

## Constructing Alternate Assessment Cohorts: An Oregon Perspective\*

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### ABSTRACT

Longitudinally modeling the growth of students with significant cognitive disabilities (SWSCDs) on alternate assessments based on alternate achievement standards (AA-AAS) presents many challenges for states. The number of students in Grades 3-8 who remain in a cohort group varies over time, depending on the methods used to construct the longitudinal cohorts. The accuracy of inferences made about student growth from such longitudinal models is further complicated when general assessments are not equated with AA-AAS which is usually the case. Measuring the growth of students switching test types is thus problematic. States must determine their priorities: measuring the growth of only AA-AAS scores that count towards making Adequate Yearly Progress under the No Child Left Behind Act (2001) or providing a more detailed look at the growth of SWSCDs over time.

Attempting to describe the growth of students with significant cognitive disabilities (SWSCDs) taking alternate assessments judged against alternate achievement standards (AA-AAS) in Oregon leads to many measurement challenges that must be addressed before conducting analyses. The State of Oregon currently has two different assessments used for Adequate Yearly Progress (AYP) performance calculations: the Oregon Assessment of Knowledge and Skills (OAKS), the general assessment which the majority of students take, and the Oregon Extended Assessment (ORExt), which is available only to students with the most significant cognitive disabilities. Scores from students taking AA-AAS can count for up to 1% of the scores the state includes in AYP determinations<sup>2</sup>, although more students can take the alternate assessment.

Growth models require multiple years of high-

quality test data for the same students. One significant problem when measuring growth for SWSCDs on AA-AAS is missing data, which affects the accuracy of student performance estimates. The decision rules used by the analyst can lead to different estimates of student growth. The tables below illustrate some of the challenges faced when constructing cohorts to measure the longitudinal growth of SWSCDs on the ORExt. Two different methods are employed to construct cohorts. Concerns when constructing cohorts to analyze growth of SWSCDs include, but are not limited to, data system integrity, missing data, student mobility, student attrition, and scaling difficulties<sup>3</sup>.

In the first cohort-building approach, SWSCDs are selected whose scores counted for AYP at the school level in the third grade for school year 2006-07. Subsequent years of students' scores for AYP are added on for that initial group of students, and separated by whether or not the score was from the ORExt, the OAKS, or neither assessment (see Table 1).

The second cohort-building approach involved selecting all student scores on the reading ORExt for each of the school years, starting in Grade 3, regardless of whether or not these scores were used for calculating AYP. Table 2 below illustrates the movement of students between the ORExt and the OAKS over the six-year period, separated by which test students took in the identified year. In the rare case that the student had two or more ORExt scores, the higher RIT score was used.

These two methods of selecting students formed the foundation for longitudinal cohorts from school year 2006-2007 through 2011-2012. Only students whose scores on the ORExt in 2006-07 as third graders counted for AYP were selected using the first method. All third graders who participated in the ORExt in 2006-07 were included from the second method,

Table 1  
*Sample Size for AYP Only Model*

Group	2006-07 (grade 3)	2007-08	2008-09	2009-10	2010-11	2011-12
Students taking ORExt	674	439	324	235	176	139
Students taking OAKS*	269	360	425	469	477	493
Attrition based on 2006-07	0	144	194	239	290	311

*\*These students with OAKS scores had an ORExt score the counted for AYP in some other year, and were included to demonstrate the movement of students between tests.*

regardless of OAKS participation. Scores from each subsequent year were added longitudinally for both cohorts. Table 3 below illustrates the total number of students included in the longitudinal cohort using each approach.

SWSCDs do not necessarily continue taking ORExt in subsequent years if they participate in Grade 3. As ORExt and OAKS are not equated, measuring growth of individual students that switch test types is problematic. States trying to implement growth models for accountability purposes may only be interested in tracking the growth of SWSCDs whose AA-AAS scores count for AYP. In states like Oregon where students can take both the general assessment (OAKS) and the AA-AAS in a given year, not including ORExt scores that do not count for AYP decreases the

accuracy of inferences made about individual student growth over time. Given the mobility between ORExt and OAKS, it is critical to develop statistical scaling and distribution correction techniques that allow for cross-test comparisons; otherwise the growth of SWSCDs may never be modeled accurately.

Table 2  
*Sample Size: Students With Any ORExt Score Regardless of AYP*

Group	2006-07 (grade 3)	2007-08	2008-09	2009-10	2010-11	2011-12
Students taking only ORExt	1074	736	580	460	430	395
Students taking ORExt and OAKS	108	37	15	9	7	5
Students taking OAKS*	0	305	454	522	538	549
Attrition based on 2006-07	0	104	133	191	207	233

*\*Students taking OAKS took ORExt in at least one other year.*

Table 3  
*Cohorts for Both Models*

Group	Year 1	Year 2	2008-09	2009-10	2010-11	2011-12
AYP only	674	330	171	87	41	22
All ORExt	1182	791	567	423	349	293

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***References***

<sup>1</sup>Farley, D., Saven, J. L., Tindal, G., Nese, J. F. T. (2013). Analysis of Growth on State Tests for Students With Significant Cognitive Disabilities (Technical Report No. 1311). Eugene, OR: Behavioral Research and Teaching, University of Oregon.

<sup>2</sup>The No Child Left Behind Act (NCLB), Pub. L. No. 107-110 (2001).

<sup>3</sup>Tindal, G., Schulte, A., Elliot, S., and Stevens, J. (2011). Technical Report. National Research and Development Center on Assessment and Accountability for Special Education. Retrieved from [http://www.ncaase.com/docs/NarrativeV15\\_NationalRDctrFINAL91410v4.pdf](http://www.ncaase.com/docs/NarrativeV15_NationalRDctrFINAL91410v4.pdf)

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