

Measuring Student Participation and Engagement across the Early Learning through
Postsecondary Spectrum: Partial Findings from the Washington Kids Count P-20 Project

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Abstract

There is growing consensus that effective education policy must be developed by looking across the three stages of education—early childhood, K–12, and postsecondary settings. The paper discusses one aspect of a three-year effort studying policy relevant indicators across early learning through postsecondary education. It documents the national context leading to recent improvements in data collection and analysis. It reviews desired and available measures of participation and engagement in education across P-20 contexts, highlighting noteworthy gaps and opportunities in Washington State’s data systems. These analyses and the lessons learned in this inquiry are of special interest to educational researchers and leaders who are grappling with developing indicator systems aimed at continuous improvement.

Measuring Student Participation and Engagement across the Early Learning through
Postsecondary Spectrum: Partial Findings from the Washington Kids Count P-20 Project

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There is growing consensus in a number of states that effective education policy must be developed by looking across the three stages of education—early childhood, K–12, and postsecondary settings. Over 38 states are starting to consider educational policy in the context of a learning process that begins at birth and extends through young adulthood by creating P–16 or P–20¹ councils or commissions (Education Commission of the States, 2008). This counters the trend of most policy analysis and development occurring within these three separate systems that often lacks consideration of the cumulative influence of learning during each stage. One reason for this is that there has not been a consistent base of data on which to build sound P–20 education analysis. Across the U.S., efforts are underway to improve state-level data systems. These include the Data Quality Campaign’s advancement of an agenda for linked student-level data systems (Data Quality Campaign, 2007) and federal investment of over more than \$115 million in 27 states through the Institute of Educational Science’s Statewide Longitudinal Data Systems Grant Program (Institute of Educational Sciences, 2008).

¹ We determined that our effort should encompass the P–20 span in order to parallel Washington State’s focus on grade 20 as a point of exit from the educational system. ECS (2006) distinguishes between P–16 and P–20: “Although K–16, P–16 and P–20 are similar in nature, there are notable differences:

A K–16 system integrates a student’s education from kindergarten through a four-year college degree.

A P–16 system integrates a student’s education beginning in preschool (as early as 3-years-old), and ends with a four-year college degree. In our formulation, ‘P’ can be as early as pre-natal.

A P–20 system expands the P–16 system to include graduate school education” (p. 1).

This paper discusses one element of the Washington Kids Count (WKC) P-20 Project (hereafter referred to as the P-20 Project) a three-year effort of the University of Washington Human Services Policy Center (HSPC) to develop and disseminate new educational indicators in a coherent P-20 Framework. Launched in late 2007, the mission of the P-20 Project is *to create a data and policy framework to guide the design, collection, and dissemination of educational indicators spanning the developmental trajectory from early-learning through young adulthood*. The P-20 Project's conceptual framework for an early learning through postsecondary data and policy analysis system is nationally oriented and draws on resources and efforts taking place internationally, nationally, and in other states. The discussion of the current availability of data focuses on Washington State, where HSPC is located. Both a brief project description and overview of the mission and work of HSPC and WKC are in Appendix A.

This five-part paper begins with a discussion of the context of data development across the P-20 trajectory as defined in the P-20 Project Framework that will be released later this spring (Brandon, Loeb, & Magarati, forthcoming). The second section summarizes our approach to reviewing available indicators and measures² of education in early learning through postsecondary settings. Third, to illustrate this approach, the paper presents initial findings regarding appropriate indicators and measures for one P-20 Framework component, educational *Participation/Engagement*. Fourth, the review of available data enables us to highlight promising practices and noteworthy gaps in data systems. In our conclusion, we discuss priorities for an emerging agenda for state policy research prompted by this inquiry.

² In this paper, we refer to *indicators* are the ways that abstract constructs are operationalized, reflecting particular categories or attributes of interest. *Measures* are the specific scales or metrics used to quantify an indicator. An example of *indicator* that provides information about the construct, engagement, would be cognitive engagement in classroom activities. An example of a *measure* exploring this indicator could be the response to an item on an instrument used to gauge the level of effort a middle school student make in her eighth grade mathematics courses.

We spotlight *Participation/Engagement* because these indicators have been shown to be important correlates of student achievement (Fredericks, Blumenfeld, & Paris, 2004; Klem & Connell, 2004; Appelson, Christenson, Furlong, 2009). Both attendance and subsequent engagement reflect whether a student is present both physically and emotionally in school. Absenteeism hinders student achievement, attainment, self-esteem, and potential in the labor market (Celio & Harvey, 2005). Alternately, engagement in learning activities inside and outside of the classroom has been found to enhance student academic performance (Fredericks et al., 2004) and to be a protective factor against engaging in risky behavior (National Research Council and the Institute of Medicine, 2004).

Context for WKC P-20 Project

Early Learning through Postsecondary Governance

The goal of the WKC P-20 Project is to improve state-level education data gathering and analysis. Three national developments in the related areas of policy governance, data availability and data use inform early P-20 Project efforts. First, the early learning–through–postsecondary enterprise is emerging as a loose partnership among state and federal agencies, policy-oriented nonprofit organizations, and private philanthropy. These efforts address a range of educational policy activities, including governance, data gathering, and legislative analysis. Generally early learning through postsecondary governance has the aim of reducing gaps in achievement between different racial and ethnic groups and improving student preparation at all levels (Van de Water & Krueger, 2002). According to the Education Commission of the States (ECS), there are 38 state P–or K–16 or P/K–20 councils or commissions (ECS, 2008). The ECS, National Governors’ Association, Achieve, and the Council of Chief State School Officers also maintain active programs providing technical assistance and policy analysis regarding P–postsecondary learning.

