2018 Oregon Observational Rating Assessment Results

BRT
behavioral research & teaching

Abstract

In the spring of 2016, Behavioral Research and Teaching (BRT) at the University of Oregon developed a new assessment for the Oregon Department of Education (ODE), called the Oregon Observational Rating Assessment (ORora). The purpose of the ORora was to allow for the review of progress for students with significant cognitive disabilities (SWSCD) who were unable to access the academic content of the Oregon Extended Assessments (OREext), despite the reduction in depth, breadth, and complexity and the increased access to test content supported by the OREext test design. BRT reviewed the research for assessing attention, basic math skills, and receptive and expressive language. Consultation with experts, including teachers of SWSCD and speech-language pathologists, as well as internal staff, was effected. The result was the ORora. A summary of the results from the second administration of the ORora is provided in this report.

Background

The Oregon Observation Rating Assessment (ORora) is an observational rating assessment for students with significant cognitive disabilities (SWSCD) who are unable to access the ORExt. SWSCD who do not meet the minimum participation rule on the ORExt are required to be administered the ORora. The ORora is used for descriptive purposes and is not part of public accountability report related to Annual Measurable Objectives.

Student performance is rated with four-point rating scales that are specific to each sub-domain. The ORora includes four sub-domain scores: a) Attention, b) Basic Math Skills, c) Receptive Language, and d) Expressive Language. Each sub-domain includes five items and each item is worth four points. Thus, each sub-domain has a maximum score of 20, each domain has a maximum score of 40, and the Total Score for the ORora has a maximum of 80. The minimum score for the ORora is 20, as students cannot receive a zero score on any items. Attention and Basic Math skills are combined into the Level of Independence domain, while Receptive and Expressive language are combined into a Communication domain score. The two domain scores, LOI and COM, are combined to provide an overall summary score. The ORora also includes a text entry domain where QAs can describe the students' current levels of functioning across all relevant domains for future reference.

The complete ORora is provided in *Appendix A*. The ORora is completed by a qualified assessor (QA) who knows the student best. Administration and scoring instructions are provided in *Appendix B*.

Methods

Participants

Responses to ORora items were received for 529 students, with approximately 75 students per grade level. Table 1 includes all grade level *n*-sizes for participation and a comparison to the ORExt n-sizes to allow for interpretation of what percentage of the SWSCD population who took the ORExt participated in the ORora. Overall, 14.4% of SWSCD who participated in the ORExt also participated in the ORora; however, some qualified assessors elected to participate while others were required to participate due to the minimum participation rule. The sample was 66% male and 34% female. The sample was 56% White, 24% Hispanic, 5% Asian, 5% African-American, 7% Multi-Ethnic, and 1% American Indian/Alaskan Native.

Procedure

The ORora was distributed via ODE's District Secure website (https://district.ode.state.or.us/apps/login/) along with secure ORExt test materials and via the tablet administration. The ORora, as a non-secure assessment, was also made available on the or.k12test.com website to all Qualified Trainers. Assessment results were downloaded in an Excel comma separated values file and analyzed descriptively in Excel.

Results

In what follows, quantitative and qualitative results from the 2017-2018 ORora are presented, respectively. The overall results suggest that students who participated in the ORora

have very complex support needs and often have multiple disabilities and medical complications that prohibit participation in a performance-based assessment.

Quantitative

The ORora score structure includes 80 total points possible, with 40 points possible for each of two domains and 20 for each of four sub-domains. The average Total Score for the ORora was 50.2 (62.8%). The average Level of Independence domain score was 24.9 (62.2%), with sub-domain scores in Attention at 12.8 (63.9%) and Basic Math Skills at 12.1 (60.5%). The average Communication domain score was 25.4 (63.4%), which was composed of an average Receptive Language sub-domain score average of 13.5 (67.4%) and an Expressive Language sub-domain score average of 11.9 (59.4%). Complete score results are presented in Table 2. The average item means ranged from 2.38 on Expressive Communication to 2.70 on Receptive Communication. Average item means are presented in Table 3.

Qualitative

The narrative summary section was designed for teachers to explain their students' access to the instruction, sensory needs, assistive technology, development of functional skills, and any areas of growth. Teachers were also encouraged to provide summary statements of student performance for future growth determinations, as well.

Consistent with prior results, narrative summaries of the 2017-18 ORora indicated that most students had multiple diagnoses, were non-ambulatory, and required full or partial physical assistance. Students had very low receptive communication, and very low receptive and expressive verbal skills. Multiple verbal prompts were required to focus student attention,

as well as redirection and reduced task demands. Token boards and other reinforcements were commonly used as rewards for work completion. Frequent breaks were often required during test administration due to student anxiety and behaviors.

