Educational System Capacity to Accommodate Increased Resources

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Randy I. Dorn
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Educational System Capacity to Accommodate Increased Resources 2012

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Executive Summary

As our state Legislature fulfills education funding reforms outlined in historic bills passed in 2009 and 2010, it is important to understand how school districts will absorb the expected increases in funding.

This report asks a central question: Can districts provide the intended reforms with the increased funding? For example, lower class sizes create the need for more teachers and more classrooms. Are school buildings able to handle the extra demand? Are there enough teachers in the workforce to supply the extra demand?

To prepare this report, the Office of Superintendent of Public Instruction (OSPI) conducted voluntary surveys of the state’s 295 public school districts. While all districts responded to the section of the survey related to full-day kindergarten capacity, only 30.5 percent (90 districts) responded to sections of the survey related to K–3 class size reduction and increased graduation requirements.

The key findings of this report indicate that, since 2010, little has changed with regard to the system’s capacity to absorb additional funding. Key points include:

- **Implementing full-day kindergarten in all districts:** For the most part, districts can absorb increased funding, although the Legislature may need to consider options to address school building needs in some districts.

- **Reducing class sizes to 17:** Districts reported some capacity to absorb extra funding in K–3, especially in elementary schools with fewer than 400 students. Schools with more than 400 students reported significant building capacity limitations.

- **Increasing the number of credits required to graduate to 24:** Districts reported limited capacity without extra funding. The Legislature should consider only implementing additional requirements once it has provided funds to meet the basic needs of districts for materials, supplies and operating costs; additional classified and certificated personnel; and increased salary allocations for classified, certificated and administrative staff.

Increased graduation requirements also may require changes to individual school schedules and/or school district collective bargaining agreements. An implementation plan of the proposed changes to graduation requirements should provide districts with ample time to make these changes.
Introduction

The 2009 and 2010 sessions of the Washington State Legislature passed two historic K–12 education funding bills. Engrossed Substitute House Bill 2261 (2009) outlined a bold new system for state funding of basic education, and created the Quality Education Council (QEC) to oversee the system’s development and implementation. Substitute House Bill 2776 (2010) authorized the first steps for implementation of the new funding system.

The Legislature envisioned implementation of the new funding system and additional funding to be phased-in beginning in the 2011–13 biennium through the 2017–18 school year. In order to understand the capacity of school districts to utilize the additional resources and implement the new system of basic education funding, the legislation called for a capacity report. The Office of Superintendent of Public Instruction (OSPI) issued the first capacity report in 2010. This report will follow-up those finding with changes in capacity identified during the past biennium.

As codified in RCW 28A.300.172, the Superintendent of Public Instruction is required to biennially make determinations on the educational system’s capacity to accommodate increased resources in relation to the elements in the prototypical funding allocation model. System capacity was defined to include:

- The ability of schools and districts to provide the capital facilities necessary;
- The ability to provide the staffing levels necessary to support the increased instructional program; and
- The availability of data and a data system capable of helping the state allocate the additional resources.

OSPI focused its analysis for this report on the elements that have an established timeline for implementation of additional resources in SHB 2776 and where the QEC was considering the State Board of Education’s request to implement changes to high school graduation requirements.

This report identifies the progress made in the availability of data and data systems capable of helping the state allocate the additional resources since last biennium.

The Superintendent is committed to providing the Legislature additional capacity information for other areas of the prototypical model, if the Legislature determines that this data will better inform the allocation of additional resources in the 2013–15 biennium.

Scope and Process

The focus of this capacity report will be on the areas where resource increases are prescribed in SHB 2776 for the 2013–15 biennium or where resources may be increased based on the proposed increase of the graduation requirements by the State Board of Education, to provide students the opportunity for 24 credits, as adopted in ESHB 2261.

Within SHB 2776, there are four specific areas within the prototypical school model that were scheduled for funding increases in the 2011–13 biennium. The following chart illustrates the phase-in schedule as adopted:
TABLE 1: SHB 2776 Implementation Schedule

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Full-Day Kindergarten</strong>&lt;br&gt;Must be fully funded statewide by 2017–18&lt;br&gt;Phase-in based on FRPL</td>
<td>More funding can begin</td>
<td>More funding must begin</td>
<td>Continues to ramp up</td>
<td>Continues to ramp up</td>
<td>Continues to ramp up</td>
<td>Continues to ramp up</td>
<td>Fully Funded</td>
</tr>
<tr>
<td><strong>K-3 Class Size Reduction</strong>&lt;br&gt;Must be fully funded statewide by 2017–18&lt;br&gt;Phase-in based on FRPL</td>
<td>More funding can begin</td>
<td>More funding must begin</td>
<td>Continues to ramp up</td>
<td>Continues to ramp up</td>
<td>Continues to ramp up</td>
<td>Continues to ramp up</td>
<td>Fully Funded</td>
</tr>
<tr>
<td><strong>Materials, Supplies, Operation Costs (MSOC)</strong>&lt;br&gt;Must be fully funded by 2015–16&lt;br&gt;$ per student basis</td>
<td>More funding can begin</td>
<td>More funding must begin</td>
<td>Continues to ramp up</td>
<td>Continues to ramp up</td>
<td>Funded at new level</td>
<td>Funded at new level</td>
<td>Funded at new level</td>
</tr>
<tr>
<td><strong>Basic Transportation</strong>&lt;br&gt;Must be fully funded by 2014–15&lt;br&gt;% of formula funded basis</td>
<td>More funding can begin</td>
<td>More funding must begin</td>
<td>Continues to ramp up</td>
<td>Fully Funded</td>
<td>Fully Funded</td>
<td>Fully Funded</td>
<td>Fully Funded</td>
</tr>
</tbody>
</table>