As the approach to cross-system educational governance is relatively new,³ policy analysts have highlighted certain challenges associated with its successful implementation. The ECS (2008) documented progress of P-16 and P-20 councils, and uncovered issues associated with limits in authority and resources. For example, only three state councils have administrative authority over state programs. Close to a third of the councils (eleven) receive no outside funds and the funding status is unknown for four councils. It is not yet clear whether the current economic downturn may compromise the status of P-20 efforts across the U.S. as declines in resources led to the recent dissolution of Washington State's P-20 Council. Other emerging issues in cross-system governance are the meaningful inclusion of early learning (Takanishi & Kauerz, 2008) and properly evaluating the progress of council and commission efforts (Chamberlin & Plucker, 2008).

Increased Availability of Linked-Longitudinal Data

Second, P-postsecondary governance efforts can benefit from the rapid progress that states have made implementing linked longitudinal data systems.⁴ Authorized by the 2002 Educational Technical Assistance Act,⁵ the federal State Longitudinal Systems Grants Program is charged with assisting state education agencies in developing and implementing systems that track student data over time. The program has given more than \$115 million in 3-year grants to 27 states (Institute for Educational Sciences, 2008). This investment is closely tied with the implementation of the 2001 No Child Left Behind Act (NCLB). The law required the creation of

³ The first P-20 council was established in Georgia in 1996. Calls for better linkages date back to Hodgkinson (1985) and Usdan (1969) who lamented the lack of collaboration across educational systems.

⁴ Longitudinal data systems match individual students' and/or teachers' records over a number of years. By providing the capacity to track information over multiple years, a longitudinal data system allows analysts to make stronger judgments about the impact of programs and policies than data from a single point in time.

⁵ The Educational Technical Assistance Act of 2002 is Title II of the statute that established the Institute of Education Sciences (IES) and is designed to help state education agencies in developing and implementing longitudinal data systems. Typically characterizing education in K-12 settings, Longitudinal Data Systems match individual students' and/or teachers' records over a number of years. By providing the capacity to track information over multiple years, a longitudinal data system allows analysts to make stronger judgments about the impact of programs and policies than data from a single point in time.

state standards and annual testing for third through eighth graders. Its mandated federal reporting of these achievement results prompted the need to increase the capacity of state K–12 information systems. Both the requirements to disaggregate achievement data by different student groups and the potential of sanctions for schools and districts that have not produced Adequate Yearly Progress have presented pressure on states to have accurate information about changes in performance over time (Snow-Renner & Torrence, 2008).

Federal and state progress in enhancing data quality and analysis are supported by a range of nonprofit policy organizations that both track progress in data development and offer technical assistance. Established in 2005, the Data Quality Campaign (DQC) has been a leader in encouraging and supporting states to both improve data collection and use and implement P–12 state longitudinal data. The DQC (2007) has advanced a system that collects data with at least “ten essential elements”⁶ and tracks state progress in this endeavor. While the focus of the DQC initiative ends at 12th grade, one of these elements addresses the integration of high school with postsecondary education and training, a capacity reported in currently 28 states (DQC, 2009). A number of organizations track and disseminate state-level indicators of student learning, including Achieve, the Corporation for Economic Development, the Education Trust, the Educational Needs Index, Kids Count organizations in other states, the National Center for Higher Education Management Systems, and State Higher Education Executive Officers.

⁶ These include: “1. A unique statewide student identifier that connects student data across key databases across years; 2. Student-level enrollment, demographic and program participation information; 3. The ability to match individual students’ test records from year to year to measure academic growth; 4. Information on untested students and the reasons they were not tested; 5. A teacher identifier system with the ability to match teachers to students; 6. Student-level transcript information, including information on courses completed and grades earned; 7. Student-level college readiness test [scores](#); 8. Student-level graduation and dropout data; 9. The ability to match student records between the P–12 and higher education systems; 10. A state data audit system assessing data quality, validity and reliability” (DQC, 2007).

State and Local Data Use

The growing availability of linked longitudinal data presents increased opportunities and sophistication in utilizing information about students' educational progress. Placed-based educational research consortia in cities and states also provide a forum for developing and executing data-oriented research agendas. Such consortia as the North Carolina Education Research Data Center and the Consortium on Chicago School Research are structured in a range of ways, and often focus on one or two educational levels. These organizations can have multiple functions, including serving as a data warehouse, a research organization, and a convener or different stakeholders focused on educational improvement (Grubb, 2008).

As educational leaders have begun to apply principles of data-driven decision making (DDDM), scholars are exploring the contexts shaping this endeavor. Marsh, Pane, and Hamilton (2006) define DDDM as the systematic collection and analysis of a range of different types of data, including input, process, outcome, and satisfaction data, to inform decisions that help improve student and school success. Their findings from four RAND research projects highlight that educators regard data to be useful for informing aspects of their work. The majority of schools and districts in the RAND studies paid a good deal of attention on outcome data, particularly state accountability test scores. Only a minority of the educators appeared to be using input, process, and satisfaction data as frequently or as systematically as they used outcome data.

