Date: September 25th, 2015  
To: Dr. Hilary Loeb and Ms. Jennifer Flaming, Puget Sound Educational Services District  
From: Mr. Alexander Bentz, Ms. Stacey Cataylo, and Dr. Jennifer Laird, RTI International  
Subject: Course Availability Study – Phase II Methodology and Key Findings

The Race to the Top Stay Strong team and the Puget Sound Coalition for College and Career Readiness commissioned RTI International to undertake a study to better understand the administrative, curriculum, and equity issues involved in providing academically challenging courses in South King County. RTI’s study commenced March 2015 and is scheduled to finish at the end of September 2015. The study consisted of two phases: Phase I included the collection, analysis, and reporting of course availability information based on master schedules and school enrollment size. Phase II consisted of interviews with principals at high-need high schools. Findings from Phase I were summarized in a memorandum dated August 8, 2015, with accompanying data tables and figures. This memorandum presents the Phase II methodology, findings, and conclusions.

I. Phase II Study Methodology

The Phase II principal interviews were designed to elicit information about the processes behind master schedule development, student placement into courses, resources/information provided to students about academic requirements, and support given to students enrolled in rigorous courses. For each of these topics, emphasis was given to resource constraints, individuals involved, challenges in serving a diverse student body, and equity considerations.

In addition to general questions about course scheduling processes, principals were asked to comment on results from Phase I of the study. In Phase I of the study RTI found “a consistent opportunity gap tied to the availability of advanced CADR in Math and second-level foreign language when comparing high-need and non-high-need high school,” a gap that was also found for AP classes. Principals were shown course availability for their school as compared to all Race to the Top region comprehensive high schools, high-need high schools in the Race to the Top region, and non-high-need high schools in the Race to the Top region. RTI asked the principals to reflect on the circumstances in their school that may be responsible for the patterns they see in the course availability data. The interview protocol is presented in Appendix A. Interviews were conducted via phone and lasted, on average, 30 minutes.

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1 Eight of the 9 interview subjects were principals, one subject was an assistant principal.
2 High-need high schools have student populations with 55% or higher free or reduced price lunch. A list of schools is included at http://roadmapracetothetop.org/about/list-of-high-need-schools/
The interview questions aligned with following Phase II study questions:

1. What are the administrative processes in place for developing a master schedule?
2. How are students placed into courses? How are students placed into rigorous courses? What data are used to inform student placement/counseling? Are efforts made to encourage non-traditional students to enroll in rigorous courses?
3. How and when are students and parents informed of high school graduation and college admission requirements? Are students informed of rigorous course/dual credit opportunities?
4. Are students supported in taking rigorous or accelerated courses?
5. What obstacles do schools face in making rigorous courses available? What adjustments have they made in reaction to such obstacles?

The quantitative data and analysis from Phase I of this study provide valuable insight into patterns of course availability in high-need and non-high-need high schools across the Race to the Top region. However, we believe it is not useful to connect the Phase I results of individual schools with the qualitative information gathered in our Phase II interviews. The Phase I results represent a single point in time assessment of course availability from the 2014-15 school year and do not provide any insight into how availability has evolved at individual schools or into how unique circumstances at each school contribute to availability of certain courses. Many principals emphasized that their processes and policies around rigorous course offerings have evolved greatly over the past few years the 2014-15 results communicated in the first phase of the study do not necessarily reflect availability in previous years or current availability for the 2015-16 school year. Despite these limitations for analysis, we included these results as part of our interviews as we found that they were useful in the discussion and helped to encourage reflection by the principals.

Study Recruitment

Dr. Hilary Loeb and Jennifer Flaming requested RTI include all high-need high school principals in the Phase II recruitment pool. High-need high schools were chosen as a target group because these schools have student populations with 55% or higher Free or Reduced Price Lunch, and as such represent the schools with challenges associated with being impacted by student poverty. They also represent a comparison group in the Phase 1 of the study. Because of their existing relationship with principals it was decided that Dr. Hilary Loeb and Jennifer Flaming would contact principals from all sixteen high-need high schools in order to recruit them for RTI’s study. Principals were recruited via email, phone, and in-person (at district meetings). From June 2015 to mid-August there were approximately five-six waves of requests. In total RTI interviewed principals from eight of 16 high-need-high schools in South King County and one principal from a non-high-need high school. The goal of 10 interviewees was not reached, likely due to principals lack of availability during the summer and early fall.