As shown, SHB 2776 indicates that the phase-in for each of these four categories, full-day kindergarten, K–3 class size reduction funding, funding for materials, supplies and operating costs (MSOC), and basic transportation, shall begin in the 2011–13 biennium and will continue to be increased until target levels of funding are reached by specific years. The statute did not provide any minimum amounts of funding to be implemented in the 2011–13 biennium and also does not identify a specific schedule of increases in future years. SHB 2776 simply identifies the biennium in which the additional investments will begin and the dates when the new funding will be fully implemented.

Unlike these SHB 2776 requirements, the graduation requirement changes are not tied to specific implementation years in ESHB 2261. ESHB 2261 states that the instructional program of basic education provided by each school district shall include instruction that provides students the opportunity to complete twenty-four credits for high school graduation, subject to a phased-in implementation as established by the Legislature, but not before the 2014–15 school year. The statute also states that changes that have a fiscal impact on school districts, as identified by a fiscal analysis prepared by the Office of Superintendent of Public Instruction, shall take effect only if formally authorized and funded by the Legislature through the omnibus appropriations act or other enacted legislation.

**Survey Background**

School districts were provided a survey designed to collect information at the *school level* about the following:
• Full-day kindergarten (FDK) offerings and capital capacity to implement state-funded FDK.
• K–3 class size reduction and capital capacity to reduce class size.
• Increased graduation requirements.

Identification of Schools
Schools were identified based on district reporting in the Comprehensive Education Data and Research System (CEDARS). The survey questions were tailored to the grade levels enrolled at each school.

Full-Day Kindergarten
The state provides basic education funding for half-day kindergarten for all schools. Additionally, the state provides FDK funding for 22% of the total kindergarten enrollment at 222 of the state’s 1,222 schools with students in kindergarten. This state funding and any expected future increases are phased-in starting with schools with the highest rates of students receiving free and reduced priced meals, as a measure of poverty.

Number of Reporting Districts
OSPI focused data collection efforts for this biennium’s report in order to collect comprehensive information on FDK. All school districts reporting kindergarten enrollment, as of July 31, 2012, provided responses to the survey used for this report. There were 1,222 schools identified across 291 school districts identified with kindergarten enrollment.

School Level Results
Districts reported survey results for 1,226 schools to OSPI. The slight increase from the number of schools originally identified comes from either new schools that have opened recently, or new programs that were assigned a new school number.

Seventy-seven schools are being excluded from the final counts. These include online programs, Alternative Learning Experience (ALE) programs such as parent partnerships programs operated largely in students’ homes, and schools that do not currently offer any kindergarten according to the district (for example, a Grade two through four elementary school). This leaves 1,149 schools that were included in the survey results. The exclusion of these 77 schools does not affect the results listed below.

Two hundred twelve districts reported having some kind of FDK program in their district, with 840 schools (out of 1,149) offering such programs (73% of the schools in the survey). However, one should not assume that all sections of kindergarten in a school reporting offering FDK are full-day programs. The survey results indicate that FDK is funded by a number of sources, and a breakdown of the number of programs funded by each source is as follows:
Table 2: District and State Summary of Full-Day Kindergarten Offerings

<table>
<thead>
<tr>
<th></th>
<th>Total Surveyed</th>
<th>State Funded</th>
<th>Federally Funded</th>
<th>Locally Funded</th>
<th>Tuition-Based</th>
<th>No FDK Offering</th>
</tr>
</thead>
<tbody>
<tr>
<td>Districts†</td>
<td>291</td>
<td>87</td>
<td>29.90%</td>
<td>19</td>
<td>6.53%</td>
<td>107</td>
</tr>
<tr>
<td>Schools</td>
<td>1,149</td>
<td>224</td>
<td>19.50%</td>
<td>33</td>
<td>2.87%</td>
<td>251</td>
</tr>
</tbody>
</table>

†Note: Some districts offer programs in different schools that may have different funding sources, such as a state-funded program in one school, and a tuition-based program in another. In such a case, the district was counted in more than one column. Individual schools were only counted once. State-funded FDK is offered at schools in 212 districts.

The following summarizes how many students are enrolled in FDK and how those programs are funded:

Table 3: Student Enrollment by Full-Day Kindergarten Type

<table>
<thead>
<tr>
<th></th>
<th>Total</th>
<th>State Funded</th>
<th>Federally Funded</th>
<th>Locally Funded</th>
<th>Tuition-Based</th>
<th>No FDK Offering</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students</td>
<td>77,246</td>
<td>17,633</td>
<td>20.40%</td>
<td>15,496</td>
<td>24,295</td>
<td>17,782</td>
</tr>
<tr>
<td>Percent of Total</td>
<td>22.83%</td>
<td>2.64%</td>
<td>20.06%</td>
<td>31.45%</td>
<td>23.02%</td>
<td></td>
</tr>
</tbody>
</table>

Note: It should not be assumed that all students at a school offering FDK are enrolled in a FDK program. Some schools may offer one or more sections of half-day kindergarten based on parent request or other factors.

