

**Exhibit 4. Number of science topics added and dropped.** We seem to plan introducing new science dropping many topics in grades 10-12 while adding few or none. This is characteristic of a shift from an integrated, "general science" approach to single-discipline courses in high school. [The gray bars on the right show how many science topics were intended to be added to coverage at each grade in the TIMSS countries. The bars extend from the 25th percentile (nearest the center line) to the 75th percentile among countries in the number of topics at each grade. The gray bars on the left show how many science topics were intended to be dropped from coverage at each grade in the TIMSS countries. The bars extend from the 25th percentile (nearest the center line) to the 75th percentile among countries in the number of topics at each grade. The black line at each grade indicates the median number of topics. We mark the U.S., Germany, and Japan individually. Missing symbols for the U.S., Germany and Japan indicate no topics for the category (added, dropped, or both).]

