The New Teacher Project

Comments from Advisory Panel Members on *Boosting the Supply and Effectiveness of Washington's STEM Teachers*, January 2010

Tom Robinson
Math/Science Teacher, Chelan High School, Lake Chelan School District
NBCT - Adolescence and Young Adulthood Mathematics
2010 ESD 171 Regional Teacher of the Year

Do you believe that the advisory panel structure has been a helpful approach to examining the issue of STEM teacher supply and effectiveness in Washington State?

I felt confident in the Advisory Panel's ability to cut to the heart of the STEM challenge in our state. Hearing perspectives from a variety of stakeholders helped me formulate my thoughts and recommendations in the proper context. I appreciated the fact that while we didn't all agree on the best path, we all agreed that finding a solution the problem we face was paramount.

To what extent do you agree with TNTP's conclusion that all stakeholders must focus on dramatically improving student achievement in STEM subjects and closing the math and science achievement gap by boosting the supply and overall effectiveness of Washington's STEM teachers?

If we in the K-12 education system are to continue producing students with the foundation to go on and succeed in STEM careers, the responsibility starts with us. It requires a combination of highly-skilled educators, with passion for their craft and compassion for their students, students who are highly-motivated and who see value in the work they do while in school, and a post-high school system that welcomes students and makes their pathway toward higher study attractive. Only when all three parts work in sync can we bridge this gap, but I believe TNTP has helped us take a critical first step toward doing that.

After participating in this process, what next step do you see for you or your organization to boost the supply and overall effectiveness of Washington's STEM teachers? What step would you most like to see other parties take?

As a high school STEM teacher, my role is the same as all the other STEM teachers in our state: we must attract students to our programs, offer them engaging, relevant, and meaningful instruction, and we need to show them the many career paths that will be available to them upon completion of their STEM studies. To that end, our schools have to continue recruiting and retaining the finest STEM teachers around. This entails building stronger relationships with

our teacher-prep programs so that those teachers exist and are excited about entering the K-12 system. The teachers and students are out there - we just have to go find them and bring them in and make them want to stay.

Stamatis Vokos
Professor of Physics, Seattle Pacific University

Do you believe that the advisory panel structure has been a helpful approach to examining the issue of STEM teacher supply and effectiveness in Washington State?

I commend the TNTP process of securing advice. Given the complexity of the challenges associated with STEM teacher supply and effectiveness, input was sought from many different perspectives. The discussions at advisory panel meetings were substantive, informative, multi-faceted, and collegial.

To what extent do you agree with TNTP's conclusion that all stakeholders must focus on dramatically improving student achievement in STEM subjects and closing the math and science achievement gap by boosting the supply and overall effectiveness of Washington's STEM teachers?

I share the sense of urgency that permeates the report. We have to act now and act in concert to have a significant positive impact on student learning and on the elimination of the achievement gap.

After participating in this process, what next step do you see for you or your organization to boost the supply and overall effectiveness of Washington's STEM teachers? What step would you most like to see other parties take?

For Seattle Pacific University, effective STEM teacher preparation is a signature commitment. Our STEM departments, working in concert with our School of Education and our regional and statewide partners, will capitalize on the findings of the TNTP report and the report of the National Task Force on Teacher Education in Physics. But there is a lot more to do. University science departments must recognize their crucial role in preparing effective science teachers, especially teachers of science in elementary grades or teachers of physics and physical science at the secondary level; schools of education must recognize that there is no such thing as generic "science" in the real world and provide the science discipline specific pedagogical preparation teachers need; school systems must provide extensive support to inexperienced or ill-prepared teachers rather than placing them in classrooms with our most vulnerable

students—students of color or in poverty; STEM professionals and business community members must recognize the expertise that precollege education professionals bring to a partnership and abandon marketplace models that are not well suited to the educational environment; state agencies must set the bar high for certification and endorsement; and elected policymakers must demand a rich science education for all students and pay for it. Above all, we need to develop consensus on *multiple* valid measures of teaching effectiveness and provide teachers with appropriate support.

Dr. Staci Vesneske
Assistant Superintendent, Human Resources, Spokane Public Schools

Do you believe that the advisory panel structure has been a helpful approach to examining the issue of STEM teacher supply and effectiveness in Washington State?

The advisory structure helped our district to provide input into the process of presenting the findings so that the report was an accurate and clear reflection of the data. Multiple opportunities for input were solicited via the advisory panel format and via site visits to our district. For the most part, The New Teacher Project staff incorporated suggestions regarding wording, additional information that would provide context for the data, and formatting of the data.

To what extent do you agree with TNTP's conclusion that all stakeholders must focus on dramatically improving student achievement in STEM subjects and closing the math and science achievement gap by boosting the supply and overall effectiveness of Washington's STEM teachers?

We agree that strong, consistent messages from multiple stakeholders are needed to change current systems in order to boost the supply of STEM teachers and increase overall effectiveness. Though the scope of the study was limited to STEM subjects, we would probably take it a step further and say that in order to close the achievement gap, the push cannot be limited solely to STEM teachers. There is a cultural shift—a shift within administrators, a shift within unions, and a shift in state statutes—that must occur. This shift in thinking relates specifically to the concepts of differential compensation and teacher evaluation/non-renewal processes. Once we begin to shift belief systems surrounding those two concepts, then we will be able to boost the supply and increase the effectiveness of all teachers.

After participating in this process, what next step do you see for you or your organization to boost the supply and overall effectiveness of Washington's STEM teachers? What step would you most like to see other parties take?