The largest source of funding for full-day kindergarten, as reported, was tuition-based programs (332 out of 840, or 40%). These programs are concentrated in larger school districts, as shown in Table 3.

Table 4: School Districts With the Largest Number of Tuition-Based FDK Programs

<table>
<thead>
<tr>
<th>District</th>
<th>Number of Schools With FDK†</th>
<th>Number of Schools With Tuition-Based FDK</th>
<th>Percent of Schools With Tuition-Based FDK</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seattle</td>
<td>72</td>
<td>53</td>
<td>74%</td>
</tr>
<tr>
<td>Lake Washington</td>
<td>27</td>
<td>27</td>
<td>100%</td>
</tr>
<tr>
<td>Edmonds</td>
<td>22</td>
<td>20</td>
<td>91%</td>
</tr>
<tr>
<td>Northshore</td>
<td>20</td>
<td>20</td>
<td>100%</td>
</tr>
<tr>
<td>Bellevue</td>
<td>16</td>
<td>16</td>
<td>100%</td>
</tr>
<tr>
<td>Issaquah</td>
<td>15</td>
<td>15</td>
<td>100%</td>
</tr>
<tr>
<td>Everett</td>
<td>15</td>
<td>10</td>
<td>67%</td>
</tr>
</tbody>
</table>

†Note: Everett has a total of 17 schools with kindergarten enrollment; two of which do not offer any form of full-day program. The other six districts offer some form of full-day program in all of their elementary schools.

These seven districts account for just under one-half (161 out of 332) of the schools that have a tuition-based FDK program.
Capacity to Accommodate Increased Resources

For this survey, capacity needs for FDK are based on current class sizes offered at each of the schools. SHB 2776 also provides for state funding for lower class sizes in Grades K–3. OSPI considers these two initiatives to be separate and the survey used to capture capacity needs was designed to keep these initiatives separate. Capacity needs identified with reducing class size to 17 for Grades K–3 are identified in the K–3 Class Size Reduction section of this report.

Forty-seven of the districts reported that they would need some type of assistance in order to have sufficient capacity to offer FDK programs to all students in their schools. Additional capacity is needed, totaling 151 portables and 151 classrooms. Detailed information about capacity needs by district is provided in Appendix A. If FDK is fully-funded in school year 2013–14, 946 schools would be able to offer schoolwide FDK programs without capacity limitations, serving 60,932 students (79% of all kindergarten students). If state funding was provided for districts to purchase all the portables needed, and if they could be installed in time, 1,063 schools would be able to offer FDK in school year 2013–14, serving 70,138 students (91% of all kindergarten students).

Table 5: Capacity Impact Summary

<table>
<thead>
<tr>
<th></th>
<th>Districts</th>
<th>Schools</th>
<th>Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number Surveyed</td>
<td>291</td>
<td>1,149</td>
<td>77,246</td>
</tr>
<tr>
<td>Number with Capacity Needs</td>
<td>47</td>
<td>203</td>
<td>16,315</td>
</tr>
<tr>
<td>Number Needing Portables</td>
<td>32</td>
<td>117</td>
<td>9,206</td>
</tr>
<tr>
<td>Number Needing Classrooms</td>
<td>15</td>
<td>86</td>
<td>7,108</td>
</tr>
<tr>
<td>Other</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
</tbody>
</table>

Cost of Adding Classrooms/Portables

In a September 2007 report to the Legislature, School Facility Impacts of Implementing Full-Day Kindergarten Programs, the cost per portable was estimated to be $200,000. This estimate was maintained for this report.

For construction, the estimated classroom size for kindergarten is 1,200 square feet. This is the same estimated size as presented in the September 2007 report. For construction costs, the estimated actual cost per square foot has been calculated at $256, using a cost estimate from OSPI School Facilities & Organization. This yields an approximation of $307,000 per new classroom that must be added to meet the capacity needs of FDK.

To reflect “soft” costs in the construction estimates for such items as architectural fees, permitting fees, etc., the total construction cost is inflated by approximately 25%. This brings the cost of a portable to $250,000 and for a new classroom to $384,000.
As identified above, districts will need a total of 151 portables and 151 classrooms to meet the needs of FDK with the following fiscal impact:

151 portables @ $250,000 each = $37,750,000
151 classrooms @ $384,000 each = $57,984,000
TOTAL $95,734,000

Discussion

This report is a snapshot of the current enrollment status of schools and districts, and the current capacity limitations as reported by school districts in September and October of 2012. Future projections (discussed below) are a projection of capacity limitations, assuming enrollment remains static. In reality, enrollment does not remain static. A decline in kindergarten enrollment could mean increased capacity at the schools, and, accordingly, fewer classrooms and portables would be needed. Conversely, an increase in kindergarten enrollment could create additional capacity limitations beyond what is reported here. Districts may also have school buildings or other construction that is in process that could expand their ability to offer an FDK program.