3 One high school was erroneously identified as a high-need school, which became apparent during the course of the interview. Although this school has a relatively high proportion of student eligible for free or reduced price lunch (roughly 40%), it did not meet the high-need definitional cutoff of 55%. Nevertheless, in consultation with the Race to the Top Stay Strong team, RTI has decided to include their interview in this summary of findings. Thus, RTI discusses the interviews of the nine principals in the study Key Findings.
Six of the eight high-need high schools that were not interviewed did not respond to the interview requests. Two responded to interview requests but did not respond to re-scheduling emails after they missed the first interview timeslot scheduled. Of these two, one sent email responses that, while limited, will be integrated into our analysis. Given a school response rate of 50%, we caution against assuming the findings from the completed interviews are generalizable to all RTT high-need high schools. For example, principals who participated may have been more willing to participate because they were proud of their schools practices (or had undergone recent changes in this area) compared with those who choose not to participate. The participating schools did range in size. In other words, it is not the case the participating schools tended to be larger, or smaller, than other schools in the region.

II. Key Findings
This section of the memorandum provides a high-level summary of the key findings of the principal interviews, organized by Phase II study questions. Though the principals were from a diverse set of high schools, many common themes emerged from the interviews.

**Question 1: What are the administrative processes in place for developing a master schedule?**

*Principals most often listed curriculum leaders and counselors as participants in master schedule development*

Principals named curriculum leaders, counselors, registrars, and teachers as participants in the master schedule process. Most schools involved different stakeholder groups at different stages of the process. For example, one school would begin the process with office staff (e.g. the principal and registrar) creating a sketch of a schedule followed by counselors and teachers discussing schedule based on student requests and graduation requirements.

*The majority of principals describe a manual, time-intensive process driven by teacher input, student transcripts, test scores, and student requests*

Of the 9 principals interviewed, two mentioned using online registration, and all mentioned needing to manually form their school’s schedule during at least one stage in their process in order to review all students’ needs. Technological applications such as Illuminate and Skyward Master Schedule Builder were each mentioned once but overall emphasis in interview responses were in the time-intensive manual process of forming a complex schedule that meets the diverse needs of their student body.

Principals mentioned that generally large amounts of information are reviewed in the initial forming of the master schedule and that adjustments are made as students are placed into courses. Teacher input was mentioned as valuable as teachers not only use their experience with the student population to assess the number of sections of each course they need to offer but also provide input on which courses they are interested in teaching. Smaller schools mentioned reviewing all student transcripts to build tallies of courses needed for the next year or semester. A handful of schools specifically mentioned using state subject test scores to inform the number of courses of each type needed. One school mentioned using results of a student survey that indicated that students wanted their high school to offer an AP Psychology course.
**Question 2:** How are students placed into courses? How are students placed into rigorous courses? What data are used to inform student placement/counseling? Are efforts made to encourage non-traditional students to enroll in rigorous courses?

Students are typically placed into “core” courses that meet unfulfilled graduation requirements and elective classes that they have selected.

Of the nine principals that provided information on student placement into courses, eight specifically mentioned graduation requirements when asked how students are placed into courses. Most principals referenced a course placement process that involves students choosing the courses they would like to be enrolled in via an online or paper system that is usually complemented by a counselor group or individual visit focuses on graduation requirements. A few principals mentioned systems in place to automatically place students into “core” graduation classes.

Some schools have, or, are moving towards a course selection approach where all or identified students are encouraged to enroll in rigorous courses and aggressively supported when they choose to enroll.

There were two main approaches to student course placement in rigorous courses mentioned by principals. The first emphasizes student self-selection and screening methods (including grades in previous courses and placement tests) to screen for placement in advanced courses. Students and parents are sometimes given information about opportunities to take rigorous courses and the potential benefits to doing so but are required to take the initiative themselves to enroll in these courses instead of receiving individualized encouragements to do so. Principals at these high-need high schools expressed that many of their students were not sufficiently prepared for high-level dual credit and rigorous courses whether because of their prior academic preparation or because of their English Language Learner (ELL)/special education or other high-need status. When reviewing student course selections, these principals mentioned focusing on ensuring that students would be able to meet graduation requirements.