Most students were non-verbal and required one-on-one classroom instruction. These students were in Life Skills programs and most communicated using assistive technology. Means of communication for these students included iPads, switch devices, vocal output devices, GoTalk Communication devices, Proloquo2Go, picture communication such as PECS, symbol and gestural communication, eye gaze, sign language, and multi-modal communication systems.

> "[Student's] disability impacts her receptive and expressive communication along with behavior. She struggles with communicating her wants and desires, which impacts her academic learning. She is also severely impacted by the need for extensive sensory input throughout her school day and has access to a variety of sensory tools to help keep her in a calm state. [Student] has a behavior plan that clearly outlines staff response to her behavioral outbursts. Historically [Student] has struggled with being part of a large or small or individual instruction in the area of academics. Within the past year, she has gradually been taking a greater interest in being part of a group (large or small) and has been starting to work with answering comprehension questions. She has a tendency to jab or hit the answer sheet, which proves to be difficult in deciphering if this is her answer. When [Student] is clearly finished with a task, she will either leave the area or hit/pinch/scream/scratch the person working with her. These behaviors have impacted her assessment taking abilities."

Comments submitted by QAs also demonstrated that they are beginning the process of comparing this year's ORora results to last year's, focusing on change over time,

> "The student's Total ORora Score increased from 34/80 in 2015-16 to 48/80 in 2016-17. His total LOI score increased from 17/40 to 23/40. His Attention score increased from 8/20 to 11/20. His math concepts score increased from 9/20 to 12/20. His total communication score increased from 17/40 to 25/40. His receptive communication increased from 11/20 to 12/20 and his expressive communication increased from 5/20 to 10/20. [Student's] increasing skills in using his AAC (iPad with Proloquo2Go) are a significant factor in his increased scores in communication and level of attention. He is able to access instruction in early math concepts and demonstrate his understanding."

Discussion

Qualitative results from the third administration of the ORora demonstrate that most students who participated in the ORora had very complex support needs, as evidenced by concomitant disabilities, orthopedic support needs and need for full or partial physical assistance. Students' communication skills were extremely limited. Multiple verbal prompts were required as well as redirection and reduced task demands. Token boards and other reinforcements were commonly used as rewards for work completion. Frequent breaks were often required during test administration due to student anxiety and behaviors.

Table 1
2017-18 ORora Participation

Grade	***n***	**OREXt ELA *n***	**% SWSCD**
3	79	541	14.6
4	66	586	11.3
5	91	528	17.3
6	102	555	18.4
7	68	493	13.8
8	65	477	13.6
11	58	430	13.5
Total	529	3,610	14.7

Note. The percentages listed above are based upon overall grade level sample for the 2017-18 OREXt ELA assessments.

Table 2
2017-18 ORora Test, Domain, and Subdomain Average Scores and Percentages

Domain Score	**Sub-domain Score**	**avg**	**%**
Level of Independence		24.9	62.2
	Attention	*12.8*	*63.9*
	Basic Math Skills	*12.1*	*60.5*
Communication		25.4	63.4
	Receptive	*13.5*	*67.4*
	Expressive	*11.9*	*59.4*
Average Total ORora		**50.2**	**62.8**

Note. Sub-domain score max = 20. Domain max score = 40. Total max score = 80. Results above may not add to 100 due to rounding.

Table 3

2015-16 ORora Average Item Means

Domain	**Sub-domain**	***m***
Level of Independence		2.49
	Attention	*2.55*
	Basic Math Skills	*2.42*
Communication		2.54
	Receptive	*2.70*
	Expressive	*2.38*

Note. The means listed above are inclusive of all grade levels. Scores were rated on a four point rating scale that was domain-specific.

Appendix A

Oregon Extended Assessment: 2017-18 Oregon Observational Rating Assessment (ORora)

The Oregon Observational Rating Assessment (ORora) provides instructional and functional information for teachers and parents in four domains: attention, math concepts, and communication (expressive and receptive). It is administered to students with significant cognitive disabilities (SWSCDs) who are not able to access the academic demands of the Oregon Extended Assessment (OREext), despite the provision of extensive supports and test design features founded in the concepts of universal design for assessment.

Qualified Assessors are to use the following decision rule in determining whether or not to complete the ORora:

If testing for an OREXt content area assessment is discontinued in English language arts, Mathematics, or Science, QAs <u>must</u> complete the ORora (only one ORora per student must be completed).