Optional Program Increases Timed to Match Fully-Funded Basic Education

Currently, approximately 23% of all kindergarten students are enrolled in a state-funded full-day program.1 Under the timelines created under SHB 2776, full-day kindergarten must be fully funded no later than the 2017–18 school year. This allows five fiscal years to ramp up the program using a linear implementation schedule of 15% increase per fiscal year.2 Figure 1 shows the number of schools that would be funded each year (light blue) in this scenario and the total number of schools receiving funding in the prior year (dark blue). Schools are added in decreasing levels of poverty, as measured by the free and reduced-price meal information for each school.

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1 The Legislature’s intent was to provide funding for 22% of all kindergarten students. Once a school is considered eligible to receive full-day funding, it is kept on the list of eligible schools. Due to enrollment changes, the number of students being served in state-funded programs currently exceeds the legislative funding target.

2 Current full-day funding reaches approximately 23.02% of all kindergarten students. To reach 100% in five fiscal years requires an additional 15.40% annually. To simplify computations for estimation purposes, this was condensed to 15% for each year, with the first year receiving 16.98% to bring it to 40% total.
However, since not all schools currently have the capacity to implement a full-day kindergarten program (see “Capacity Limitations”), additional portables and classrooms would be needed each year as well. Figure 2 shows the specific capacity needs of the schools funded using the five-year linear implementation schedule in Figure 1.
The estimated costs for construction are inflated using a combination of the five-year average of the Boeckh Index\(^3\) and the U.S. Implicit Price Deflator for State and Local Government Construction. The following provides an annual breakdown of the inflation factors used:

- 2013–14: 3.031%
- 2014–15: 3.158%
- 2015–16: 3.0%
- 2016–17: 3.0%
- 2017–18: 3.0%

**Table 6: Annual Cost to Meet Full-Day Kindergarten Space Requirements**

**Using a Five-Year Implementation Schedule**

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of Portables</th>
<th>Cost (thousands)</th>
<th>Number of Classrooms</th>
<th>Cost (thousands)</th>
<th>Total Spaces</th>
<th>Cost (thousands)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012–13</td>
<td>0</td>
<td>$0</td>
<td>0</td>
<td>$0</td>
<td>0</td>
<td>$0</td>
</tr>
<tr>
<td>2013–14</td>
<td>29</td>
<td>$7,470</td>
<td>25</td>
<td>$9,891</td>
<td>48</td>
<td>$17,361</td>
</tr>
<tr>
<td>2014–15</td>
<td>29</td>
<td>$7,706</td>
<td>18</td>
<td>$7,347</td>
<td>47</td>
<td>$15,053</td>
</tr>
<tr>
<td>2015–16</td>
<td>28</td>
<td>$7,663</td>
<td>31</td>
<td>$13,032</td>
<td>59</td>
<td>$20,695</td>
</tr>
<tr>
<td>2016–17</td>
<td>28</td>
<td>$7,893</td>
<td>38</td>
<td>$16,454</td>
<td>66</td>
<td>$24,347</td>
</tr>
<tr>
<td>2017–18</td>
<td>37</td>
<td>$10,743</td>
<td>39</td>
<td>$17,393</td>
<td>76</td>
<td>$28,136</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>$10,743</td>
<td></td>
<td>$64,117</td>
<td></td>
<td>$105,592</td>
</tr>
</tbody>
</table>

**Optional Program Increases by Percentage Tiers**

The above increases assume a linear progression in moving toward a fully funded program of basic education by 2017–18, and an assumption of a linear progression in the percentage of students being offered FDK. If, instead, the Legislature decides to fund full-day kindergarten at different percentages, the costs can be projected at each tier. The table and figures below show the number of schools added, classrooms and portables needed, and estimated cost assuming the Legislature targets additional students at every 10% tier.

This model is not intended to be an assumption of an additional 10% per year. Such an increase would require eight more years, which is beyond the full-funding schedule recommended in statute and mandated in *McCleary v. State of Washington*. This is only to show how many schools would be funded at every 10% tier. Accordingly, no inflationary factors are included as this breakdown is not intended to be an annual projection.

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\(^3\) The Marshall & Swift/Boeckh Building Cost Index for seven northwest cities calculates a historical trend of regional construction costs.
OSPI has developed a downloadable model that allows the user to input different percentage tiers to project the estimated FDK enrollment that will be served and the corresponding fiscal impact. This model is available on OSPI’s website at:
http://www.k12.wa.us/safs/misc/budprep13/FDK_model.xlsx.

Figure 3: Number of Schools Added, 10% Tiered Funding

Figure 4: Number of Portables/Classrooms Needed, 10% Tiered Funding
Table 7: Number of Portables/Classrooms Needed and Estimated Cost, 10% Tiered Funding