One third of principals mentioned moving away from this approach and towards a practice that instates policies and processes that identify students who are underrepresented in rigorous courses who are likely to succeed in rigorous and dual credit courses and intentionally encourage and support their enrollment. These principals were more likely to mention specific goals around increasing the numbers of underrepresented students in rigorous courses and to report focusing on equity in the course placement process. Two schools had a full-time staff member who was responsible for overseeing tasks related to increasing enrollment in rigorous courses (particularly IB courses) by traditionally underrepresented students - students of color, and particularly, male students of color. One school that has had a very intense focus on closing the opportunity gap around rigorous courses mentioned their use of a survey on student grit. The principal mentioned how use of this survey indicates student potential for succeeding in academically accelerated courses. When asked about any specific policies for

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4 For this study we defined rigorous courses as higher-level math and science courses, second-level language courses, AP and IB courses, and other dual credit courses.
encouraging students to take advanced courses, another high-need high school principal, stated: “It’s not a goal. It’s what we do. All juniors and seniors take IB”.

Question 3: How and when are students and parents informed of high school graduation and college admission requirements? Are students informed of rigorous course/dual credit opportunities?

Roughly half of schools undertook initiatives to actively inform students and parents of rigorous course opportunities, graduation and college requirements. While some schools reported reliance on students and parents to seek out information about academic requirements and rigorous course availability, half reported proactive efforts to provide information to students and parents of many backgrounds. These take the form of class visits (early and often in the academic year and student grade levels), parent nights (including one that partners with the University of Washington for a “FAFSA night”), letters sent home (including one that includes personalized AP Potential data5), and counseling. Other, more passive, information dissemination strategies include course catalogs and course registration materials. The communications are sometimes focused on the individual students and/or parents and sometimes on groups of parents. The goals and content of these communications vary by school. Some schools focus primarily on high school graduation requirements, others include college admission requirements (and/or NCAA participation requirements), and some emphasize rigorous course opportunities at the school.

Question 4: Are students supported in taking rigorous or accelerated courses?

Students are supported in rigorous courses with prerequisite and support classes as well as dedicated staff and watch list systems. All of the principals interviewed mentioned existing support systems at their schools to assist students in courses. Pre-requisite classes such as Exploring Computer Science are offered at one high school in which the course is meant to be a foundational computer science course taken before IB Computer Science. Another high school mentioned a 10-day boot camp before the beginning of school, meant for students to learn about AP course expectations and study skills strategies. Principals also mentioned adoption of a strategy of building in support into student schedules with seminar classes where students review course materials or using existing support classes like AVID6 to provide academic support. One school mentioned its intensive strategy of creating a watch list of students new to rigorous courses, working with teachers to scaffold content appropriately, and going through a checklist of rigorous course needs with all students.

5 The College Board Website explains that “AP Potential is a free, Web-based tool that allows schools to generate rosters of students who are likely to score a 3 or higher on a given AP® Exam. Based on research that shows moderate to strong https://appotential.collegeboard.org/app/welcome.do
6 AVID offers middle and high school courses and professional development for educators focused on college and career readiness and study skills. More information may be found at http://www.avid.org/
Question 5: What obstacles do schools face in making rigorous courses available? What adjustments have they made in reactions to such obstacles?

The primary obstacle of creating a master schedule full of rigorous courses is the need to create a master schedule that serves the high-need student population. All the principals interviewed expressed that serving diverse student bodies with large populations of high-need, ELL, and special education students presents unique challenges in creating master schedules and offering rigorous courses. For example, ELL students must devote part of their schedules to English language courses and many require extra support in credit-earning courses. Some principals expressed that these students are generally not prepared for rigorous courses while others said that they found that many are prepared for rigorous courses in certain subjects even if their overall academic record was not consistent with that of students usually enrolled in rigorous courses.

Two high schools mentioned other unique high-need populations. One school noted that they have a large percentage of transfer students whose needs have to be accommodated, often after the schedule has been formed, while another noted the majority of students at their school are seniors who are behind on their graduation requirements.

Limited resources constrain schools from offering courses and programs that only serve a small number of students without sacrificing the needs of the rest of their student body. Principals interviewed came from varied school sizes. Smaller schools noted the ability to know and easily adjust to the needs of their students but did not note limitations on the number of course offerings, (e.g. having enough students to offer a statistics course). These smaller schools shared their strategy of partnering with a nearby school in order to offer their students more course options. Principals also mentioned budgetary and staffing constraints. Two schools mentioned submitting staffing mitigation plans (when the student need for a course was greater than the number of teachers that could offer course) to the district that allowed them to hire more staff and increase rigorous course offerings.

Other Findings
In the course of our interviews, principals shared information that does not answer our primary study questions but, which PSESD might find valuable; we are sharing it below:

- One small school discovered that by offering their students advanced, dual credit courses at a nearby school they 1) lost valuable student leaders and 2) these students weren’t succeeding at some of the off campus classes. This school course corrected to evaluate what offerings they could offer at the school, and, as part of the evaluation asked students what they would like take.