The educator(s) responsible for the student's instruction should complete this assessment, which is comprised of 10 **Level of Independence** items (5 - Attention Sub-domain and 5 - Math Concepts Sub-domain) and 10 **Communication** items (5 - Expressive Sub-domain and 5 – Receptive Sub-domain) using the following rating scales (1-4). These ratings can be summarized within and across domains to define and track student progress. A total of 80 points are possible on this assessment (20 points for each sub-domain).

Level of Independence (LOI) Domain

Attention Sub-domain

Sub-domain prompt/question **Student sustains attention in….**	**Level 1** *Full Physical*	**Level 2** *Partial Physical*	**Level 3** *Verbal/ Gestural*	**Level 4** *Indep-endent*
1. one-on-one instructional contexts.	**1**	**2**	**3**	**4**
2. multiple environments (home, school, community).	**1**	**2**	**3**	**4**
3. completing preferred activities.	**1**	**2**	**3**	**4**
4. settings with limited /few distractions.	**1**	**2**	**3**	**4**
5. settings with multiple/different distractions.	**1**	**2**	**3**	**4**
Total	**Attention Points: _____**			

Math Concepts Sub-domain

Sub-domain prompt/question Student…	**Level 1** *Full Physical*	**Level 2** *Partial Physical*	**Level 3** *Verbal/ Gestural*	**Level 4** *Indep-endent*
6. orients to math objects (e.g., manipulatives, shapes, measurement tools)	**1**	**2**	**3**	**4**
7. recognizes concepts of *less, same*, and *more*.	**1**	**2**	**3**	**4**
8. uses a schedule/routine to identify activities.	**1**	**2**	**3**	**4**
9. matches similar objects by characteristics, such as size, shape, and/or color.	**1**	**2**	**3**	**4**
10. identifies common geometric shapes (i.e., circle, square, triangle, rectangle).	**1**	**2**	**3**	**4**
Total	**Math Concepts Points: _____**			

Level of Indepence Domain Summary

Domain	**Points Achieved**
1. Attention Sub-domain	_____
2. Math Concepts Sub-domain	_____
Total LOI Score: _____	

Communication (COM) Domain

Receptive Sub-domain

Sub-domain prompt/question Student is able to...	**Level 1** *Reactive*	**Level 2** *Proactive*	**Level 3** *Unconventional*	**Level 4** *Conventional*
11. attend to desired objects (e.g., food, toys, persons).	**1** attends to object	**2** reach and capture	**3** exploratory actions with objects	**4** conventional use of objects
12. follow one-step directions.	**1** orients to speaker	**2** simple imperatives (e.g., stop, no, give, look)	**3** self-care directions (e.g., pick up, turn off, clean your, etc.)	**4** one- step, one-object directions (e.g., open the, go to, bring me, get your)] objects
13. anticipate/predict coming events.	**1** conveys discomfort	**2** anticipates routine events	**3** predicts routine event	**4** uses schedule to predict routine event
14. direct attention to object identified by communication partner.	**1** orients to object	**2** alternates attention	**3** imitates actions on objects or tools	**4** uses objects or tools in conventional manner
15. understand gestures/ utterances.	**1** reacts to intonation	**2** with routine utterance	**3** with conventional gestures	**4** with 1-2 labels
Total	**Receptive Points: _____**			

Expressive Sub-domain

Sub-domain prompt/question Student is able to _____ at this level.	**Level 1** *Reactive*	**Level 2** *Proactive*	**Level 3** *Unconventional*	**Level 4** *Conventional*
16. request/protest an object/action	**1**	**2**	**3**	**4**
17. indicate need for a social routine	**1**	**2**	**3**	**4**
18. indicate need for comfort	**1**	**2**	**3**	**4**
19. request permission/information	**1**	**2**	**3**	**4**
20. convey messages	**1**	**2**	**3**	**4**
Total	**Expressive Points: _____**			

Communication Summary

Domain	**Points Achieved**
1. Receptive Sub-domain	_____
2. Expressive Sub-domain	_____
Total COM Score: _____	

Oregon Observational Rating Assessment (ORora) Summary

Domain		**Points Achieved**
Level of Independence (LOI)	1. Attention Sub-domain	_____
	2. Math Concepts Sub-domain	_____
	LOI Total	_____
Communication (COM)	3. Receptive Sub-domain	_____
	4. Expressive Sub-domain	_____
	COM Total	_____
	Total ORora Score (LOI Total + COM Total) : _____ **ORora Percentage (Total ORA Score/80) : _____**	