<table>
<thead>
<tr>
<th>Tier</th>
<th>Current 23%</th>
<th>30%</th>
<th>40%</th>
<th>50%</th>
<th>60%</th>
<th>70%</th>
<th>80%</th>
<th>90%</th>
<th>100%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Portables</td>
<td>0</td>
<td>14</td>
<td>15</td>
<td>13</td>
<td>26</td>
<td>18</td>
<td>14</td>
<td>26</td>
<td>25</td>
</tr>
<tr>
<td>Cost (thousands)</td>
<td>$0</td>
<td>$3,500</td>
<td>$3,750</td>
<td>$3,250</td>
<td>$6,500</td>
<td>$4,500</td>
<td>$3,500</td>
<td>$6,500</td>
<td>$6,250</td>
</tr>
<tr>
<td>Number of Classrooms</td>
<td>0</td>
<td>15</td>
<td>10</td>
<td>13</td>
<td>18</td>
<td>18</td>
<td>30</td>
<td>28</td>
<td>19</td>
</tr>
<tr>
<td>Cost (thousands)</td>
<td>$0</td>
<td>$5,760</td>
<td>$3,840</td>
<td>$4,992</td>
<td>$6,912</td>
<td>$6,912</td>
<td>$11,520</td>
<td>$10,752</td>
<td>$7,296</td>
</tr>
<tr>
<td>Total Spaces</td>
<td>0</td>
<td>23</td>
<td>25</td>
<td>26</td>
<td>44</td>
<td>36</td>
<td>44</td>
<td>54</td>
<td>44</td>
</tr>
<tr>
<td>Total Cost (thousands)</td>
<td>$0</td>
<td>$9,260</td>
<td>$7,590</td>
<td>$8,242</td>
<td>$13,412</td>
<td>$11,412</td>
<td>$15,020</td>
<td>$17,252</td>
<td>$13,546</td>
</tr>
<tr>
<td>Cumulative Cost (thousands)</td>
<td>$0</td>
<td>$9,260</td>
<td>$16,850</td>
<td>$25,092</td>
<td>$38,504</td>
<td>$49,916</td>
<td>$64,936</td>
<td>$82,188</td>
<td>$95,734</td>
</tr>
</tbody>
</table>

Kindergarten Through Grade Three Class Size Reduction

SHB 2776 provides, beginning with the 2011–13 biennium and with schools with the highest percentage of students eligible for free and reduced price meals in the prior school year, that the general average class size for Grades K–3 will be reduced until the average funded is no more than 17 in the 2017–18 school year. This is a similar phase-in strategy that is used for the FDK implementation; however, state funding for FDK was provided at approximately 20% of state’s kindergarteners prior to the 2011–13 biennium.

Number of Districts Reporting

Two distinct and separate school district surveys were used to capture data for school capacity to reduce class size. As previously mentioned, OSPI focused data collection efforts on the FDK component of this survey and captured responses from all school districts reporting kindergarten enrollment. Current class size data for kindergarten was provided by 290 school districts representing 1,150 schools and 99 percent of the statewide kindergarten enrollment.

A secondary school level survey of school districts captured current class size data for Grades one through three, the capacity to reduce class size to 17 for kindergarten through third grade and the district’s ability to hire highly qualified teachers. Responses were received from 109 out of the state’s 295 school districts. As of July 31, 2012, OSPI identified 1,304 schools with K–3 enrollment. Fifty-four percent or 702 schools responded to the survey, which represents 45 percent of the statewide enrollment in Grades K–3.

School Level Results

It is important to understand current actual class sizes versus the funded class sizes shown in SHB 2776. While more funding may be distributed, a certain number of school districts already are at or below the targeted class size. Survey respondents provided a clear indication that district and school size was clearly a factor in determining current class sizes and the
capacity for districts to meet the target with additional funds. Figures 5 and 6 show the class sizes reported for the respondents overlaid with a line showing the average enrollment at the corresponding schools, showing smaller class sizes typically occur at smaller schools.

**Figure 5: Kindergarten Class Size by School**

N=1,150 schools

![Figure 5: Kindergarten Class Size by School](image)

**Figure 6: Grades 1 through 3 Average Class Size by School**

N = 506 schools

![Figure 6: Grades 1 through 3 Average Class Size by School](image)

The above graphs show that districts with less than 50 students per grade are very close to the current target of 17 already. Using the same data to determine a weighted average of class...
size per grade shows the smallest class sizes are in kindergarten and increasing by 1.5 students by Grade three. All class sizes are above the class size target set by SHB 2776 of 17. However, the class sizes are lower than the currently funded class size of 24.3 for high poverty schools, with fifty or more percent of students participating in the free and reduced price meal program, and 25.23 for non-high poverty schools.

<table>
<thead>
<tr>
<th>Kindergarten</th>
<th>Grade 1</th>
<th>Grade 2</th>
<th>Grade 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>22.3</td>
<td>22.9</td>
<td>23.3</td>
<td>23.8</td>
</tr>
</tbody>
</table>

**Capacity to Accommodate Increased Resources**

Also, similar to full-day kindergarten implementation, the capacity limitations for school districts fall into the two categories; staffing and facilities.

In response to the OSPI capacity survey sent to school districts, 7 out of 101 respondents indicated that they would face a staffing capacity issue in Grades K–3 class size reduction implementation. Three of these indicated they expect the demand caused by the additional resources would lead to a system-wide shortage. Even so, 93% of districts responding indicated they would not have a staffing capacity issue.

Not surprisingly, a large number of schools indicated they would face facility capacity limitations in meeting the target of reducing class size to 17 in Grades K–3. More than half (65%) of the respondents stated that they would need more classrooms. These schools reported they would need 1,560 additional classrooms. A majority of the reported classrooms needed (88%) came from 261 schools with K–6 enrollment greater than the prototypical elementary enrollment of 400 students and the remaining need was reported as necessary by the remaining 82 schools.

