

10-2019

Examining Diagnostic Utility of CELF-5 Sentence Comprehension Test

Dayana Lituma-Solis
litumad1@southernct.edu

Follow this and additional works at: <https://opencommons.uconn.edu/nera-2019>



Part of the [Language and Literacy Education Commons](#)

Recommended Citation

Lituma-Solis, Dayana, "Examining Diagnostic Utility of CELF-5 Sentence Comprehension Test" (2019).
NERA Conference Proceedings 2019. 4.
<https://opencommons.uconn.edu/nera-2019/4>

Dayana Lituma-Solis

Southern Connecticut State University

Examining Diagnostic Utility of CELF-5 Sentence Comprehension Test

Background and Purpose:

In our partnership with urban schools serving large populations of students from lower socioeconomic and culturally diverse backgrounds, we have provided research-based interventions for improving the reading skills of at-risk readers in first and second grade. Our research augments the school's response-to-intervention (RTI) while simultaneously investigating the efficacy of our assessments and interventions. Because the school we work with tends to have insufficient personnel and resources to serve all who need RTI, it is essential that our screening measures can accurately identify children who may need extra intervention. Screening tools to identify students for interventions need to be reliable, valid, practical and accurately predict risk (Jenkins & Johnson, 2019).

Last year we were asked to assess kindergarteners and provide an intervention to those identified as at-risk for developing reading problems. Adapting our project to meet the needs of the school, we chose the Sentence Comprehension subtest of the Clinical Evaluation of

Language Fundamentals (CELF-5) as a measure of language comprehension to screen for potential reading comprehension problems. The CELF-5 is an individually administered clinical tool designed to screen school-aged students for language disorders. We present preliminary data on the diagnostic utility of the CELF-5 Sentence Comprehension subtest in a sample of three kindergarten classrooms at a Title I school.

Participants:

Demographic information was collected for a sample of 49 kindergarteners at a Title I school who had completed pre-post data. In classroom A, the mean age was 5.53 years, mean age was 5.57 years in classroom B, and mean age was 5.73 in classroom C. 53% of students in classroom A were female, 67% were female in classroom B, and 53% were female in classroom C. 7 students in classroom A received RTI/special education services, 4 students in classroom B received RTI/special education services, and 4 students in classroom C received RTI/special education services. There was 1 English language learner in each classroom. The sentence comprehension pretest standard score was 9.88 for classroom A, 10.33 for classroom B, and 9.50 for classroom C. The sentence comprehension standard score posttest was 11.41 for classroom

A, 11.20 for classroom B, and 11.06 for classroom C.

Celf-5 Sentence Comprehension:

The CELF-5 is a 26-item test. The examiner reads a sentence and the examinee selects one of four pictures that matches the sentence. Testing stops at four consecutive zeros. Raw scores are converted to age-based standard scores ($M = 10$, $SD = 3$).

Procedure:

1. Undergraduate research assistants (RAs) administered CELF-5 Sentence Comprehension as part of a larger battery of tests.
2. Tests were administered on separate days to minimize fatigue, and each administration took about 10 minutes.
3. Children were pretested in February/March 2019 and post-tested in May/June 2019.
4. At the end of the project, frequencies of errors for each child were recorded for each CELF-5 language category: Negation, Modification, Prepositional phrase, Direct/Indirect Objects, Infinitive, Verb Phrase, Relative Clause, Subordinate Clause, Interrogative,

Passive, Direct Request, Indirect Request, and Compound.

Intervention:

Seven children were selected for a dialogic reading (DR) intervention based on CELF-5 pretest scores and the school's input. Of the seven ($M= 6.57$, $SD = 1.39$, $Mdn = 6.0$), 5 students had standard scores 1 SD below average and two students had low-average performance. DR is a shared book reading technique in which adults interact with children while reading in a way that encourages them to think about the story, express their thoughts, and make connections to their personal experiences. The strategies we use are summarized by the acronym, EMPOWERED. DR was implemented by trained RAs one-on-one with each child in 10-minute sessions. We examined the error frequencies at pretest and posttest of children who received DR as compared to all other children (28 typically-achieving peers and 13 children who received training on word identification).

