# 3. Assessment

**Norbert Elliot**
New Jersey Institute of Technology

Since its appearance in 1956, the term *assessment* has been straightforward in definition and contested in use (Oxford University Press, n.d.). Harold Loukes of Oxford University first used the noun in his 1956 study of British education, *Secondary Modern*, in which the Quaker educationist was trying to understand how well a selection system was serving students. In England, Wales, and Northern Ireland, the Ministry of Education established secondary modern schools in 1944 for students between 11 and 15 years old who failed to earn high marks on the 11-plus examination. As a contemporary of Loukes saw it, these were schools whose "job it was to cope with all the nation's dull children" (Dent, 1958, p. 31). For Loukes (1956), a way out of this caste system was to find "a new means of assessment" (p. 112), one that would allow secondary modern schools to "find their own place" (1959, p. 139), as he later put it, especially in terms of the value for vocational education.

And so we discover, in the very first use of the term, an enduring tension between the definition of assessment (as "a systematic process to measure or evaluate the characteristics or performance of individuals, programs, or other entities") and complexities surrounding its use ("for the purpose of drawing inferences") (American Educational Research Association [AERA], American Psychological Association [APA], and National Council on Measurement in Education [NCME], 2014, p. 216). Administrative leadership can readily identify a systematic process that will yield findings about students and instructional programs. It is another matter to draw inferences from the findings and have them accepted by stakeholders embedded in complex ***rhetorical*** situations in which cultural and linguistic diversity are of paramount importance (Gonzales & Baca, 2017).

When we talk about assessment in technical and professional communication (TPC), we carry forward this 60-year-old genealogy of complexity. In their foreword to *Assessment in Technical Communication* (2010), the first and only edited collection on the topic, Margaret N. Hundleby and Jo Allen observe that assessment in our field has suffered from irregular attention, uncertainty about authentic strategies, and muddled identification of aims. Recently, Geoffrey Clegg and colleagues (2020) argued that the field of TPC is only now buttressing programmatic student learning outcomes—the objectives upon which an assessment is based—with field-wide data from undergraduate degree programs across the US. An enduring tension—rising in the gap between the straightforward definition of assessment and the complexity of inferences drawn from it—remains.

Today, TPC researchers acknowledge this tension, view it productively, and use it as a means to create innovative assessment programs (St.Amant &

DOI: https://doi.org/10.37514/TPC-B.2023.1923.2.03

Nahrwold, 2007), equip researchers for socially just work through transformative paradigms (Phelps, 2020), and introduce interstitial pedagogical practices that engage diversity (Lane, 2021). Researchers acknowledge that assessment is a situated rhetorical activity that exists on a continuum of rhetorically situated aims. As a situated rhetorical activity, the TPC assessment exists in a sociocultural and sociocognitive environment. Here, John M. Swales' (2017) sociocultural concept of discourse communities as centers of professional identity resonates well with Robert J. Mislevy's (2019) depiction of sociocognition as community discourse practices revealed in linguistic, cultural, and substantive language patterns. Once the deeply situated nature of language is acknowledged, it is then easier to get to the harder realization: that our inferences from assessment are also rhetorically situated and, as such, filled with values both apparent and tacit.

Following acknowledgement of situated language use, assessment stakeholders often adopt two productive strategies for TPC assessment. Each has come into consideration in the 21st century. While one has demonstrated the ability to inform critical research, the other is best considered as a needed reconceptualization.

The first strategy involves reconceptualizing evidence. In 2006, Michael T. Kane proposed that traditional evidence categories of validity (evidence used to support a given interpretation) and reliability (evidence used to support consistency) be understood in terms of interpretation and use. Arguments about interpretation and use, he proposed, allow us to draw inferences and make claims about a given assessment. Gone were totalizing statements ("a given assessment is valid"); present were precise claims supported with evidence ("a given assessment demonstrates evidence of construct validity"). As part of the process of validation, construct validity—evidence that the characteristic the assessment was designed to measure is sufficiently present—was central to a given validity argument. As Kane wrote, "It is the plausibility of the proposed interpretations and uses that is to be evaluated" (p. 23). By 2013, he shifted his terminology to emphasize the interpretation/use argument (IUA)—"the network of inferences and assumptions inherent in the proposed interpretation and use" (p. 2).