**Increased Graduation Requirements**

As indicated above, ESHB 2261 states that the instructional program of basic education provided by each school district shall include instruction that provides students the opportunity to complete 24 credits for high school graduation, subject to a phased-in implementation as established by the Legislature. As measured by district oral and written responses, this area is the most controversial of the potential changes covered in this report.

There are several factors to consider in determining school district capacity to implement the proposed graduation requirements and the capacity of the system to accommodate the increased resources provided for implementation. The most important factor is arguably the fact that state funds currently do not provide ample resources to meet basic education requirements. Districts are concerned that increasing state graduation requirements will simply increase the burden on local resources to meet basic needs.
The simplest example of this concern is in the area of materials, supplies and operating costs (MSOC). SHB 2776 recognizes the need to increase MSOC funding to the level of average district spending from school year 2008–09 with a goal of full implementation in school year 2015–16. (As of school year 2012–13, no increases in MSOC have been made to achieve this goal.) While a district may be spending on average $309 per FTE on utilities and insurance, the State will only be funding half of the need in the 2012–13 school year. The balance of the costs must be picked up by reducing program services or through local resources. The same is true for facilities maintenance, textbooks, and the other MSOC categories. Changes that increase the amount of time a student attends school increases the costs of providing services in MSOC categories and, therefore, increase the pressure on local funding for their current share of the MSOC costs.

While MSOC is used as an example here, the same logic holds true for classified staffing, administrative staffing, and certificated staffing needs. Increased student time requires increased staffing in all areas – and this increased staffing need is not fully funded by the state through the current funding formula.

OSPI was charged with determining the costs of the proposed changes to the graduation requirements. After completing this analysis, OSPI found that there were direct costs associated with the increased graduation requirements. However, the most significant costs and concerns that districts had were a result of the systematic underfunding of the system that would simply be exacerbated by increased requirements without ample funding of the staffing and MSOC components of the prototypical school formula.

In summary, the current funding levels of the basic education system – particularly in the areas of MSOC, classified staffing levels and salary allocations, certificated staffing levels and allocations, and administrative staffing allocations – all raise legitimate concerns regarding the system’s ability to increase requirements in any area prior to more resources being provided.

**Number of Districts Reporting**

A survey was sent to school districts requesting information at the school level for the capacity to implement the increased graduation requirements as currently planned by the State Board of Education. This survey requested information about the schools physical capacity to implement the increased requirements and to hire highly capable teachers. Responses were received from 90 out of the state’s 295 school districts, or 30 percent of the state’s school districts. As of July 31, 2012, OSPI identified 1,080 schools with enrollment in Grades 9 through 12. Twenty-nine percent or 308 schools responded to the survey, which represents 46 percent of the statewide enrollment in Grades 9–12.

**Capacity to Accommodate Increased Resources**

Beyond the funding issue, school districts also reported capacity limitations regarding staffing capacity and facility capacity. The following chart provides information on facility capacity:
As shown, the need for additional science lab spaces was identified by 96 schools responding to the survey. Just as we saw in the K–3 class size reduction, the need was focused in a few of the respondents – eleven districts were responsible for 28 of the reported 56 additional classrooms needed by the change. This shows that the facility needs will vary significantly among school districts based on current requirements, size of school and capacity, and a variety of other factors.

Regarding staffing capacity, school district respondents also indicated that they would have difficulty in hiring highly qualified staff to meet the proposed requirements. Of the 90 school districts that responded, 15% expressed difficulty finding English, Social Studies and Career Concentration; 39% for Lab Science; 22% Art; and 48% in World Language.

The districts overwhelmingly indicated that the shortages were due to local workforce supply issues. Many smaller, rural districts reported concerns about a system-wide demand for teachers would create difficulties for their districts to attract teachers who would need to relocate to their small communities, especially if the teacher was only needed on a part-time basis.

Not to diminish the perception and experience of those in local districts who are actually recruiting and interviewing prospective teaching candidates regularly, other data was available regarding statewide staffing availability. In the 2010 report, OSPI identified since the 2008–09 school year, the teaching workforce has been reduced by over 1,000 FTE based on OSPI collected staffing data (S-275 reports). That number has continued to decline over the past biennium to over 2,000 FTE This data seems to indicate that the supply of teachers may not be the issue in the state as a whole – but that the individual labor markets based on district and school location may have a significant impact on a district’s capacity to attract and retain a highly qualified workforce.
Data Systems

This report is also required to provide information regarding the availability of data and data systems necessary for policy makers to make resource allocation determinations.

Washington State has one of the most comprehensive statewide K–12 longitudinal education data systems in the country. Washington has all of the 10 essential elements for a longitudinal data system and the ability to meet 5 of the 10 data actions as recommended by Data Quality Campaign (DQC).

Using K–12 Statewide Longitudinal Data System (SLDS) grant funding from the federal Department of Education the technical infrastructure and framework for a data warehouse has been built and populated with data from over 20 source systems. In addition, a web portal, K–12 Data and Reports, was released on December 6, 2012, with three reporting tools linked to the warehouse, which provides the public with dynamic access to K–12 longitudinal data for the first time. Data included in the phase I release include staff, fiscal, and directory data. Student information including assessment data is scheduled to be released to the public this spring.