- Another school that serves a primarily ESL population reported that it feels that it often has to communicate the complexity of its program to others; their program is funded in the same manner as other programs despite its higher complexity and need for translation services.
III. Conclusions and Recommendations

Through interviews with principals, we identified a wide variety of strategies, goals, and obstacles that are part of the master scheduling process in Race to the Top region high-need high schools. However, common themes arose.

PSESD should encourage principals to structure course schedules and offerings around rigorous courses in conjunction with high school graduation requirements

Many principals approached course scheduling with a high school graduation lens. One school reported changing their schedule to a 4x8 (in which students had the opportunity to take up to eight courses) in order to fit in all core requirements and finding that they were able to offer more classes as a result of this schedule. We saw two takeaways from this story: First, schools, in consultation with their stakeholders, can discuss schedule changes that will most benefit students. Second, graduation requirements should be viewed as inclusive of rigorous courses, not competing against them. The first is a strategy that we envision the ESD assisting principals with as a discussion item or area where the ESD can consult and share options and resources. The second is another discussion item involving changing the conversation about rigorous courses, and defining rigorous courses.

PSESD should encourage frequent and consistent communication between school staff and students about rigorous course offerings

We found that principals taking proactive approaches to informing students about course opportunities felt that their efforts were worth it. While small schools took this approach because their small student populations allowed it, larger schools that set up structured counseling meetings were also able to personally reach out to students. While many schools have barriers to communication with their students and parents, we recommend that PSESD work with schools to make consistent and frequent communication of rigorous course opportunities a priority for all students.

PSESD should encourage sharing of information and strategies around rigorous course offerings between schools and other regional stakeholders

In addition, three-quarters of principals emphasized that their processes/philosophies had or were currently undergoing a shift from ones that emphasize students opting-in to programs to one that focus on equity and increasing enrollment/development among students from underrepresented in rigorous courses. However, of these principals, only 3 specifically mentioned issues of equity. Many reported successes with these new processes and all reported new and old challenges that they are working to overcome.

It is still too early to link these changes in process and philosophy to data that can be analyzed externally from the school; however, we recommend that more discussion and sharing happen between schools in regards to the processes and philosophies around master scheduling in particular those that center on equity. Multiple principals reported that they were interested in sharing their experiences and that they wished more stakeholders would ask them to speak about their successful practices. As these changes and processes are key to the Race to the Top goal of increasing equity among rigorous course availability and enrollment, we believe that PSESD has a role to increase sharing among its member schools in this area. Kent-Meridian in particular, shared that they are the first large system school district participating...
Next Step: Encourage principal engagement in regional conversations about rigorous course offerings

The recommendations we have made all imply or require conversations and engagement in the topic. Considering the relatively low response rate to the interview portion of study, we suggest that PSESD thoughtfully strategize with its partners on how resources can best be used to engage principals and all other stakeholders in a conversations and initiatives for closing the opportunity gap in rigorous coursetaking. The discussion could begin broadly with the development of a theory of change and then move on to specific learning sessions where experts on closing the gap, such as Equal Opportunity Schools, could meet with building leaders and the Puget Sound Coalition for College and Career Readiness.

Next Step: Continue to quantify and evaluate opportunity gap around rigorous course availability

We believe that regularly evaluating the gap will be helpful in monitoring and driving progress. While Phase I was limited in its scope because of it measured one point in time, future efforts to quantify could use Phase I results as a comparable baseline. We also suggest that future evaluations broaden the definition of rigorous courses. For the limited scope of this study, rigorous courses were defined to include AP, IB, second-level foreign language, math, and science courses. A broader definition could include other dual credit programs, career and technical education courses, social science/humanities courses. Future assessments of course availability could also explore other data sources. Again, with limited scope and time, master schedules were seen as the best approach to quantify course availability but if there was more buy-in from schools and more resources given to the project, a more detailed count of courses could be obtained. PSESD could also explore the other sources of data that are also currently collected by other organizations and publicly available. Data from the Office of the Superintendent of Public Instruction provides information on all dual credit enrollment and was referenced in Phase I. Regional conversations about increasing rigorous course availability should include discussions of which data would be most valuable to inform the practice and evaluation of rigorous course offerings moving forward.
References


Introduction

My name is [__________] and I am a [__________] at RTI International. [__________] is also on the phone and will be helping us by taking notes. RTI is a multi-disciplinary, non-profit research organization. Our headquarters are in North Carolina, and we work out of the Berkeley CA office. We are in the Education and Workforce Development Division at RTI. RTI is conducting the external evaluation of Puget Sound Educational Service District’s Race to the Top Grant. We’ve have also been asked to do a small, focused study about course availability in PSESD high schools, with particular focus on courses that satisfy Washington state’s (FOUR-YEAR PUBLIC COLLEGE ENTRY REQUIREMENTS, Advanced Placement courses, International Baccalaureate courses, and other dual credit courses.