This shift was profound and signaled a new era for TPC assessment. As Julia M. Williams (2010) recognized in her explication of the *RosEvaluation* assessment system, first used at Rose-Hulman Institute of Technology in 1998, identification of outcomes shifted institutional focus from identifying resource inputs to defining goals for student learning. With outcomes established, in this case by Accreditation Board for Engineering and Technology (ABET, 2016), evidence of student learning could then be systematically collected (For current criteria, see ABET, 2022.). In turn, this ***information*** could be used to advance opportunity to learn (Moss et al., 2008). As Williams (2021) observed in reflecting on the over-two-decade-old *RosEvaluation* assessment system, one of its notable achievements has been dissemination of communication ***pedagogy*** among technical faculty members to inform the way they use the language of rhetoric in

their technical courses. Through discussions of curricular objectives, faculty express willingness to reinforce and extend students' communication development in their classes. Because instruction and assessment are reliably extended across the curriculum, stakeholders see these activities as complementary.

Evidence-based approaches have been accompanied by attention to a category of evidence techniques for the TPC assessment. In 2015, Edward M. White and colleagues designed the first assessment system specifically designed for writing studies. Using the federal Classification of Instructional Programs (CIP) for rhetoric and composition/writing studies, White and his colleagues designed a system in which programs in technical and business writing (CIP 23.1303) and programs in rhetoric and composition (CIP 23.1304) could equally benefit by a unified evidential approach: Design for Assessment (DFA). DFA invited assessment designers to focus on traditional evidential forms of validity and reliability while adding other categories of evidence: consequence (unintended and intended positive and negative impact), theorization (development of ideas concerning a given construct), standpoint (situated perspectives), ***research*** (foundational ***knowledge***), ***documentation*** (evidence gathering), accountability (demonstrated responsibility), sustainability (mission-related resource allocation), process (actions related to program success), and communication (providing information to stakeholders). In a survey approach, these evidence centers have been used by Nancy Coppola and colleagues (2016) to examine TPC program outcomes (Ilyasova & Bridgeford, 2014) and plan evidence-based revision of them. Coppola concludes that evidence models including IUAs provide stakeholders with a principled way to undertake programmatic research. An alternative evidence model for continuous curricular improvement—dedicated to making visible "all of the interrelated work and perspectives" of TPC to ensure that instructional programs continue to "grow and address stakeholder needs in a sustainable way"—has been proposed by Joanna Schreiber and Lisa Melonçon (2019, p. 275). In this model, evidence was collected beyond the program objectives and interpreted by perspectives beyond those of the program administrators.

The second strategy for TPC assessment involves reconceptualized assessment aims. While we have seen research related to evidence-based approaches become significant, we are late to reexamine assessment aims and have yet to witness assessment strategies in our field that are centered on fairness. While no detailed ***history*** of assessment in the field of TPC has been written, Elliot (2010) proposed a conceptual history in which modernism (assessment as an artifact of scientific objectivity) receded as postmodernism (assessment as a contextualized activity) advanced. In general, these phases parallel pedagogical developments in TPC in which instruction dominated by an emphasis on ***style*** and correctness was replaced by social constructivist perspectives on writing (Rude, 2015). Accompanying the move from language objectivity to contextualism, educational measurement researchers have begun to attend to fairness as a category of evidence equal to validity and reliability (AERA, APA, NCME, 2014). To establish evidence of fairness,

researchers collect and interpret information in these areas: fairness during the assessment process in areas such as ***accessibility*** for all learners through universal ***design***; measurement bias toward student subgroups in terms of gender assignment and identity, race and ethnicity, socioeconomic characteristics, and other relevant categories and their combination; and access to the constructs being measured through educational opportunity (AERA, APA, & NCME, 2014). In TPC, calls for evidence of fairness have been accompanied by attention to ***social justice*** research—a collective and active effort to "reveal, reject, and replace" oppression (Walton et al., 2019, p. 50; see also Agboka & Dorpenyo, 2022, Inoue, 2015; Jones, 2016; Poe et al., 2018; Walton & Agboka, 2021). As Mya Poe (2023) and her colleagues have suggested, even the *Standards for Educational and Psychological Testing*, while necessary, may be insufficient to achieve social justice.

This shift towards reconceptualization of assessment aims must now be accompanied by a fairness approach for TPC assessment. In her guide to mapping institutional values to the technical writing curriculum in order to contextualize assessment, Allen (2010) reminded researchers to consider "the *heritage* [emphasis added] that inspires the institution's traditions," such as that of historically Black colleges and universities and the founders' motivations and vision for women's colleges (p. 41). Advancing this idea of contextualization, Michelle F. Eble (2020) has called for "de-colonial and critical race theory, feminist and queer, and other community participatory approaches" to instruction in technical communication" (p. 40).