The data warehouse and the K–12 Data and Reports portal are designed to address policy and research questions and the strategic policy decisions of legislators, school district directors, superintendents, principals, and other district staff. Tools in the system provide the ability to create custom professional quality reports or raw longitudinal data for further analysis.

The K–12 Data and Reports site provide reports that meet the legislative requirement of ESHB 2261 and data needed to address pressing research and policy questions. Visit the site at: http://data.k12.wa.us:9990/PublicDWP/Web/WashingtonWeb/Home.aspx.

CEDARS

Washington’s Comprehensive Education Data and Research System (CEDARS) includes the following data elements: student enrollment and demographics, course catalog, student grade history, student and staff schedules, and program participation (e.g., highly capable, bilingual, and special education programs). CEDARS contains the records of two million students dating back to the 2009–10 school year. The building blocks for this system were formed when the state Legislature authorized the use of a unique student identifier in the 2003–04 school year.

With implementation beginning in August 2009, CEDARS collects 15 data files submitted by each district at least monthly, but weekly by most. The system captures pre-kindergarten to Grade 12 enrollment. Students’ statewide identification numbers and teachers’ certification numbers allow linking student course enrollment and outcome data to teacher preparation and assignment data maintained in other databases. Teacher certifications, endorsements, and preparation history are all maintained with the unique certification number. Past assignment information such as salaries and National Board for Professional Teaching Standards Certification status can also be tracked with the certification number.

The use of statewide course codes, based on the National Center for Education Statistics Secondary Classification of Education Data coding schema, was implemented as part of CEDARS in the 2009–10 school year. This allows easier analysis of schools’ course offerings.
and students’ course taking patterns, in addition to analyses of teacher assignment data and
determinations of federal Highly Qualified Teacher status.

**Assessment Data**

Statewide assessment data are also maintained at the individual student record level, allowing
longitudinal analyses of participation and performance, linked with enrollment and program
participation history. Reasons for students not participating in the assessments, as well as the
types of alternate assessments used, are maintained in the assessment files.

**Fiscal Data**

Further, extensive fiscal data is currently available on the School Apportionment and
Financial Services section of the K–12 website (http://www.k12.wa.us/SAFS/default.asp).
Additional reports and financial data views will result from the work to implement SHB 2776
passed during the 2010 Legislative Session. Among the items included in SHB 2776 is a new
formula for allocating general apportionment moneys to school districts. Various models
showing staffing units funded under the prototypical school model, and crosswalk models
between the prior funding formula and the new prototypical schools formula under SHB
2776, can be found at: http://www.k12.wa.us/safs/INS/2776/2776.asp.

**P-20 Data**

An important component of the statewide K–12 longitudinal education data system in
Washington is the Education Data and Research Center (ERDC), which was created in 2007.
The ERDC was established through legislation to integrate early childhood, K–12, post-
secondary and workforce data for longitudinal research analysis and reporting. Each
education agency, including OSPI, provides unit-level records to the ERDC. ERDC then
matches and analyzes the data, emphasizing the transitions between systems; (i.e., from early
childhood daycares to kindergarten, from high school to a two-year community college, from
community college to employment or four-year university, and on to the workforce). The
ERDC collaborates with a variety of state agencies and institutions in its work.

**Data Governance**

ESHB 2261, passed during the 2009 Legislative Session established a data governance
program in the K–12 education arena. With the Data Governance Group and Data
Management Committee meetings occurring on a regular basis, more coordination across
program areas is occurring. Redundant data collections have been eliminated and data
management best practices have been put in place.

Further, the data analysts funded through budget proviso connected to ESHB 2261 are
mapping and linking data across various systems and extracting data for a variety of users
ranging from the University of Washington, Education Northwest, and the Education
Research and Data Center in the Office of Financial Management. These staff have also been
critical resources in the work surrounding the data warehouse and reporting tools.
Facilities Data

One specific area of data that needs continued focus and effort is in the area of school facilities and construction. The State funded through its 2010 capital budget the first phase of the development of the School Facilities Inventory and Condition system. As the Legislature continues to move forward with the implementation of SHB 2776 and the prototypical school model, it is critical that the facility data used is based on consistent and reliable information. The survey responses gathered to create this report give legislators some insight as to the issues and general significance of capacity – but a fully implemented facility system would provide greater clarity regarding the number of classroom spaces available and the current condition of those classrooms.

Conclusion

The educational system has significant capacity to receive additional resources consistent with the prototypical school model. In the areas of full-day kindergarten and reducing class sizes in early grades, the capacity issue is clearly in the area of facilities, where the staffing capacity exists in all but a few unique circumstances. Facility capacity concerns exist regarding school districts ability to reduce class size and implement full-day kindergarten – and not surprisingly the extent of the capacity concern varies significantly based on district size.

For full-day kindergarten, capacity exists in most districts to proceed with much faster phase-in than indicated in SHB 2776. Where capacity does not exist at the time schools become eligible, consideration should be given to special need based grants for facility expansion. Another option would be to allow allocations to be used to increase facility space where necessary to implement full-day kindergarten.

Regarding K–3 class size reduction, facility capacity may be an issue in statewide implementation based on poverty. Similar to full-day kindergarten, there are options available to allow phase-in, including those mentioned for full-day kindergarten. In addition, the Legislature could consider only providing funding to the extent that school districts are able to meet the funded ratios. This would provide an incentive for districts to adjust facility space within their schools to lower class sizes in the early grades.