ORora Narrative Summary

(*Suggested content*: access to instruction/sensory support needs, use of Assistive Technology, development of functional skills, any areas of growth, comparison to previous ORora scores)

Appendix B
Oregon Observational Rating Assessment (ORora)
2017-18 Administration Instructions

ORora Purpose

The ORora provides instructional and functional information for teachers and parents in four domains: attention, basic math concepts, and receptive and expressive communication. It is administered to students with significant cognitive disabilities (SWSCD) who are not able to access the academic demands of the Oregon Extended Assessment (OREXt), despite the provision of extensive supports and test design features founded in the concepts of universal design for assessment. Assessor(s) responsible for student's instruction should complete this rating scale.

Qualified Assessors (QAs) are to use the following decision rule in determining whether or not to complete the ORora:

If testing for an OREXt content area assessment is discontinued in English language arts, Mathematics, or Science, QAs must complete the ORora (only one ORora per student must be completed).

Consequences of Discontinuing the OREXt

Students must complete 10 items on the OREXt to count for Annual Measureable Objective (AMO) participation. QAs should consider discontinuation of the OREXt administration if a student misses 10 items at any point within the administration of the first 15 items. If OREXt testing is discontinued, QAs must administer the ORora. However, teachers may elect to complete a full test administration in order to generate performance scores and still complete the ORora. Discontinuing the administration of the OREXt is a serious decision with many potential consequences; however, administering the OREXt when a valid score is not feasible is also an inefficient use of teacher and student time.

Two ORora Domains: LOI and Communication

This assessment includes both a level of independence (LOI) and a communication domain (COM), each with their own respective rating scales. The LOI scale helps stakeholders to define how much support a student needs from a teacher in order to become successful in specific areas. The COM scale helps to define the level of the student's functioning in terms of both understanding the intent of others as well as conveying their needs or wants to those around them.

Level of Independence (LOI)
In the LOI domain, the teacher rates how much assistance the student requires in order to bring them to success in a particular area, using a system of least prompts approach (Wolery, Ault, & Doyle, 1992), beginning with independent function, proceeding to the remaining levels of support only when needed, including verbal/gestural, partial physical, and/or full physical.

Level of Independence Rating Scale (LOI)

Level 1	Level 2	Level 3	Level 4
Full Physical Requires use of full physical supports from teacher (e.g., holding the elbow/hand) in order to attend to a task, as well as to complete the task.	**Partial Physical** Requires use of partial physical supports from teacher (e.g., touching the hand/shoulder) in order to attend to a task, as well as to complete the task.	**Verbal/Gestural** Requires use of verbal/gestural supports from teacher in order to attend to a task, as well as to complete the task.	**Independent** Able to complete task without direct support from teacher.

Clarifying Example
Here is an example of how a QA would work through a classroom activity using a system of least prompts. In a testing context, we are defining the level of support needed for different types of activities.

Level 4: Independent
Place preferred drink in front of student and wait 3-5 seconds to see if the student responds independently.

Level 3: Verbal/Gestural
If the student does not respond at Level 4 in 3-5 seconds, direct the child to the drink by pointing or providing a verbal prompt (*Indirect:* Are you thirsty? or *Direct:* Pick up your beverage so you can drink.)

Level 2: Partial Physical
If the student does not respond to Level 3 support in 3-5 seconds, use tactile physical assistance to prompt the student's hand, but do not use full physical assistance. Partial physical support can be paired with verbal prompting, as well.

Level 1: Full Physical
If the student does not respond to Level 2 support in 3-5 seconds, use full physical support (e.g., hand-over-hand) to fully assist the student to grab the beverage. Full physical support can be paired with verbal prompting, as well.

Communication (COM)

The **COM** rating is based on the following scale: 1 = Reactive, 2 = Proactive, 3 = Unconventional, 4 = Conventional. The COM rating captures communication behaviors below the pre-symbolic and symbolic levels assessed on the OREXt. The lowest functioning SWSCD likely have skills somewhere along this continuum—from staying awake and attending to functional and/or instructional objects in the classroom to beginning to work with objects and images. The COM rating scale is supported by a wide research base (Browder & Spooner, 2011; Browder, Wakeman, & Flowers, 2008; Browder, Wood, Thompson, & Ruboffo, 2011; McLean, Snyder-McLean, & Rowland, 1981; Rowland & Schweigert, 1990; Rowland, 2013).