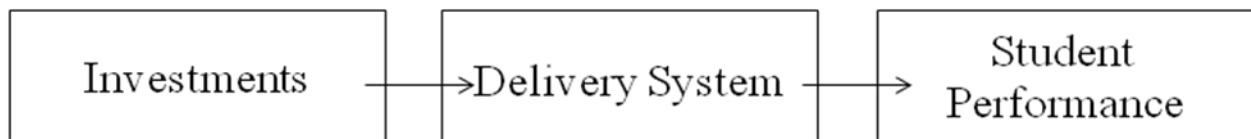
These three developments underscore the importance of advancing a coherent data and policy framework across the early learning through postsecondary trajectory. Valuable as the DQC data elements are—as well as the press for increased availability of data and data use in decision making—these are insufficient to conduct policy analysis to successfully implement P-20 governance. What are often missing from linked longitudinal data are measures reflecting

student progress in early care and education (ECE) and postsecondary settings. In addition, key information about student participation and engagement are not routinely collected. In the sections that follow, we explore *Participation/Engagement*, which we characterize as one component of the P-20 Framework, and argue for enhanced data collection and analysis.

Participation/Engagement Indicators Specified within a Conceptual Framework

A major objective of the WKC P-20 Project has been to focus attention on what policy makers need to know in order to specify and structuring a coherent set of indicators. To guide this effort, the P-20 Project has developed a conceptual framework which will be described in a forthcoming publication (Brandon, Loeb, Magarati, 2009). The core of the HSPC P-20 framework, presented in Figure 1 on the following page, is a logic model that links components of student performance to the investments and service delivery objectives shown by research to affect those outcomes. The logic model categories have been developed to be parallel and apply consistently across the early learning-postsecondary age range. The P-20 Framework also defines appropriate indicators for each component, high-priority indicator categories, and feasible measures for each indicator. The *Participation/Engagement* indicators and measures discussed in this paper are one component of *Student Performance*.

Figure 1: P-20 Framework Categories



Inquiry Methods: A Review of Available Indicators and Data Sources

The P-20 Project Conceptual Framework informed a review of key international, federal, and state indicator reports based on categories in the conceptual framework. We explored these

resources with four questions in mind: (1) What indicators and measures best reflect the Participation/Engagement indicators in the conceptual framework? (2) What types of information are available at the individual student, staff/educator, and school/institutional or district level about key constructs and indicators in Washington? (3) What might be promising practices in other states or localities that would inform data gathering efforts in Washington? (4) How do the potential indicators inform a state-level agenda for data and policy analysis in a consistent P-20 framework?

We reviewed a number of data sources and indicator reports with the eight framework components and their associated indicators in mind. A range of techniques guide data collection for the measures associated with these indicators, including observations, surveys, and information from public agencies. These resources fell into five categories. First, a primary focus was Washington State data from four educational agencies overseeing early learning, elementary-secondary, community and technical colleges, and higher education. Second, data collected by the National Center for Educational Statistics, the U.S. Census, and the Organisation for Economic Co-operation and Development highlighted indicators collected at the national level and in countries outside of the U.S. Of particular interest were the data systems that drew from large-scale, longitudinal sample surveys like the Early Childhood Longitudinal Study-Birth Cohort and the National Longitudinal Survey of Youth. These resources are valuable as they are based on a detailed review of past research and data and the are informed by technical advisory panels to consider what needs to be known and how best to measure it. Third, we reviewed major indicator reports developed by such national organizations as the Center for Information and Research on Civic Learning and Engagement, the Education Commission of the States, the Education Trust, and the National Center for Public Policy and Higher Education to understand how their analyses supported their policy agendas. Fourth, we explored leading examples of

alternative approaches to assessment such as portfolios and teacher logs. Fifth, educational research from peer reviewed scholarly journals and state and city research consortia helped us identify additional key indicators and measures.

Results: The Student Performance Objective of Participation/Engagement

Defining Participation/Engagement

This paper highlights our findings about *Participation/Engagement*, one of the conceptual framework components of *Student Performance*. Students' *Participation* and *Engagement* in learning are critical factors associated with educational access, attainment and achievement. Tracking *Participation* through enrollment is important for early and post-secondary learning as financial access is not universally guaranteed. In elementary-secondary settings, both the level of participation through attendance and expulsion rates reflects students' access to learning opportunities.

Researchers often focus on the degree to which students are engaged in the learning process. Engagement throughout a student's career has been found to improve students' academic performance (Fredericks, Blumenfeld, & Paris, 2004), promote school attendance, and inhibit risky adolescent behavior (National Research Council and the Institute of Medicine, 2004). Similarly, disengagement has been found to correlate with poor academic achievement and particularly during adolescence, sexual activity, substance use, and ultimately dropping out of school (Fredericks, Blumenfeld & Paris, 2004). Disengagement in postsecondary settings is also harmful as it may increase the likelihood of dropping out of college without a degree and experiencing difficulty exiting the low-skilled job market (National Survey of Student Engagement, 2008).

Parent *Engagement* identifies the ways in which parents and caregivers are supporting their children's education both in terms of direct involvement in school and participating in

student's learning activities at home. Research has shown that parental engagement empowers students' perceived control and competence, offers a sense of security and connectedness, and helps students internalize positive attitudes about learning and participating in school (Gonzalez-DeHass, Willems, & Doan-Holbein, 2005).

Our review also encompasses indicators related to student and parent expectations about future student attainment and learning as these strongly influence *Engagement*. Investigations of student and parent expectations about subsequent postsecondary attainment reveal two types of gaps. First, data reflect large differences between overall expectations and attainment patterns. Although close to 69% of high school seniors expected to earn a bachelor's degree or higher (U.S. Department of Education, National Center for Education Statistics, 2006), 27% of adults over the age of 25 (American Community Survey, U.S. Census Bureau, 2007) attained this goal. Second, researchers have shown that expectations vary among different socio-demographic groups. A recent National Center for Educational Statistics Report documented significant differences between the expectation levels of parents based on gender of child, race, socioeconomic status, parent education and household structure (Lippman, Guzman, Dombrowski Keith, et al., 2008). These expectation gaps closely reflect longstanding achievement gaps: 80% of Asian students had parents who expected them to finish college, as compared to 66%, 64%, and 53% of White, Black and Hispanic students, of other, non-Hispanic students respectively.