Classroom Results:

At pretest, children in all three classes showed the highest number of errors in the Prepositional phrase, Subordinate clause, and Negation categories. Even though the standard scores for Sentence Comprehension were in the average range for all three kindergarten classes, indicating 'typical' performance, all classes struggled with the same language categories. This suggests that error profiles can be informative to educators when planning language arts/literacy instruction.

At posttest, Class A still struggled with both the Negation and Prepositional phrase categories, but instead of subordinate clauses, they had difficulty with the Direct/indirect object

category. For Class B and C, the same three categories were problematic at pretest and posttest. However, Class B improved substantially on the Subordinate clause category, thus only showed a high number of errors at posttest on two categories. Class C appeared to improve substantially on the Prepositional phrase category.

Intervention Results:

At pretest, children selected for DR intervention had the most errors on Prepositional Phrase, Relative Clause and Modification, and Compound. DR participants reduced the number of errors in these categories at posttest, narrowing the gap with peers. Results should be interpreted with caution because data are descriptive. However, data suggests that the CELF-5 Sentence Comprehension may be useful diagnostically to identify those who might benefit from intervention, and it may also be capable of tracking improvements within interventions focused on oral language comprehension such as DR.

Conclusion:

The CELF-5 is a reliable and valid assessment. The Sentence Comprehension subtest takes only a few minutes to administer and therefore would be a good candidate as a screen for

identifying children who may develop reading comprehension problems. The current results warrant further investigation into whether error patterns can be used diagnostically to identify risk for reading problems.

References

- Abbott, M., Wills, H. P., Kamps, D., Greenwood, C. R., Kaufman, J., & Filingim, D. (2008). The process of implementing a reading and behavior three-tier model: A case study in a Midwest elementary school. In C. R. Greenwood, R. Horner, T. Kratochwill, & I. Oxaal (Eds.), *Elementary school-wide prevention models: Real models and real lessons learned* (pp. 215–265). New York, NY: Guilford Press.
- Authors. (2016a, March 5). *Dialogic reading: A theory-based approach to early reading intervention in urban schools*. Poster presented at the annual meeting of the Eastern Psychological Association, New York, NY.
- Authors. (2016b, October 28). *Longitudinal impact of a dialogic reading intervention in first and second graders*. Poster presented at the annual meeting of the Northeastern Educational Research Association, Trumbull, CT.
- Authors. (2018a, April 14). *Efficacy of a dialogic reading intervention for at-risk readers in urban schools*. Paper presented at the annual meeting of the American Educational Research Association, New York, NY.
- Authors. (2018b, October 18). *Efficacy of a dialogic reading Intervention for struggling first-graders in urban schools*. Poster presented at the annual conference of the Northeastern Educational Research Association, Trumbull, CT.
- Hutchins, T. L., & Cannizzaro, M. S. (2017). Review of the Clinical Evaluation of Language Fundamentals, Fifth Edition. In J. F. Carlson, K. F. Geisinger, & J. L. Jonson (Eds.), *The twentieth mental measurements yearbook*. Lincoln, NE: Buros Institute of Mental Measurements.

Jenkins, J. R., & Johnson, E. (2019). *Universal screening for reading problems: Why and how should we do this?* Retrieved on May 22, 2019 from:

<http://www.rtinetwork.org/essential/assessment/screening/readingproblems>.

Pratt, S. (2017). Review of the Clinical Evaluation of Language Fundamentals, Fifth Edition. In J. F. Carlson, K. F. Geisinger, & J. L. Jonson (Eds.), *The twentieth mental measurements yearbook*. Lincoln, NE: Buros Institute of Mental Measurements.