In transferring theory into TPC assessment practice, however, researchers have not yet realized the gains associated with evidence of fairness. Here we realize the truth of Miriam F. Williams, our field's first Black Association of Teachers of Technical Writing Fellow, that there is little research that addresses "the unique ways that historically marginalized racial and ethnic groups within the U.S. created or responded to technical communication" (Williams, 2013, p. 86). Put straightforwardly, the consequences of our TPC assessments are unknown in terms of their intersectional impact (Crenshaw, 1991). If assessment is to be a meaningful keyword in our field, then stakeholders will have to use theoretical concepts of diversity such as Black Feminist Theory to generate sources of evidence related to fairness (Collins, 2000). Following Loukes, we need a new means of assessment—an innovation focusing on fairness and consequences as sources of evidence—if we are to advance opportunity to learn and achieve universal justice for all our students.

## References

Accreditation Board for Engineering and Technology (ABET). (2016). *Criteria for accrediting engineering programs, 2017–2018*. https://www.abet.org/accreditation/accreditation-criteria/criteria-for-accrediting-engineering-programs-2017-2018/

Accreditation Board for Engineering and Technology (ABET). (2022). *Criteria for accrediting engineering programs, 2023–2024*. https://www.abet.org/wp-content/uploads/2023/01/23-24-ETAC-Criteria_FINAL.pdf

Agboka, G. Y., & Dorpenyo, I. K. (2022). The role of technical communicators in confronting injustice—*Everywhere* [Special issue]. *IEEE Transactions on Professional Communication*, *65*(1), 409-411. https://doi.org/10.1109/TPC.2021.3133151

Allen, J. (2010). Mapping institutional values and the technical communication curriculum: A strategy for grounding assessment. In H. Hundleby & J. Allen (Eds.), *Assessment in technical and professional communication* (pp. 39-56). Baywood.

American Educational Research Association, American Psychological Association, and National Council on Measurement in Education. (2014). *Standards for educational and psychological testing*. American Educational Research Association.

Clegg, G., Lauer, J., Phelps, J., & Melonçon. L. (2020). Programmatic outcomes in undergraduate technical and professional communication programs. *Technical Communication Quarterly*, *30*(1), 19-33. https://doi.org/10.1080/10572252.2020.1774662

Collins, P. H. (2000). *Black feminist thought: Knowledge, consciousness, and the politics of empowerment* (2nd ed). Routledge.

Coppola, N. W., Elliot, N., Newsham, F., & Klobucar, A. (2016). Programmatic research in technical communication: An interpretive framework for writing program assessment. *Programmatic Perspectives*, *8*(2), 5-45. https://cptsc.org/wp-content/uploads/2018/04/vol8-2.pdf

Crenshaw, K. (1991). Mapping the margins: Intersectionality, identity politics, and violence against women of color. *Stanford Law Review*, *43*(6), 1241-1299. https://doi.org/10.2307/1229039

Dent, H. C. (1958). *Secondary modern schools: An interim report*. Routledge and Kegan Paul.

Eble, M. F. (2020). Response: Turning toward social justice approaches to technical and professional communication. In N. Elliot & A. Horning (Eds.), *Talking back: Senior scholars and their colleagues deliberate the past, present, and future of writing studies* (pp. 38-42). Utah State University Press.

Elliot, N. (2010). Assessing technical communication: A conceptual history. In H. Hundleby & J. Allen (Eds.), *Assessment in technical and professional communication* (pp. 17-35). Baywood.

Gonzales, L., & Baca, I. (2017). Developing culturally and linguistically diverse online technical communication programs: Emerging frameworks at University of Texas at El Paso. *Technical Communication Quarterly*, *26*(3), 273-286. https://doi.org/10.1080/10572252.2017.1339488

Hundleby, M., & Allen, J. (Eds.). (2010). *Assessment in technical and professional communication*. Baywood.

Ilyasova, K. A., & Bridgeford, T. (2014). Establishing an outcomes statement for technical communication. In T. Bridgeford, K. S. Kitalong, & B. Williamson (Eds.), *Sharing our intellectual traces: Narrative reflections from administrators of professional, technical, and scientific communication programs* (pp. 53-80). Baywood.