Indicators and Measures Best Reflecting Participation and Engagement

The purpose of Table 1 on the following page is to provide examples of illustrative indicators and measures about student and parent *Participation/Engagement*. Appendix B provides background information about the majority of surveys discussed in this paper. We

draw from Fredericks, Blumenfeld, and Paris (2004), who summarize that the research literature defines behavioral, emotional, and cognitive dimensions of student *Engagement*.

Behavioral engagement draws on the idea of participation; it includes involvement in academic and social or extracurricular activities and is considered crucial for achieving positive academic outcomes and preventing dropping out. Emotional engagement encompasses positive and negative reactions to teachers, classmates, academics, and school and is presumed to create ties to an institution and influence willingness to do the work. Finally, cognitive engagement draws on the idea of investment; it incorporates thoughtfulness and willingness to exert the effort necessary to comprehend complex ideas and master difficult skills (p. 60).

Fredericks et al. (2004) note certain challenges with the construct of engagement. First, the concepts in engagement overlap with phenomena that have been previously studied. The authors provide a number of examples, including the overlap between emotional engagement and student attitudes, interest, and values. Appelson, Christenson, and Furlong (2008) call for greater conceptual clarity of engagement, and provide the useful distinction of “*indicators of engagement*” and “*facilitators of engagement*” (p. 382). While *indicators of engagement* reflect the nature of a student’s connection to school, *facilitators of engagement* provide insight into the factors in the home, community, or school that influence the connection.

Table 1: Examples of Indicators and Measures Reflecting Student *Participation/Engagement*⁷

Framework Category	Indicator	Illustrative Measures		
		Early Learning	Elementary-Secondary	Post-Secondary
Access/ attendance	Participation and persistence	% of children from birth to age 5 who participated in various weekly non-parental care arrangements by type of arrangement (e.g, center care, Head Start, Family, Friend and Neighbor Care, multiple)	% of students not returning to the school system in the last two years of high school	% of freshmen students returning to begin second year in 4-yr institutions
				% of first year community and technical college students returning to begin 3rd quarter in 2-yr institutions
Student engagement	Behavioral engagement	% of parents of children aged 3 to 5 who reported that the child tries to comfort a peer who is upset, not feeling well, or has been hurt	% of students in grades K through 12 who reported skipping school many times during the school year	% of students in post-secondary setting who discussed grades or assignments with a faculty member or advisor
	Emotional engagement	% of parents in ECE settings who report their child likes being in the setting most or all of the time	% of students in grades K-12 who report they like being at school most or all of the time	% of students reporting they agree with the statement, "the very first time I came to this college, I felt welcome"
	Cognitive engagement	% of children between 36 and 54 months whose scores on agency were rated 5 or higher by an observer (higher scores indicate that the child approaches tasks and classroom activities with more confidently and assertively)	% of students in grades K through 12 who reported being well prepared for class most of the time	% of students in post-secondary setting who reported often/very often discussing ideas from class outside of class (with other students, family-members, coworkers or instructors),
Parent engagement	Involvement in school related activities	% of parents of children from birth to age 5 who report participating in classes or home visits to help them support their learning and development	% of parents of high school students who reported participation in parent-teacher conferences	% of students in post-secondary setting who reported parental assistance in submitting the FAFSA to pay for their school related expenses
	Communication with instructors or school staff	% of parents of children from birth to age 5 who report being highly likely to help the caregiver with activities or materials in licensed ECE settings	% of students whose parents reported school-initiated communication practices (e.g., phone call, email, or letter)	
Student expectation	Academic expectation	N/A	% of students in K through 12 who expect to go to college upon high school graduation	% of students in post-secondary setting who expect to graduate with a degree or certificate
Parent expectation	Academic expectation	% of parents who agree that children's learning results mainly from being presented basic information again and again	% of students (age 13-20) who report that their parents expect them to graduate from college	

Note: Whenever possible, all measures should be disaggregated by type of setting, race, ethnicity and SES of students.

⁷ Table taken from Brandon, Loeb, and Magarati (forthcoming). This draft table subject to change after the paper receives external review.

Access/attendance indicators of participation. *Participation* indicators track enrollment, truancy, and dismissal data and vary at the different educational levels. In early care and education (ECE) settings, tracking participation by type is valuable as it provides insights into patterns regarding access to quality of care. A focus on absence rates, student mobility, and high school dropout rates in K-12 settings can inform policy development as historically underserved student groups are most at risk to transfer or leave schools. Similarly, tracking persistence in two- and four-year colleges may be done through tracking the return of a cohort of students in subsequent academic years.

Engagement indicators. Behavioral engagement indicators include paying attention during instruction, following class rules, and completing work. In formal ECE settings, these measures capture infant and toddler's participation in learning tasks. In elementary-secondary contexts, other indicators reflect participation in extracurricular activities and non-academic school activities such as in the after school and enrichment programs. At both the elementary-secondary and postsecondary levels, students' involvement in the community also may include *Participation/Engagement* when service learning is a formal component of the curriculum. In postsecondary settings, some measures of student-faculty interaction such as discussing grades, course readings, assignments, and career plans with a faculty or advisor and working with faculty members on activities other than course offer a picture of behavioral engagement.

