Communal Socialization Scale - Elementary

This scale measures the extent to which students perceive their mathematics learning and the discipline itself to be connected to ideas of collectivism and social interdependence.

Purpose
- The Communal Socialization Scale - Elementary (McElveen et al., 2021) measures "systematically measures messages and practices that implicitly teach values of interdependence and social connectedness and the importance of prioritizing the wellbeing of the group or society" (McElveen, 2024).
- The construct of Communal Socialization is operationalized in this measure via three factors:
    - Communal Utility: practices to connect mathematics and one's sense of community responsibility;
    - Global Responsibility: practices that reflect concern for others beyond one's group memberships or local communities with an emphasis on equity and/or justice;
    - Personal Responsibility: "the development and enactment of values that guide adolescents' choices, create a sense of purpose, and reflect on benevolence"

Measure Details
- The eight items in this scale define two factors: Communal Utility and Global Responsibility. There is also an optional single item aligned to the Personal Responsibility factor.
- All items are measured on a 0-3 likert scale.
- The original scale was developed for use with secondary classrooms, and the revised version is modified for elementary classrooms.
- The measure has not yet been standardized.
- It has shown explanatory utility as a distinct component of students' math identity.

Contribution to the Field
- Research has identified preference for and increased performance in communal learning environments, particularly for African American/Black students (Boykin & Bailey, 2000; Coleman et al., 2023; Hurley et al., 2019). Communal and social justice-oriented mathematics have previously been examined in experimental settings and through qualitative inquiry (e.g. Gutstein, 2003). The goal was to develop a scale to begin to systematically examine communal learning within mathematics classrooms to understand how aspects better contribute to student learning. Evidence suggested higher levels of communal socialization was associated with students' perception of relevance and engagement in mathematics (McElveen, 2021).

Communal Socialization Scale - Elementary
McElveen, T.L., Hornburg, C.B., Mayes, A. S., & Miller-Cotto, D. (2021)
Last updated 1.20.26

Development History and Previous Uses

- The original measure (McElveen, 2021) was developed to assess the ways in which teachers utilize communal learning in their math classrooms.
- The revised scale was developed during the Our Mathematical World project within the EF+Math Program to (1) adjust the reading level, items, and rating scale to be more developmentally appropriate for younger children and (2) reflect the factor analyses conducted for the targeted population.

Accessing the Measure

- You may access the measure here:
    - McElveen, T. L., Hornburg, C. B., Mayes, A. S., & Miller-Cotto, D. (2021). *Communal Socialization Scale - Elementary.* https://osf.io/k2hz8/files/skc2f
- For additional information, please contact:
    - Dr. Tamika McElveen at mcelvet@miamioh.edu

Associated Publications

McElveen, T.L. (2024). Communal Socialization: (re)imagining the role of communal socialization on African American high schoolers' engagement and performance in mathematics. *Journal of Educational Psychology, 116*(4), 489.

McElveen, T. L., Hornburg, C. B., Mayes, A. S., Miller-Cotto, D., Andres-Salgarino, M. B., Schmitt, S. A., Powell, S. R., & Purpura, D. J. (2023, March). Associations between communal socialization and the math identity and performance of minoritized elementary students. In T. McElveen (Chair), *The measurement of sociocultural equity in preschool through elementary environments.* Paper presented at the Biennial Meeting of the Society for Research in Child Development (SRCD), Salt Lake City, UT.

McElveen, T.L., Hornburg, C.B., Mayes, A.S., Miller-Cotto, D., Andres-Salgarino, M.B., Schmitt, S.A., Powell, S.R., & Purpura, D.J. (2022, June). *Examining the factor structure of communal socialization in mathematics and associations with elementary students' math identities.* Poster presentation at the annual meeting of Mathematical Cognition and Learning Society, Antwerp, Belgium.