Capacity to implement the graduation requirements is highly debated. OSPI is on record regarding the incremental costs associated with implementing the new graduation requirements. But those reported costs do not reflect the underfunding of the education system and the impact that this underfunding has on a school district’s capacity to provide higher levels of service. Clearly, there are many school districts that have implemented a 24 credit requirement for graduation using currently available resources – and many have done so by changing the class schedule to allow for more classes per day. This option is available to some districts, and others may not have that ability due to locally bargained teacher caseload language. A phase-in of the new requirements, based on a timeline of additional resources provided for MSOC, staffing levels, and staffing allocations, would allow districts the time and resources necessary to create the capacity to implement these requirements – and would not increase the burden on local taxpayers for state decision on graduation requirements.
Finally, the data systems and data available to policy makers in the educational system are ample and continue to be improved through collaboration among agencies and institutions. More work is necessary, but this area should not inhibit additional resource allocations to the K–12 education system.
Appendix A: Capacity Needs by District

- **Auburn**: They would need 12 portables spread across six schools, and one school does not have the capacity nor additional space for portables.
- **Battle Ground**: They would need to add a portable each at three schools.
- **Bethel**: They would need construction money to reconfigure rooms at three of their elementary schools.
- **Blaine**: At Blaine Primary School, they have no space for portables and no space inside the building, so short of a second-story expansion they cannot offer FDK at the school. They would need four new classrooms.
- **Burlington-Edison**: They would need a portable each at two schools to offer FDK.
- **Central Kitsap**: They would need one portable each at two schools.
- **Central Valley**: They would need a portable each at eight schools and four portables at one more school.
- **Coupeville**: They would need a portable, as all of their classrooms are occupied.
- **Dieringer**: They would need two classrooms.
- **Edmonds**: They would need to purchase four portables for additional classroom space.
- **Ellensburg**: They have almost no space at their existing schools, and limited resources to purchase portables. They would need a bond or levy to get portables at three elementary schools.
- **Everett**: Some schools partially offer FDK; to fully offer FDK they would need additional portables at ten schools, with an estimate of 16 portables across those ten schools.
- **Federal Way**: They would need portable or internal reassignments at six schools, amounting to an estimated ten portables.
- **Fife**: They would need to be able to purchase four portables for additional classroom space.
- **Griffin**: The district would need a portable to offer all FDK.
- **Highline**: Two of their elementary schools have no current capacity. They have some space at other buildings in the district, or they need at least one portable at those two schools.
- **Issaquah**: They would need 21 portables spread across 11 schools to be able to offer FDK programs. Additionally, one school has no more room for portables and would need six classrooms or house FDK off-site.
- **Kennewick**: They would need to develop capacity at ten of their schools, possibly by adding portables.
- **Lake Stevens**: They would need an additional classroom at six different schools to offer FDK.
- **Lake Washington**: They would need to add one classroom each at eight schools.
- **Lynden**: They would need a portable each at three schools.
- **Marysville**: Two of their schools would need portables. Two of their elementary schools share the same campus, which has no room for additional growth.
- **Mead**: Aside from additional teachers, they would need eight portables spread across six schools.
- **Monroe**: They would need to relocate their district’s special education programs to other facilities. One school would need two classrooms.
• Moses Lake: They would need portables at two schools.
• Mount Vernon: They would need a portable at one school.
• Mukilteo: They would need 11 rooms spread across six different schools.
• Napavine: They would need a portable at one school.
• Oak Harbor: They currently only have space at the middle schools. To add FDK at their five elementary schools, they would need additional space (approximately 14 rooms).
• Orting: They would need a portable and capital funding for said portable.
• Pasco: They would need to add at least one portable each for four schools.
• Pullman: They would need a portable each at three schools.
• Puyallup: They do not currently offer FDK in their schools. They estimate needing 36 classrooms across 21 schools to be able to offer FDK.
• Richland: They would need to add portables at 11 schools to have sufficient space for FDK.
• Riverview: They would need another portable to fully offer FDK at one of their schools.
• San Juan Island: They would need to add a portable; they have limited capacity to offer FDK.
• Sedro-Woolley: They would need portables at two schools and additional transportation funding.
• Sequim: They would need to add a portable each at two schools.
• Shaw Island: They would need to rent space in the community to offer FDK.
• Shelton: They do not have the space at this time, and would need a double portable each at two schools.
• Snoqualmie Valley: They estimate needing 14 rooms spread across five schools to offer FDK.
• Spokane: They would need a portable at two schools, and would need to move the Special Education programs at two more.
• Stanwood-Camano: They would need two more permanent classrooms, as they are already at capacity.
• Steilacoom: They would need two additional classrooms each at two schools to offer FDK programs.
• Tahoma: Their schools are currently at capacity. They would need 2–3 portables each at four different schools to be able to offer FDK programs.
• Tumwater: They would need to add additional classrooms at six elementary schools (estimate of 13 classrooms).
• Vancouver: They would need “full construction funding” to add additional classrooms or portables at 15 schools. To move all portables into rooms at the schools would require 26 rooms over 21 schools.
• Woodland: They would need to add three classrooms or portables to fully implement FDK.