Emotional engagement indicators bring students' feelings of connection to (or lack thereof) their school and school work into focus. These include how students feel about being in school, the ways and workings of the school, and relationships with peers, teachers, and administrators. A related dimension of emotional engagement is the nature of students' optimistic expectations about the future. The majority of these measures come from student self-reports on surveys in elementary-secondary and post-secondary settings, they are much less

likely to be available for young children. However, emotional engagement among young children can be obtained by direct observation or video-tapes as is done in major national studies such as the NICHD Study of Early Child Care and Youth Development.

Cognitive engagement indicators describe students' effort, investment, and strategies for learning. In ECE settings, cognitive engagement is captured by an adult's observation of child participation in learning tasks. In elementary-secondary settings, this dimension focuses on engagement in instruction-related activities. Specific measures include excitement about learning, course taking patterns, time spent on homework, participation in classroom discussions, quality of work on assignments, and the level of academic challenge that students report. Cognitive indicators in postsecondary settings parallel those in elementary-secondary environments, with the addition of engagement with faculty, making class presentations, tutoring or teaching other students, participating in a community-based projects as part of a regular course, and discussing ideas from courses with others outside of class. Indicators about expectations track students' hopes for their future education and participation in the workforce.

Student and parent expectations. Student expectations are shaped over time by parents' expectations, and the interaction and messages that both students and parents receive from educational institutions. Measures of expectations include the highest level of educational attainment student and parents expect the student to achieve. The type of occupation the student expects to hold as an adult is a related measure of expectation. Indicators reflecting the mismatch between expectations and current reality (discussed on pages 11 and 12) about postsecondary preparation may also provide rationale to explore and address the mismatch.

Availability of Data about Participation/Engagement in Washington

Participation data. Student enrollment and mobility across multiple schools is available at the state level in Washington's elementary-secondary schools. Since other *Participation* data

(including attendance patterns, unexcused absences, and expulsions) is collected at the school district level, it is not yet possible to easily aggregate this up to the state-level. Participation data in ECE settings is more complex to access as there is a broad range of public and private services that parents can access based on income and preference. Both HSPC's Family, Friends and Neighborhood Care Demand Survey (Brandon, Maher, Joesch, & Doyle, 2002) and SRI International's (Golan, Spiker, Peterson, et al., 2008) work in Washington State are one-time studies which document indicators of ECE participation. In Washington, student engagement and expectation data were collected in the University of Washington Beyond High School Survey between 2000 and 2005.

Post-secondary enrollment data is available from individual public two- and four-year higher education institutions and the Washington State Board for Community and Technical Colleges (SBCTC). The State Office of Financial Management publishes Higher Education Enrollment Reports (HEER) based on the Public Centralized Higher Education Enrollment System (PCHEES) data. Participation data for high school students in dual credit programs in community and Technical colleges are available from our state department of education. A caveat is that enrollment data in postsecondary settings, especially community colleges, may be complicated by the fact that many students attend multiple institutions or on a part-time basis.

Engagement data. Our review uncovered two sources that appear to be underutilized in exploring student *Engagement* at the state level. Administered biennially by the Washington State Department of Health, the Healthy Youth Survey (HYS) provides information about a range of aspects of student engagement, including participation in risky behaviors, the role of social networks in student learning, and school climate. The National Assessment of Educational Progress (NAEP) also includes a student survey that addresses parent engagement, home literacy activities, effort made in school, and school absence rates. Both surveys enable

disaggregation by race and ethnicity and the NAEP surveys additionally enable analysis based on students participate free and reduced price lunch programs. To date, state-level estimates of these indicators have not been disseminated.

Availability of Other Data about Participation/Engagement

Participation/enrollment in the early care and education (ECE) data has been collected by various surveys at the national level such as the National Survey of American Families and the Early Childhood Longitudinal Survey-Birth Cohort. Other instruments provide portraits of student engagement. A number of national and institution-based surveys provide rich information on the transitional period of adolescence when students' likelihood of disengaging from school and participating in risky behaviors raise concerns. These include the National Longitudinal Study of Education and the High School Student Engagement Survey. While Washington State has not participated in the NAEP High School Transcript study, course taking patterns at the secondary level of students should be available in late 2009 when the State adopts a uniform secondary course naming system.

National student surveys in the ECE and elementary-secondary settings also address of student expectation and the student reports of parental expectations. These include the Adolescent Health and Academic Achievement study, an expansion of the national Longitudinal Study of Adolescent Health measure expectations. The NICHD Early Care and Development Surveys provide rich measures of parental expectation of their very young children.

Instruments at the postsecondary level include the national, the Community College Survey of Student Engagement (CSSE), the National Survey of Student Engagement (NSSE), and the freshman and senior surveys conducted by the Higher Education Research Institute at UCLA. The first Survey of Entering Student Engagement (SENSE) was administered in 2008 in 89 participating community and technical colleges nationwide. As participation in the CSSE,

NSSE and SENSE are voluntary and do not include all of the state's public and private postsecondary institutions, providing state-level estimates may have technical barriers.

Policy Questions and Key issues Relevant to Participation/Engagement.

Close scrutiny of *Participation/Engagement* indicators may inform the development of policies that impact the most vulnerable students. High priority analyses attend to (1) patterns, levels, and disparities of enrollment and engagement; (2) such facilitators of engagement as peer group relations, school climate and teaching quality; (3) the impact of engagement and disengagement on student performance outcomes; (4) investment priorities to identify students at-risk of disengagement and to improve their level of engagement; (5) investment priorities to improve access of all students to high quality learning opportunities.