Are you aware of this study? [If no, give background on process, methodology, and findings]

Thank you for making the time to speak with us about course offerings at your school. Now that we have done an analysis of master schedules of PSESD Race to the Top high schools, we are moving onto Phase II of the study. We are conducting short 30 minute interviews with about 10 Race to the Top-identified high-need high schools. High need schools are defined as having 55% or more of its students qualifying to free or reduced price lunch. The goal is to collect information through these interviews in order to deepen understanding of the regional capacity to offer rigorous courses. We will ask you for some general information about how your school develops its master schedule, and how students are assigned to courses, and then some tailored questions about courses offered in some subjects.

We will combine the information we gather through these interviews, with the course schedule information already gathered and analyzed, to produce a PowerPoint presentation for PSESD. For this project we work mostly closely with Hilary Loeb and Jennifer Flaming at PSESD. They plan to use this information to support increased rigorous course opportunities for students and to support the implementation of Core 24 high school graduation requirements.

Information you share during this interview will be kept anonymous. In other words, when we report on these interviews, we will not link specific quotes or explanations with particular schools or respondents. However, because there are a relatively small number of schools involved, it may be relatively easy for someone like Hillary or Jennifer at PSESD, who know the schools well, to identify a response to a particular school. However, both we at RTI and Jennifer and Hilary are dedicated to maintaining anonymity with information that is shared to the broader PSESD community, so we will do what is needed to mask specific responses.

We are committed to summarizing information in a way that it helpful and actionable for the Race to the Top partners. So we encourage you to be candid and ask us to clarify if any questions are unclear.
We would like to tape record the interview so that we can flesh out our notes after the interview. We will not share this recording outside of our team at RTI, and we will delete it once our notes are complete. Is that Ok with you? Do you have any other questions for us before we begin?

**General Questions**

1. Please describe your school’s process for developing the master schedule? Who is involved? What information do you use?
   - **Probes:**
     - Timeframe for developing schedule
     - Technology used in development
     - Information that informs schedule:
       - Adequate four-year public college entry requirements, Core 24 courses
       - Information on cohort needs, abilities, demands, parent pressure
       - Resource restraints (ex: number or preparation of teachers available to teach courses)
     - Use of scheduling strategies
       - How have strategies changed over time?
     - Development and implementation of policy
       - Existence of an equity review process?

2. How are students assigned to courses? Please first describe how incoming 9th graders are assigned to courses, and then the older grades?
   - **Probes:**
     - For students who first enter your school in 10th or later grades, how are they assigned to courses? (e.g., what information from their previous school do use? Do students take placement tests in any subject?)
     - Do you review students' progress on four-year public college entry requirements when assigning them to courses?
     - Are there courses on your schedule that have multiple pre-requisite courses?
       - Are there pre-requisites that cross subjects (e.g. Math courses required for Science courses)? Are there efforts made to synchronize these?
     - AP, IB, AICE, etc.
1. Does your school use AP Potential data that is based on students PSAT scores? How? What is the cut-off?
2. What drives a teacher or counselor to place or encourage a student to take an AP, IB, etc. class?

3. What types of information, and at what points, are students given about courses needed for high school graduation, and for college, such as the four-year public college entry requirements?
   - Probes:
     - Dual credit enrollment options?

4. Does your school have any specific policies, or goals, related to supporting students in taking accelerated course? (e.g., extra support for students taking AP courses who may need it)

Tailored Questions

We now would like to talk with you specifically about the courses offered at your school, based on the analysis that we did this spring of master schedules. In particular, we’d like to hear your thoughts about the data results for [___________], [___________] and [___________]. So let’s take them one at a time, starting with [___________].

5. Do you have any thoughts or reactions to your school’s result, including when you consider it in the context of result for other schools?
   - Probes:
     - What factors contribute to the differences? (ex: size of student population)
     - In what ways are they similar?
     - Your school offers relatively less ____ courses and relatively more ____ courses. Is there a reason your master schedule looks this way?

6. Is there anything we should have asked about this topic that we have not asked?