In Spokane, we believe that the shift needs to begin with legislative action that will provide the impetus for districts and unions to renegotiate outdated evaluation and non-renewal processes. Thus, the next step must be with the legislature to revisit statutes regarding required evaluative criteria, provisional status of teachers, non-renewal, and differential pay for high-need areas. Beyond that, in Spokane we are revisiting our own hiring processes and examining our work with principals and evaluation, relative to the data which emerged from our district.

Dr. James Meadows
Washington Education Association

Do you believe that the advisory panel structure has been a helpful approach to examining the issue of STEM teacher supply and effectiveness in Washington State?

The advisory panel was an effective venue for stakeholders to provide practical guidance to inform TNTP research and policy development. WEA acknowledges the professionalism, follow-through and respectful approach provided by TNTP staff in working with our governance and staff leaders.

To what extent do you agree with TNTP's conclusion that all stakeholders must focus on dramatically improving student achievement in STEM subjects and closing the math and science achievement gap by boosting the supply and overall effectiveness of Washington's STEM teachers?

Improving public education is all of our work. While education stakeholders have varied agendas, we are all, ultimately, committed to the same end – ensuring that all students have access to a high-quality public education that prepares them for success in life. In that spirit, WEA enters the 2010 legislative session in support of efforts to improve teaching and learning in STEM areas. The issues we are examining this legislative session – including teacher effectiveness, evaluation, school improvement and alternative certification – will require thoughtful, research-based policy solutions that draw from the input of many stakeholders.

After participating in this process, what next step do you see for you or your organization to boost the supply and overall effectiveness of Washington's STEM teachers? What step would you most like to see other parties take?

WEA has many avenues to help improve STEM teaching and learning. We are committed to working with PESB to shape policy solutions to

address the recruitment, preparation and retention of STEM teachers. We will advocate for policy solutions to expand alternative routes to teaching. We believe we must invest in, rather than outsource, our higher education system. We affirm the importance of strong content, pedagogical and clinical preparation.

We are committed to helping define new visions for teacher evaluation and teacher effectiveness. While we support the use of multiple measures for identifying effective teachers and principals as a starting point for improving our system, we believe similar work can be done to quantify metrics for other entities (e.g. district, school board, community, parents, business) which have an essential role in supporting public education.

WEA members are likely the greatest resource for shaping the future of public education. We look forward to elevating and amplifying their voices to shape policy solutions that are practical, realistic and well-supported.

Gary Kipp
Association of Washington School Principals

Do you believe that the advisory panel structure has been a helpful approach to examining the issue of STEM teacher supply and effectiveness in Washington State?

I feel that the diversity perspectives of the advisory panel caused the researchers to pause and look at this work through a variety of lenses before jumping to particular conclusions. Those doing the research appeared genuinely curious about the viewpoints of those on the panel, and I believe this curiosity led to a better project in the end.

To what extent do you agree with TNTP's conclusion that all stakeholders must focus on dramatically improving student achievement in STEM subjects and closing the math and science achievement gap by boosting the supply and overall effectiveness of Washington's STEM teachers?

Who could argue with the notion of trying to improve student achievement in STEM subjects? The challenge is to do this without jumping on a pendulum that pits literacy against the arts against STEM, etc. We can ride on that pendulum to the detriment of our students if we are not careful.

After participating in this process, what next step do you see for you or your organization to boost the supply and overall effectiveness of Washington's STEM teachers? What step would you most like to see other parties take?

Our association's focus is on principals. We believe that we can best contribute to the state's goal of increasing student achievement in STEM subjects by increasing the principals' skill and confidence in hiring and supervising STEM teachers. To this end, we are organizing a summer retreat, in cooperation with various sponsors, which will be designed to train principals in recognizing good science and math instruction, and increasing their knowledge of these content areas.

Jennifer Wallace
Professional Educator Standards Board

Do you believe that the advisory panel structure has been a helpful approach to examining the issue of STEM teacher supply and effectiveness in Washington State?

Many thanks for the time spent with PESB staff. We see the results of our good conversations in this final report. I hope this spurs continued dialogue and action.

To what extent do you agree with TNTP's conclusion that all stakeholders must focus on dramatically improving student achievement in STEM subjects and closing the math and science achievement gap by boosting the supply and overall effectiveness of Washington's STEM teachers?

On slide 25 – I think it important to a state policymaker audience that you not only depict cost to candidate, but also cost to district and/or state. The reason why TNTP fellowships, UTRs and TFA have lower cost to candidate is some combination of district, state federal and/or foundation funding. TNTP's quote to Washington was that a commitment of roughly $400,000 would be important to get the program up and running and reduce cost to candidate.

I question the $80,000 in lost salary included here. I've not seen data to suggest that the typical intern is foregoing a salary at that level. Data from both the Woodrow Wilson Foundation and SRI Studies suggest far lower.
I also object to the characterization of non-Washington alternative routes as "genuine", implying ours are not. The Fordham Foundation, restrictive in their considerations of alternative routes, labels Washington one of 13 states with "genuine" alternative routes.

Re: slide 23, Washington's more specific definition of alternative route is one reason our production numbers look very low. To date we have only counted participants in our Alternative Route Partnership Grant Program. As a result, many other programs fitting the federal criteria have not been counted. In addition, the state data is apples and oranges – the variety of definitions (NCAC has 11 different classifications of alternative routes) makes true cross-state comparison nearly impossible.

Finally, while we all want increased production, when and how are more critical considerations than ever. Note the graph below. Districts are not hiring new teachers, even in shortage areas, so careful consideration needs to be given to short-term production that may increase unemployment rates among alternative route completers.