At each level, student mobility is an important consideration, as this may shape both individual student engagement and institutional climate. Studying participation patterns in early care and education (ECE) settings will help identify the proportion of children who are accessing higher and lower quality early learning opportunities. Similarly, enrollment analyses in post-secondary settings provide information on barriers to access. Key policy questions may focus on the relationship between changes in these measures at the school level and student achievement, and help isolate the most important engagement measures to track over time. These may also inform investments in programs that strengthen students' connection to their learning setting. Expectation data may help identify delivery system mechanisms to raise or meet students' own and their parents' expectations about students' educational trajectory and explore the mismatch between high expectations of and low attainment among groups who are underserved in public education.

Given the recent widespread attention of the importance of early learning (e.g., Fuller, 2007; Kirp, 2007), it will be worthwhile to explore the effects of such policy investments as

nurse home visits, Head Start, universal, prekindergarten and full-day kindergarten on the engagement of student and parents, and the ways in which these investments shape outcomes of different racial, ethnic, and socioeconomic groups. Further, longitudinal analyses of student data will enable the development and implementation of early warning systems at the elementary and secondary grades that may help prevent students from dropping out of school. As more than one third (37%) of 2004 high school graduates beginning postsecondary education in the state are enrolled in remedial mathematics and/or English courses (Washington State University, n.d.), the levels of engagement of students in these courses may also inform policies about both secondary and postsecondary programs and coursework.

Discussion: The Need to Prioritize Responses to Gaps and Opportunities in State-Level Data

Brandon, Loeb and Magarati (forthcoming) identify key gaps and opportunities in available data for policy analysis across the early learning through postsecondary trajectory for all components of the P-20 Framework. Our following discussion focuses on *Participation/Engagement* gaps and opportunities related to our review of indicators and measures described above. While we have identified alarming gaps in what is known about students who are not in public education systems, we have uncovered resources that can enhance efforts to inform policies about students in elementary-secondary and postsecondary settings.

Gaps in Information about Participation/Engagement

The review of indicators and measures highlighted that there is no ongoing state-level data being collected in Washington about child *Participation/Engagement* for our youngest children. While the state tracks participation measures children in its Head Start/Early Care and Education Assistance Program (ECEAP), this pertains to a small fraction of young children in the state. In addition, truancy data is currently not aggregated up to the state level. Washington also lacks a mechanism to gather information about adolescents and young adults who are not

participating in public education systems. We know little about those who drop out or leave. We also lack information about children and youth outside of the public education system, including the 86,811 students who attend Washington private schools (Broughman, Swaim, & Keaton, 2009).

Opportunities to Tap or Develop Existing Data Sources about Participation/Engagement

Opportunities to improve the quality of *Participation/Engagement* information and analysis fall into four categories. First, the aforementioned gaps point to priorities to create new sources of information. Potential resources to explore may be state oversamples of existing cohort-based studies of young children, adolescents, and young adults, including the ECLS-B, and ELS. These studies employ sampling frames and strategic oversamples in order to gather information about children inside and outside of public education systems and could be a model for filling the gap at the state, district and school levels in a cost-effective manner. Brown and Moore (2009) estimate that 3,000 children would be a sufficient sample size to allow for precise estimates across major age, income, and race/ethnicity groups for individual states across the U.S.

Second, we discussed such underutilized state resources as the Washington Department of Health's HYS and the NAEP. If the HYS were linked to other student data by a common identifier, it would allow analysis of important factors that promote or inhibit adolescent engagement in learning. Results from the NAEP student surveys could provide similar state-level portraits of cognitive engagement that can be linked to assessment scores and teacher and school characteristics. If Washington would opt to participate in the 12th grade NAEP, it would allow other important analyses of particular relevance to the transition to post-secondary education. At the post-secondary level, engagement data is already collected at most two- and

four-year institutions of postsecondary education in Washington state through the CSSE and the NSSE, but is not reported to a central source or available as a data base for state-level analysis.

Third, like other states, Washington is also embarking on creating new data sources that could yield valuable information about student *Participation/Engagement*. Information about secondary course taking patterns will be available for the first time at the end of this year and could provide a portrait of gaps in access to opportunity or rigor across the state. Two new bills currently making their way through the Washington State 2009 legislative session may help facilitate new data development. First, a new state report card will be discussed which mandates the inclusion of attendance data. Second, if the State passes legislation to implement a statewide kindergarten readiness assessment, such a tool could collect data about children's history in ECE settings.

Fourth, the Data Quality Campaign (2009) recently released recommendations regarding next generation issues for enhancing state level data systems. They advocate for developing research capacity to mine and analyze linked longitudinal data systems. Our informal conversations with Washington State agency leaders highlight the limits of capacity to analyze existing data sources for the purpose of informing public policy. The need to respond to compliance requirements provides limited time to conduct applied research. Currently there are no research consortia in Washington, but there is an active state association that brings together educational researchers who regularly conduct applied policy analysis in educational settings. This organization could potentially serve as a convener to explore efforts that could lead to improved state-level capacity for data and policy analysis.

Conclusion

An agenda for improved data collection and analysis that considers the cumulative influence of learning during each stage may inform the design of funding structures,

accountability mechanisms, and professional standards. The P-20 Project aims to identify key practices and gaps in data collection that may enhance analysis of educational indicators to improve public policy. Our discussion of desired indicators and measures, together with our review of analysis of available state-level information about *Participation* and *Engagement* in education highlights the need for increased data analysis and new data development. We have observed that while data has been gathered for a range of purposes—including compliance and accountability—there are ripe opportunities to analyze it to inform public policies.