Inoue, A. B. (2015). *Antiracist writing assessment ecologies: Teaching and assessing writing for a socially just future*. The WAC Clearinghouse; Parlor Press. https://doi.org/10.37514/PER-B.2015.0698

Jones, N. N. (2016). The technical communicator as advocate: Integrating a social justice approach in technical communication. *Journal of Technical Writing and Communication*, *46*(3), 342-361. https://doi.org/10.1177/0047281616639472

Kane, M. T. (2006). Validation. In R. L. Brennan (Ed.), *Educational measurement* (pp. 17–64). American Council on Education/Praeger.

Kane, M. T. (2013). Validating the interpretation and uses of test scores. *Journal of Educational Measurement*, 50(1), 1–73. https://doi.org/10.1111/jedm.12000

Lane, L. (2021). Interstitial design processes: How design thinking and social design processes bridge theory and practice in TPC pedagogy. In M. Klein (Ed.), *Effective teaching of technical communication: Theory, practice, and application* (pp. 29-43). The WAC Clearinghouse; University Press of Colorado. https://doi.org/10.37514/TPC-B.2020.1121.2.02

Loukes, H. (1956). *Secondary modern*. Harrap.

Loukes, H. (1959). The pedigree of the modern school. *British Journal of Educational Studies*, *7*(2), 125-130. https://doi.org/10.1080/00071005.1959.9973019

Moss, P. A., Pullin, D. C., Gee, J. P., Haertel, E. H., & Young, L. J. (Eds.). (2008). *Assessment, equity, and opportunity to learn*. Cambridge University Press. https://doi.org/10.1017/CBO9780511802157

Mislevy, R. J. (2018). *Sociocognitive foundations of educational measurement*. Routledge. https://doi.org/10.4324/9781315871691

Oxford University Press. (n.d.). Assessment. In *Oxford English Dictionary*. Retrieved June 23, 2023, from www.oed.com

Phelps, J. P. (2020). The transformative paradigm: Equipping technical communication researchers for socially just work. *Technical Communication Quarterly*, *30*(2), 204-215, https://doi.org/10.1080/10572252.2020.1803412

Poe, M., Inoue, A. B., & Elliot, N. (2018). *Writing assessment, social justice, and the advancement of opportunity*. The WAC Clearinghouse; University Press of Colorado. https://doi.org/10.37514/PER-B.2018.0155

Poe, M., Oliveri, M.E., & Elliot, N. (2023). The *Standard*s will never be enough: A racial justice extension. *Applied Measurement in Education, 36*(3), 193-215. https://doi.org/10.1080/08957347.2023.2214656

Rude, C. (2015). Technical communication. In P. Heikler & P. Vandenberg (Eds.), *Keywords in writing studies* (pp. 165-168). Utah State University Press. https://doi.org/10.7330/9780874219746.c033

Schreiber, J., & Melonçon, L. (2019). Creating a continuous improvement model for sustaining programs in technical and professional communication. *Journal of Technical Writing and Communication*, *49*(3), 252-278. https://doi.org/10.1177/0047281618759916

St.Amant, K., & Nahrwold, C. (2007). Acknowledging complexity: Rethinking program review and assessment in technical communication. *Technical Communication*, *54*(4), 409-411.

Swales, J. M. (2017). The concept of a discourse community: Some recent personal history. *Composition Forum*, *37*. https://compositionforum.com/issue/37/swales-retrospective.php

Walton, R. & Agboka. G. Y. (2021). *Equipping technical communicators for social justice work: Theories, methodologies, and pedagogies*. Utah State University Press.

Walton, R., Moore, K. R., & Jones, N. N. (2019). *Technical communication after the social justice turn: Building coalitions for action*. Routledge. https://doi.org/10.4324/9780429198748

White, E. M., Elliot, N., & Peckham, I. (2015). *Very like a whale: The assessment of writing programs.* Utah State University Press.

Williams, J. M. (2010). Evaluating what students know: Using the RosE portfolio system for institutional and program outcomes assessment tutorial. *IEEE Transactions on Professional Communicatio*n, *53*(1), 46-57. https://doi.org/10.1109/

TPC.2009.2038737
Williams, J. W. (2021). Assessment beyond accreditation: Improving the communication skills of engineering and computer science students. In. D. Kelly-Riley & N. Elliot (Eds.), *Improving outcomes: Disciplinary writing, local assessment, and the aim of fairness* (pp. 187-197). Modern Language Association.
Williams, M. F. (2013). A survey of emerging research: Debunking the fallacy of colorblind technical communication. *Programmatic Perspectives*, *5*(1), 86-93. https://cptsc.org/wp-content/uploads/2018/04/Vol_5.1.pdf