

Annual Technical Report for ACCESS for ELLs Online English Language Proficiency Test

Series 602, 2023–2024 Administration Annual Technical Report No. 20A

References

Prepared by Center for Applied Linguistics Language Assessment Division Psychometrics and Quantitative Research Team June 2025

References

- Allen, N. L., Carlson, J. E., & Zalanak, C. A. (1999). The NAEP 1996 technical report. National Center for Education Statistics.
- American Educational Research Association, American Psychological Association, & National Council on Measurement in Education. (2014). Standards for educational and psychological testing. American Psychological Association.
- American Institutes of Research. (2018). *ELPA21 Technical Report, Part I—Summative assessment*.
- Andrich, D. A. (1978). A rating scale formulation for ordered response categories. *Psychometrika*, 43, 561–573.
- Bachman L. F., & Palmer A. S. (2010). *Language assessments in practice*. Oxford University Press.
- Baker, F. B., & Kim, S.-H. (2017). The basics of item response theory using R. Springer.
- Brennan, R. (2004). *Linking with equivalent group or single group design (LEGS)* (Version 2.0) [Computer software]. Center for Advanced Studies in Measurement and Assessment.
- Center for Applied Linguistics. (2016). ACCESS for ELLs Series 400 listening and reading scale maintenance: Technical brief.
- Center for Applied Linguistics. (2017). ACCESS for ELLs 2.0 speaking and writing score scale reconstruction: Technical brief.
- Center for Applied Linguistics. (2019). *Maintaining the ACCESS for ELLs online writing scale:*Preparations for the Series 501 redesign: Technical brief.
- Chapman, M., Chuang, P., Bitterman, T., & Elliott, H. (2024, August). *Development of a new WIDA writing scoring rubric for grades 1–12* [Technical Report]. WIDA, Wisconsin Center for Education Research, and the Board of Regents of the University of Wisconsin System. https://wida.wisc.edu/sites/default/files/resource/Technical-Report-Development-New-WIDA-Writing-Scoring-Rubric-Grades-1-12.pdf
- Chuang, P-L. (2024, April). Validating a new writing scoring scale using multi-faceted Rasch analyses [Technical report]. WIDA, Wisconsin Center for Education Research, and the Board of Regents of the University of Wisconsin System.

- https://wida.wisc.edu/resources/validating-new-writing-scoring-scale-using-multi-faceted-rasch-analyses
- Cook, H. G., & MacGregor, D. (2017). *The ACCESS for ELLs 2.0 2016 standard-setting study* [Technical Report]. WIDA and the Board of Regents of the University of Wisconsin System.
- Cronbach, L. J. (1951). Coefficient alpha and the internal structure of tests. *Psychometrika*, 16, 297–334.
- Engelhard, G., Jr., & Wind, S. A. (2018). *Invariant measurement with raters and rating scales:*Rasch models for rater-mediated assessments. Routledge/Taylor & Francis Group.
- Ercikan, K., & Julian, M. (2002). Classification accuracy of assigning student performance to proficiency levels: Guidelines for assessment design. *Applied Measurement in Education*, 15(3), 269–294.
- Feldt, L. S., & Brennan, R. L. (1989). Reliability. In R. L. Linn (Ed.), *Educational Measurement* (3rd ed., pp. 105–146). Macmillan.
- Gottlieb, M. (2004). English language proficiency standards for English language learners in kindergarten through grade 12: Framework for large-scale state and classroom assessment. WIDA and the Board of Regents of the University of Wisconsin System.
- Jones, P. E., & Smith, R. W. (2006, April). *Item parameter drift in certification exams and its impact on pass-fail decision making* [Conference presentation]. National Council on Measurement in Education (NCME) Annual Meeting, San Francisco, CA, United States.
- Kamata, A., Turhan, A., & Darandari, E. (2003, April). *Estimating reliability for multidimensional composite scale scores* [Paper presentation]. American Educational Research Association Annual Meeting, Chicago, IL, United States.
- Kane, M., & Case, S. M. (2004). The reliability and validity of weighted composite scores. *Applied Measurement in Education*, *17*, 221–240.
- Kenyon, D. M. (2006). *Development and field test of ACCESS for ELLs* [Technical Report No. 1]. WIDA, Center for Applied Linguistics, and the Board of Regents of the University of Wisconsin System.
- Kenyon, D. M., Ryu, J. R., & MacGregor, D. (2013). Setting grade level cut scores for ACCESS for *ELLs* [Technical report]. WIDA, Center for Applied Linguistics, and the Board of Regents of the University of Wisconsin System.