Appendix A: P-20 Project Description

Washington Kids Count P–20 Project Serving the Washington Policy Community with Effective Early Learning Through-Postsecondary Analysis

The Need for an Early Learning–Through-Postsecondary Approach to Policy Analysis

There is growing consensus in Washington’s policy community, as in other states, that effective education policy must be developed by looking across the three stages of education—early childhood, K–12, and postsecondary settings. Released in November 2006, the *Washington Learns Report* included a series of recommendations aimed at “developing a world-class, learner-focused, seamless education system for our state.” The report charged state educational leaders to advance a governance system that will call for greater coordination and collaboration across these educational levels, leading to the establishment of the Washington P–20 Council.

This counters the trend of most policy analysis and development occurring *within* these three separate systems that lacks consideration of the cumulative influence of learning during each stage. One reason for this is that there has not been a consistent base of data on which to build sound P–20 analysis. Currently, data is collected separately around the needs of different provider agencies and stakeholder groups representing each educational stage. Funding structures, accountability mechanisms, and professional standards are developed separately for each level. In addition, university researchers and think tanks typically focus their efforts at one stage (or at most two stages).

Overview of the WKC P–20 Project

An effective P–20 approach to educational policy requires an integrated, seamless data system to support it. The Human Services Policy Center (HSPC) Washington Kids Count (WKC) effort is uniquely positioned to develop and analyze such data through its new P–20 Project. The mission of this project is to create a data and policy framework to guide the design, collection, and dissemination of educational indicators spanning the developmental trajectory from early-learning through young adulthood.

Supported by both a three-year grant of the Bill & Melinda Gates Foundation and ongoing funding from the Annie E. Casey Foundation, project goals include (1) developing a conceptual framework that has constructs for student outcomes and educational investments across the different educational levels; (2) defining key indicators to inform education policy analysis aimed at improving student learning in Washington state in early learning–through-postsecondary contexts; (3) employing indicators in policy analyses tuned to a P–20 framework, with specific attention to its seams and discontinuities; and (4) stimulating improved state and regional data collection among key policy stakeholders in Washington.

The conceptual model for the P–20 Project will place issues of race, culture, and class in the foreground of indicator defining and data gathering. Expert review of this model will inform how WKC staff will gather indicators, identify high-priority gaps in information, and employ indicators in policy analyses. Our work will subsequently be focused on both exploring policy options that both better integrate the three institutional contexts of learning and work toward

eliminating disparities among different racial, ethnic, linguistic, and socioeconomic groups. In order to improve state and regional data collection, WKC plans to implement a strategic communications plan focused on specific project audiences. Proposed efforts include the release of indicator data through a user friendly, Web-based system; public speaking and conference presentations at venues for educational policymakers, researchers, and practitioners; ongoing informal dialogue with educational stakeholders across Washington; and technical assistance through responses to data requests.

Our data and policy reports will reflect such consistent themes across the P–20 spectrum as student achievement and preparation for each educational stage; equitable access to high-quality learning opportunities; and adequacy and equity of program financing. We will also begin to identify and address the seams and discontinuities between the different levels, seeking opportunities to improve institutional collaboration and effectiveness. We anticipate that these prospective themes will evolve as we work in collaboration with key stakeholders in Washington State. The P–20 Project will be guided by a group of expert consultants, including scholars and educational leaders in a range of areas, including assessment, civil rights issues, educational policy at each level, educational psychology, school finance, and workforce development.

Additional Information about HSPC and WKC

HSPC is dedicated to improving the lives of children, families, and communities, with a special emphasis on addressing the needs of those who are disadvantaged. In concert with the University of Washington’s Daniel J. Evans School of Public Affairs, we pursue research and ideas that work to strengthen sound public policy and management. HSPC pairs applied analytic research with the promotion of policies through four core program areas:

- **Analyzing Family Support Systems.** Many of HSPC’s areas of expertise—financial analysis, data profiling, program evaluation, and communication—come together in our efforts to identify and analyze systems that support children and families.
- **Profiling Child and Family Well-Being.** WKC tracks, analyzes, and communicates information about the education, health, and well-being of children and families in Washington, producing the annual *State of Washington’s Children*.
- **Educating and Caring for Children.** HSPC researchers recently conducted studies of financing access to quality education, improving the child care workforce, and strengthening the quality of family, friend, and neighbor care of young children.
- **Building Public Understanding and Support for Better Policies.** HSPC uses public communications, strategic partnerships, and experience with the policymaking process to ensure that its research actually affects policy. The Center also conducts surveys and sponsors forums on topics concerning children and families.

For more information on HSPC and WKC, please visit our Web site at <http://www.hspc.org>.