Communication Rating Scale (COM)

Level 1	Level 2	Level 3	Level 4
Reactive Student's behavior is not purposeful, but may be reflective of the student's current status (e.g., level of comfort/energy, thirst, hunger). Teachers and parents are able to interpret the student's needs and wants by observing the behaviors (e.g., noises, facial expressions, moving body parts) and making inferences about what the student needs.	**Proactive** Student behaves purposefully, but does not realize that s/he can influence the behaviors of others by communicating needs at this level. Teachers and parents interpret the student's needs and wants by observing behaviors and making inferences.	**Unconventional** Student uses unconventional pre-symbolic communication. No use of symbols is included, nor does the student follow existing social communication norms. The student is attempting to interact with others to meet personal needs by making noises, facial expressions, and/or moving body parts.	**Conventional** Student uses conventional pre-symbolic behaviors to communicate with purpose. They are still below symbolic communication with abstract symbols (e.g., letters, numerals), but are communicating needs and wants in order to influence those around them in a socially accepted manner. Students may communicate by nodding, pointing, waving, hugging, looking toward a desired object, or using other socially appropriate gestures.

ORora Narrative Summary
In the open-ended narrative section, teachers can address or identify: (a) prerequisite skills that allow her/him to access instruction, (b) sensory support needs (hearing, vision, orthopedic, medical), (c) effective use of Assistive Technology (AT) (e.g., alternative communication devices), (d) relevant functional skills have developed over the past year, and, generally, (e) areas of growth that educators have noted in the prior year (e.g., comparing current to prior ORora scores, if available, or any context for determining the Present Levels of Academic and Functional Performance [PLAAFP] for SWSCDs).

Using Scores from the ORora

The ORora yields four sub-domain scores (Attention, Basic Math Concepts, Receptive Communication, and Expressive Communication), domain summary scores for the LOI and COM domains, and a summary score composed of both domain scores. These scores can be used for diagnostic purposes to represent student learning and change across time. Individualized Education Program (IEP) teams are encouraged to use the ORora results as one data source to develop appropriate and meaningful Present Levels of Academic and Functional Performance (PLAAFP) descriptions, as well as IEP goals and objectives. Here is an example of a student's ORora results reflected in a PLAAFP statement:

"Student achieved a total score of 70/80 on the ORora this year (87.5%), with a score of 19 in the Attention sub-domain, 18 in the Basic Math Concepts sub-domain, an 18 in the Receptive Communication sub-domain, and a 15 in the Expressive Communication sub-domain. These results reflect overall growth compared to last year's results, where s/he earned a 64/80 (80%). Student made impressive gains in communication, increasing by 4 points in the Expressive sub-domain and 2 points in the Receptive sub-domain."

IEP goals can also target overall improvement on the ORora, using other sources of data for assessment of objectives. Resources related to increasing student communication level will be published on BRT's curriculum and instruction website.

NOTE: ORA scores are entered on the Oregon Department of Education (ODE) District secure website at https://district.ode.state.or.us/apps/login/.
Please contact Brad Lenhardt at ODE at brad.lenhardt@state.or.us with any questions.

References

Browder, D. M. & Spooner, F. (2011). *Teaching students with moderate and severe disabilities*. New York: Guilford Press.

Browder, D. M., Wood, L., Thompson, J., & Ribuffo, C. (2014). *Evidence-based practices for students with severe disabilities* (Document No. IC-3). Retrieved from University of Florida, Collaboration for Effective Educator, Development, Accountability, and Reform Center website: http://ceedar.education.ufl.edu/tools/innovation-configurations/

Browder, D. M., Flowers, C., & Wakeman, S. (2008). Facilitating participation in assessments and the general curriculum: Level of symbolic communication classification for students with significant cognitive disabilities. *Assessment in Education: Principles and Practice, 15*:2, 137-151. *doi* 10.1080/09695940802164176

McLean, J. E., Snyder-McLean, L., & Rowland, C. (1981). *Process-oriented educational programming for the severely/profoundly handicapped adolescent*. Parsons: University of Kansas, Bureau of Research.

Rowland, C. & Schweigert, P. (1990). *Tangible symbol systems: Symbolic communication for individuals with multisensory impairments.* Tucson, AZ: Communication Skill Builders. Retrieved from http://files.eric.ed.gov/fulltext/ED319154.pdf

Rowland, C. (2013). *Communication matrix for parents and professionals*. Oregon Health & Sciences University. Retrieved from http://communicationmatrix.org/uploads/pdfs/handbook.pdf

Wolery, M., Ault, M. J., & Doyle, P. M. (1992). *Teaching students with moderate to severe disabilities: Use of response prompting strategies*. New York: Longman.