- Kolen, M. J., & Brennan, R. L. (2004). *Test equating, scaling, and linking: Methods and practices* (2nd ed.). Springer.
- Kolen, M. J., Hanson, B. A., & Brennan, R. L. (1992). Conditional standard errors of measurement. *Journal of Educational Measurement*, 29, 285–307.
- Lance, C. E., Butts, M. M., & Michels, L. C. (2006). The sources of four commonly reported cutoff criteria: What did they really say? *Organizational Research Methods*, 9(2), 202-220. https://doi.org/10.1177/1094428105284919
- Lee, W., Hanson, B. A., & Brennan, R. L. (2002). Estimating consistency and accuracy indices for multiple classifications. *Applied Psychological Measurement*, 26, 412–432.
- Linacre, J. M. (1994). Sample size and item calibrations stability. *Rasch Measurement Transactions*, 7(4), 328.
- Linacre, J. M. (1999). Relating Cronbach and Rasch reliabilities. *Rasch Measurement Transactions*, *13*(2), 696. http://www.rasch.org/rmt/rmt132i.htm
- Linacre, J. M. (2002a). Optimizing rating scale category effectiveness. *Journal of Applied Measurement*, 3(1), 85–106.
- Linacre, J. M. (2002b, Autumn). What do infit and outfit, mean-square and standardized mean? Rasch Measurement Transactions, 16(2), 878. https://www.rasch.org/rmt/rmt162f.htm
- Linacre, J. M. (2004). Optimizing rating scale category effectiveness. In E. V. Smith Jr. & R. M. Smith (Eds.), *Introduction to Rasch measurement* (pp. 258–278). JAM Press.
- Linacre, J. M. (2006). Winsteps Rasch analysis (Version 3.60.1) [Computer software]. https://www.winsteps.com
- Linacre, J. M. (2020). *Reliability and separation of measures*. Winsteps. https://www.winsteps.com/winman/reliability.htm
- Linacre, J. M. (n.d.). *Displacement measures*. Winsteps. https://www.winsteps.com/winman/displacement.htm
- Livingston, S. A. (2018). *Test reliability—Basic concepts* [Research memorandum]. ETS Research Institute.
- Livingston, S. A., & Lewis, C. (1995). Estimating the consistency and accuracy of classifications based on test scores. *Journal of Educational Measurement*, 32, 179–197.
- Lord, F. M. (1980). *Applications of item response theory to practical testing problems*. Lawrence Erlbaum Associates.

- Mantel, N., & Haenszel, W. (1959). Statistical aspect of the analysis of data from retrospective studies of disease. *Journal of the National Cancer Institute*, 22, 719–748.
- Meyer, J. P. (2018). jMetrik [Computer software]. Retrieved from https://itemanalysis.com/jmetrik-download/
- Muraki, E. (1993). Information functions of the generalized partial credit model. *Applied Psychological Measurement*, 17(4), 151–363.
- National Center on Educational Outcomes. (2021). *Universal design of assessments*. https://nceo.info/Assessments/universal_design
- Nunnally, J.C. (1978). An overview of psychological measurement. In: Wolman, B.B. (Ed.), *Clinical diagnosis of mental disorders* (pp. 97-146). Springer. https://doi.org/10.1007/978-1-4684-2490-4_4
- Price, L. R., Lurie, A., Raju, N., Wilkins, C., & Zhu, J. (2006). Conditional standard errors of measurement for composite scores on the Wechsler Preschool and Primary Scale of Intelligence Third edition. *Psychological Reports*, 98(1), 237–252.
- Reise, S. P. (1999). Personality measurement issues viewed through the eyes of IRT. In S. E. Embretson, & S. L. Hershberger (Eds.). *The new rules of measurement: What every psychologist and educator should know* (pp. 219–240). Psychology Press.
- Rudner, L. (2001). Informed test component weighting. *Educational Measurement: Issues and Practice*, 20(1), 16–19.
- Sahakyan, N. (2020). Generating alternate overall composite scale scores for English Learners with disabilities who are missing domain scores in the ACCESS for ELLs assessment [Technical Report]. WIDA and the Board of Regents of the University of Wisconsin System.
- Sahakyan, N., & Poole, G. (2023, April). Examining English learner testing, proficiency, and growth: Before, during, and "after" the COVID-19 pandemic [Research report]. WIDA, Wisconsin Center for Educational Research, and the Board of Regents of the University of Wisconsin System. https://wida.wisc.edu/resources/examining-english-learner-testing-proficiency-and-growth-before-during-and-after-covid-19
- Stahl, J. A., & Muckle, T. (2007). Investigating drift displacement in Rasch item calibrations. Rasch Measurement Transactions, 21(3), 1126–1127.
- Thissen, D. (2000). Reliability and measurement precision. In H. Wainer, N. Dorans, D. Eignor, R. Flaugher, B. Green, R. Mislevy, L. Steinberg, & D. Thissen (Eds.), *Computerized adaptive testing: A primer* (2nd ed., pp. 159–184). Lawrence Erlbaum Associates.