Appendix B: Background Information About Surveys Discussed in Paper

Survey	Overview	URL with More Information
Beyond High School Project	<p>"The UW-BHS (University of Washington-Beyond High School) project began in 1999 as a study of the impact of I-200 (the referendum that ended affirmative action) on minority enrollment in higher education in Washington State. As part of the initial project, a pilot survey of high school seniors in one school district was conducted in the spring of 2000. The success of this survey led to a long term project that eventually included baseline surveys of five cohorts of seniors across several school districts in the Pacific Northwest and a one-year follow-up survey. At present, the research objectives of the project are to: 1) describe and explain differences in the transition from high school to college by race and ethnicity, socioeconomic origins, and other characteristics, 2) evaluate of the impact of the Washington State Achievers Program on the transition from high school to college, and 3) explore the implications of multiple race and ethnic identities."</p>	<p>https://depts.washington.edu/uwbhs/</p>
Community College Survey of Student Engagement	<p>"The CCSSE instrument focuses on institutional practices and student behaviors that promote student engagement. CCSSE works with participating colleges to administer the survey, which measures students' levels of engagement in a variety of areas. The colleges then receive their survey results, along with guidance and analysis they can use to improve their programs and services for students."</p>	<p>http://www.ccsse.org/</p>
Early Childhood Longitudinal Study, Birth and Kindergarten Cohorts	<p>"The Early Childhood Longitudinal Study (ECLS) program includes three longitudinal studies that examine child development, school readiness, and early school experiences. The birth cohort of the ECLS-B is a sample of children born in 2001 and followed from birth through kindergarten entry. The kindergarten class of 1998-99 cohort is a sample of children followed from kindergarten through the eighth grade. The kindergarten class of 2010-11 cohort will follow a sample of children from kindergarten through the fifth grade."</p>	<p>http://nces.ed.gov/ecls/index.asp</p>
Healthy Youth Survey	<p>"The Healthy Youth Survey provides important information about adolescents in Washington. County prevention coordinators, community mobilization coalitions, community public health and safety networks, and others use this information to guide policy and programs that serve youth. The information from the Healthy Youth Survey can be used to identify trends in the patterns of behavior over time. The state-level data can be used to compare Washington to other states that do similar surveys and to the nation."</p>	<p>https://fortress.wa.gov/doh/hys/</p>
High School Student Engagement Survey	<p>"The ultimate goal of HSSSE is to document, describe, and monitor student engagement in educationally purposeful activities in secondary schools nationally. HSSSE provides information that can be used to stimulate discussions on teaching and learning and guide student improvement activities."</p>	<p>http://www.indiana.edu/~ceep/hssse/</p>

<p>Higher Education Research Institute (HERI) Cooperative Institutional Research Program (CIRP)</p>	<p>"The CIRP Freshman Survey is administered by the Higher Education Research Institute (HERI) at UCLA... The CIRP Freshman Survey is designed to provide comprehensive information on your incoming first-year students. It can be used by itself, or, when used in conjunction with the Your First College Year Survey (YFCY) and the College Senior Survey (CSS), provides valuable baseline data for a longitudinal assessment. The CIRP Freshman Survey is used by researchers and practitioners to examine readiness for college, how students choose colleges, student values and beliefs about diversity and civic engagement, and student expectations."</p>	<p>http://www.heri.ucla.edu/index.php</p>
<p>National Assessment of Educational Progress</p>	<p>"The National Assessment of Educational Progress (NAEP) is the only nationally representative and continuing assessment of what America's students know and can do in various subject areas. Assessments are conducted periodically in mathematics, reading, science, writing, the arts, civics, economics, geography, and U.S. history. Assessments in world history and in foreign language are anticipated in 2012."</p>	<p>http://nces.ed.gov/nationsreportcard/aboutnaep.asp</p>
<p>National Educational Longitudinal Survey</p>	<p>"The Education Longitudinal Study of 2002 (ELS:2002) is designed to monitor the transition of a national sample of young people as they progress from tenth grade through high school and on to postsecondary education and/or the world of work. ELS:2002 has two distinctive features: First, it is a longitudinal study, which means that the same individuals are surveyed repeatedly over time. Second, it is a multilevel study, which means that information is collected from multiple respondent populations that represent students, their parents, their teachers, their librarians, and their schools."</p>	<p>http://nces.ed.gov/surveys/ELS2002/</p>
<p>National Institute of Child Health Study of Early Child Care and Human Development</p>	<p>"The NICHD Study of Early Child Care (SECC) is a comprehensive longitudinal study initiated by The National Institute of Child Health and Human Development (NICHD) in 1989 to answer the many questions about the relationship between child care experiences and characteristics and children's developmental outcomes. "</p>	<p>https://secc.rti.org/</p>
<p>National Longitudinal Study of Adolescent Health</p>	<p>"The National Longitudinal Study of Adolescent Health (Add Health) is a longitudinal study of a nationally representative sample of adolescents in grades 7-12 in the United States during the 1994-95 school year. The Add Health cohort has been followed into young adulthood with four in-home interviews, the most recent in 2008, when the sample was aged 24-32. Add Health combines longitudinal survey data on respondents' social, economic, psychological and physical well-being with contextual data on the family, neighborhood, community, school, friendships, peer groups, and romantic relationships, providing unique opportunities to study how social environments and behaviors in adolescence are linked to health and achievement outcomes in young adulthood. The fourth wave of interviews expanded the collection of biological data in Add Health to understand the social, behavioral, and biological linkages in health trajectories as the Add Health cohort ages through adulthood."</p>	<p>http://www.cpc.unc.edu/projects/addhealth</p>
<p>National Survey of American Families</p>	<p>"The National Survey of America's Families provides a comprehensive look at the well-being of children and non-elderly adults, and reveals sometimes striking differences among the 13 states studied in depth. The survey provides quantitative measures of child, adult and family well-being in America, with an emphasis on persons in low-income families."</p>	<p>http://www.urban.org/center/anf/nsa/f.cfm</p>

<p>National Survey of Student Engagement</p>	<p>"The National Survey of Student Engagement (NSSE) obtains, on an annual basis, information from hundreds of four-year colleges and universities nationwide about student participation in programs and activities that institutions provide for their learning and personal development. The results provide an estimate of how undergraduates spend their time and what they gain from attending college. Survey items on The National Survey of Student Engagement represent empirically confirmed 'good practices' in undergraduate education. That is, they reflect behaviors by students and institutions that are associated with desired outcomes of college."</p>	<p>http://nsse.iub.edu/index.cfm</p>
<p>Survey of Entering Student Engagement</p>	<p>"The survey is administered during the fourth and fifth weeks of the fall academic term in courses most likely to enroll entering students. The survey asks students about institutional practices and student behaviors — those that research indicates are associated with improved student success — during the early weeks of college."</p>	<p>http://www.ccsse.org/sense/</p>

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