Improving Teacher Preparation and Development

Marge Plecki

Ana Elfers

University of Washington
Educational Leadership and Policy Studies

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Session Overview

- Introductions
- Presentation of findings from an exploratory value-added study
- Consideration of an evidence-based framework for improving teacher preparation and development
- Implications for program improvement and accountability

Purposes of the Inquiry

- Conduct a *illustrative study* using a value-added methodology that explores the relationship between teacher characteristics, teacher preparation programs, and student learning
- Develop an *initial evidence-based framework* that includes evidence along the continuum of teacher development from program applicant to experienced teacher

Research Questions

- What differences in teacher value-added scores are found by years of teaching experience?
- What differences are found in value-added scores for teacher education graduates by teacher preparation institution attended?

Data Sources and Methods

- Used available WA state data
- Simple two-level random effects model (using a Hierarchical Linear Model)
- Separate analyses for reading and math
- Separate analyses for all 5th grade teachers and beginning 5th grade teachers in 2007-08
- Two primary teacher variables were explored:
 - a. Years of teaching experience
 - b. Teacher preparation institution

Results from the Feasibility Study: Teacher Experience

1. For all 5th grade teachers, years of teaching experience had a positive and significant effect on value-added measures in reading and math
2. Experience effects plateaued at 25 years for reading and 20 years for math
3. Teachers with less than 3 years of experience had lower value-added measures than more experienced teachers

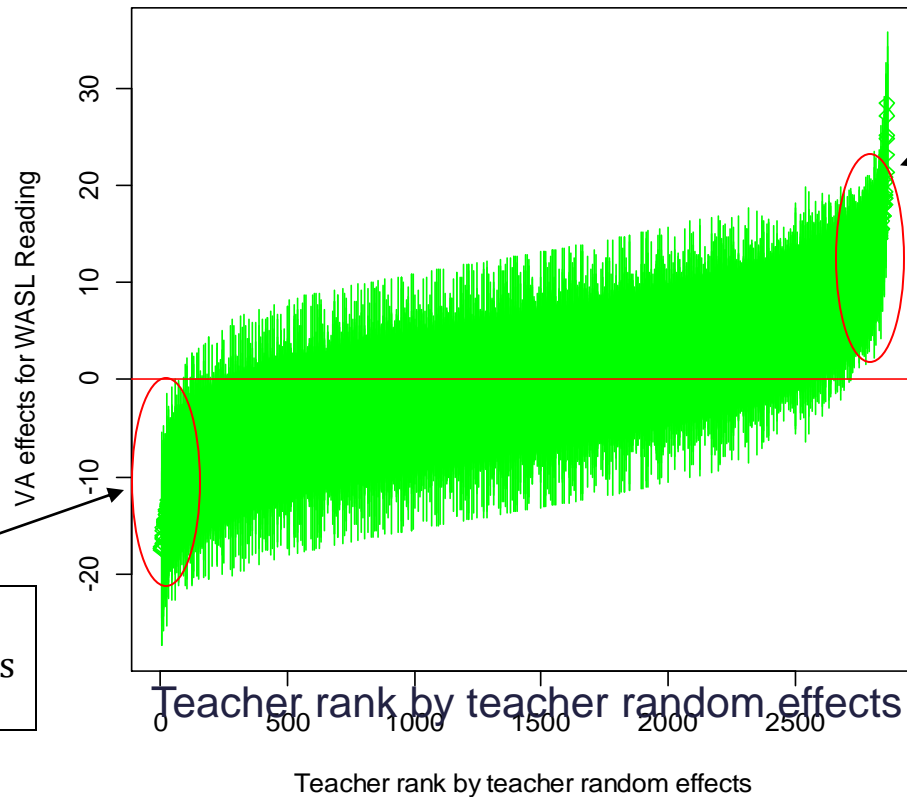
Results from the Feasibility Study: Teacher Preparation Institutions

1. When examining all 5th grade teachers, we identified institutions that significantly outperformed and underperformed in both reading and math
2. When studying only teachers with less than 5 years of experience, we identified 2 institutions that significantly outperformed others in reading
3. No results were statistically significant in math for novice teachers

Note: Some institutions/campuses were combined to generate sufficient sample size

An Illustration of Teacher Value-Added Effects

Washington: Ordered teacher VA effects



Teachers identified as less effective on this measure

Teachers identified as more effective on this measure

Implications and Caveats

- Due to psychometric challenges and current data limitations, it is not appropriate to rank order individual institutions or make summative statements about preparation program quality that relies solely on value-added analyses
- Value-added approaches can be information, but are not sufficient, particularly when applied to individual teacher and institution outcomes