- Turner, C.E. & Upshur, J.A. (2002), Rating scales derived from student samples: Effects of the scale maker and the student sample on scale content and student scores. *TESOL*Quarterly, 36(1), 49-70. https://doi.org/10.2307/3588360
- U.S. Department of Education. (2018). A state's guide to the U.S. Department of Education's assessment peer review process. Retrieved from https://oese.ed.gov/files/2020/07/assessmentpeerreview.pdf
- WIDA. (2007). English language proficiency standards and resource guide, 2007 edition, prekindergarten through grade 12. Board of Regents of the University of Wisconsin System.
- WIDA. (2012). WIDA 2012 amplification of the English language development standards kindergarten–grade 12. Board of Regents of the University of Wisconsin System.
- WIDA. (2020). WIDA consortium English language proficiency assessment for grades 1-12 test and item design plan ACCESS for ELLs online annual summative and WIDA screener online. Board of Regents of the University of Wisconsin System.
- WIDA. (2021a). ACCESS for ELLs test administrator manual. Board of Regents of the University of Wisconsin System.
- WIDA. (2021b). ACCESS for ELLs district and school test coordinator manual. Board of Regents of the University of Wisconsin System.
- WIDA. (2021c). Test policy handbook for state education agencies. Board of Regents of the University of Wisconsin System.
- Wright, B. D. & Douglas, G.A. (1975). Best test design and self-tailored testing. Research memorandum, Statistical Laboratory, Department of Education, University of Chicago.
- Wright, B. D., & Stone, M. H. (1979). Best test design: Rasch measurement. MESA Press.
- Young, M. J., & Yoon, B. (1998). Estimating the consistency and accuracy of classifications in a standards-referenced assessment (CSE Technical Report 475). Center for the Study of Evaluation, National Center for Research on Evaluation, Standards, and Student Testing, Graduate School of Education and Information Studies.
- Zieky, M. (1993). DIF statistics in test development. In P. W. Holland & H. Wainer (Eds.), *Differential item functioning* (pp. 337–347). Erlbaum.
- Zwick, R., & Bridgeman, B. (2014). Evaluating validity, fairness, and differential item functioning in multistage testing. In Y. Duanli, A. A. von Davier, & C. Lewis (Eds.), *Computer multistage testing: Theory and applications* (pp. 271–284). CRC Press.

- Zwick, R., Donoghue, J. R., & Grima, A. (1993). Assessment of differential item functioning for performance tasks. *Journal of Educational Measurement*, 30, 233–251.
- Zwick, R., Thayer, D. T., & Wingersky, M. (1993). A simulation study of methods for addressing differential item functioning in computer-adaptive tests (ETS Research Report RR-93-11). Educational Testing Service. https://onlinelibrary.wiley.com/doi/epdf/10.1002/j.2333-8504.1993.tb01522.x

Acknowledgments

We would like to extend our appreciation to the many CAL and WIDA staff members who have supported this work, including the following:

From CAL: Tanya Bitterman, M.A.; Sofia Buitrago, MS.; Yage (Leah) Guo, Ph.D.; Victor Eyo Essien; Seong Eun Hong, Ph.D.; Michele Kawood, M.S.Ed.; Justin Kelly, Ph.D.; Reshmi Kumpakha, M.A.; Samantha Musser, M.A.; Aubrey Sahouria; Yu Lan Su, Ph.D.; Jasmine Tsai, M.Ed.; Yamei Wang, Ph.D.; Frank Wucinski, M.A.; Shu Jing Yen, Ph.D.

From WIDA: Kyoungwon Bishop, Ph.D.; Syed Abdul Hadi, M.Sc.