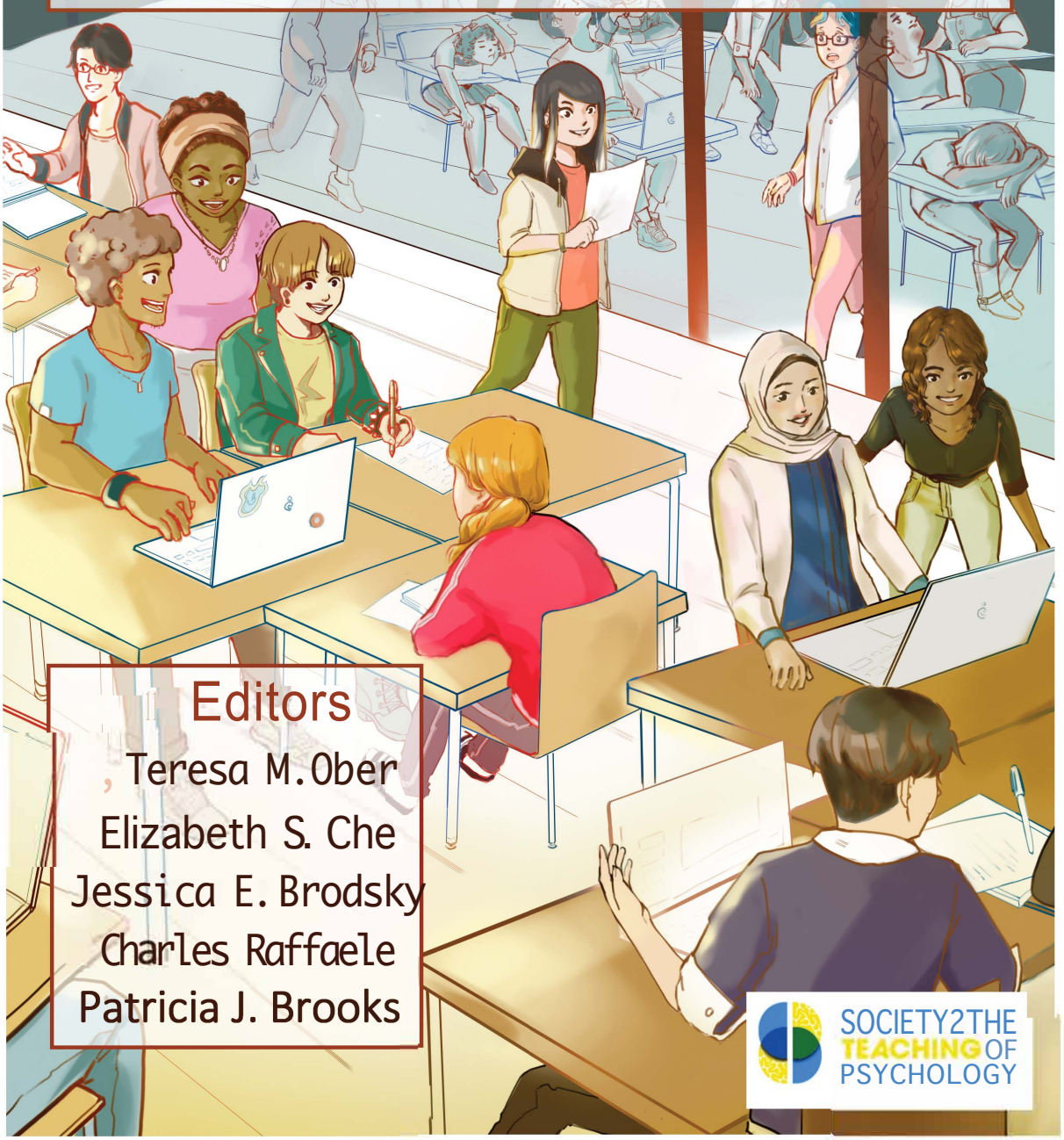
HOW WE TEACH NOW

The GSTA Guide to Transformative Teaching



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SOCIETY2THE TEACHING OF PSYCHOLOGY

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Teaching Transparency: Open Data

Another step we can teach students about research transparency is how to make their research data open. That means making all their study's data available to peer reviewers when they submit their manuscript for peer review and, later, making all their study's data available to readers of the published article. The parallel in the classroom is the requirement for students make all their study's data available to the instructor, and to other students, when they submit their study for peer review or grading.

Of all the steps toward transparency that researchers can take, making their data available is one of the most desirable but also one of the most fear inducing (Houtkoop et al., 2018). One way I have lowered my own anxiety about making my data available is that I first arrange a data-checking swap with another colleague. I send my data to another colleague to check, and they send me their data to check. We try to reproduce each other's reported results prior to each of us posting our data – or submitting our manuscripts (Gernsbacher, 2018b). I feel considerably more confident about the accuracy of my data and my analyses and submitting them to further scrutiny after another colleague has checked them. And accuracy is everyone's goal.

In my classes, I also have students swap-check their data with other students. In fact, even in my undergraduate entry-level research methods class (Gernsbacher, no date), I require each student to share their data with two other students. And the other two students have to use those data to draw the same conclusions as the student who shared the data with them. I require students to swap-check their data whenever they collect and report data. Getting their data into a format that other students can work with it is also a valuable skill to learn. Many funding agencies, an increasing number of journals, and the Transparency and Openness Promotion (TOP) Guidelines require researchers to post their data (Culley, 2017), and most researchers believe that is the ethical and ecological thing to do (Nature Communications, 2018).

Best practices for organizing data are similar to those for organizing research materials. Data sets should be comprehensive (all data that contributed to the results should be included); self-explanatory (all data should be well cataloged, with full annotations rather than researcher-created abbreviations); self-contained (all data should be made available in one place or, if needed, with links to other places); and organized (a good rule of thumb is to order the data in the sequence with which they are discussed in the manuscript). As with other documentation, good data documentation serves researchers themselves as well as the research community (Hunt, 2019).