Improving State Data Capacity

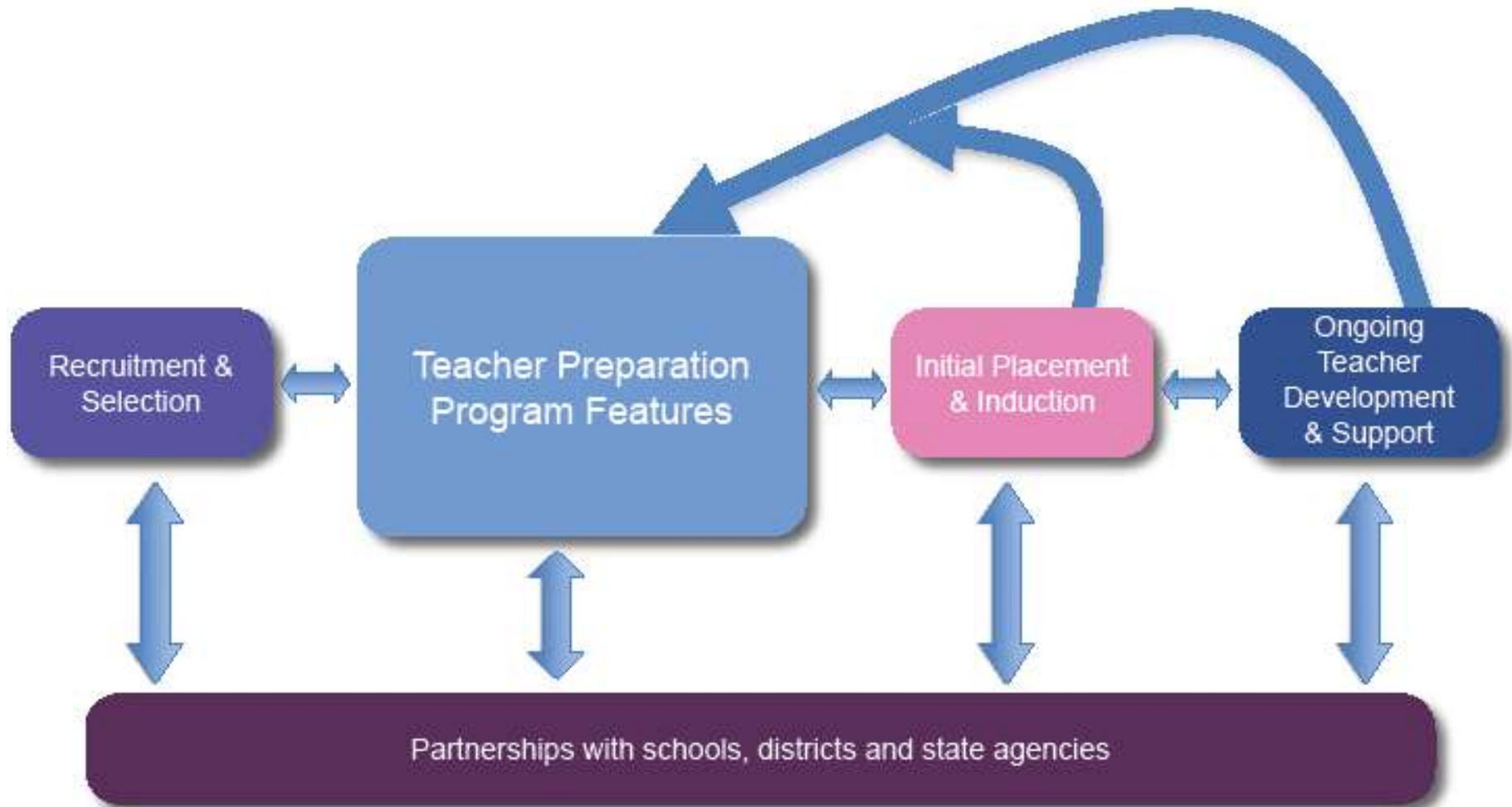
- Significant limitations exist with available statewide data including:
 1. Incomplete matching of certificated instructional staff to the classrooms and students they teach
 2. Lack of uniform outcome measures in grades K-2, 9, 11 and 12
 3. Uniform outcome measures limited to reading and math across grades, and writing and science in some grades
 4. Lack of data regarding the types and amounts of programs and intervention services provided to students
 5. Need for new and uniform data about teacher preparation program features, including field experiences

Creating an Evidence-based Framework

“No single measure – no matter how powerful the findings – is enough to gauge all the relevant components of teacher quality or program effectiveness.” (Crowe, 2010)

- Data elements need to be organized into a coherent framework
- Creating a “culture of evidence” – systematic collection and rigorous analysis of data
- Initial development of an evidence-based framework that emphasizes shared responsibility:
 - for multiple forms of evidence
 - from various actors and agencies

Evidence-based Framework



Forms of Evidence Across the Continuum of Teacher Preparation and Development

Applicants	Candidates	Novices	Experienced Teachers
<ul style="list-style-type: none"> • Background characteristics • Admissions criteria • Recruitment venue 	<ul style="list-style-type: none"> • Coursework • Field experiences • Feedback from district partners • Evaluation from faculty supervisors • Performance assessments • Surveys of candidates • Types of credentials earned 	<ul style="list-style-type: none"> • Hiring rates • Classroom characteristics • Nature of assignment • School context • Induction and mentoring • Professional development • Retention and mobility • Value-added measures 	<ul style="list-style-type: none"> • Assignment by grade and subject area • Professional learning • Teacher leadership and career development • Retention and mobility • Value-added measures

Small Group Discussion

1. What evidence or measures do you think would be helpful for improving professional preparation and teacher development? (see handout)
2. What isn't currently collected or measured but should be and how could this information be gathered?

Summarizing Small Group Discussion

- What similarities did you encounter?
- What are the points of difference?
- What suggestions do you have about measures that need to be developed or included?

The Call for Collective Responsibility

- Responsibility for improving teacher preparation and development rests jointly with higher education institutions, schools and districts, professional organizations and state agencies
- Building an evidence-base system requires collective involvement and an investment in data quality and availability if used for both improvement and accountability purposes
- Continue to develop value-added approaches but press for appropriate interpretation and use

Possible Next Steps to Consider

- Collaborate with teacher preparation institutions and K-12 systems to develop a comprehensive framework for statewide use
- Advocate for necessary data elements at the state and local level
- Consider how current state efforts to improve teacher and principal evaluation can inform the discussion
- Pilot the use of multiple measures of teacher and student learning, including responsible use of value-added approaches

For more information...

Please contact us with questions or for
copies of our report

Marge Plecki: mplecki@uw.edu

Ana Elfers: aelfers@uw.edu