

## Appendix A-1. School Identification, Recruiting, and Participation

In North Carolina, at the time we were recruiting schools for participation in our research, North Carolina STEM education experts estimated that there were around 30 ISHSs in the state, but there was no comprehensive or definitive list of these schools. We contacted those schools our informants identified for us and those North Carolina high schools that had a STEM-related word (e.g., “science,” “technology,” or “engineering”) in their name and conducted informal interviews with school leaders to ascertain whether or not they met our operational definition of an inclusive STEM high school. We were able to identify 26 North Carolina schools meeting our definition of an inclusive STEM school by virtue of their admissions practices and having at least 35% of students designated as low income and at least 35% designated as coming from minority groups under-represented in STEM. Four of the schools were in districts that declined participation, leaving 22 ISHSs of which 18 agreed to participate. In spring 2013, 12 of the North Carolina ISHSs and 16 comparison schools returned Grade 12 Student Surveys (Cohort 1). In spring 2016, students originally surveyed as ninth graders in 11 ISHSs and 9 comparison schools took the Grade 12 Student Survey (Cohort 2).

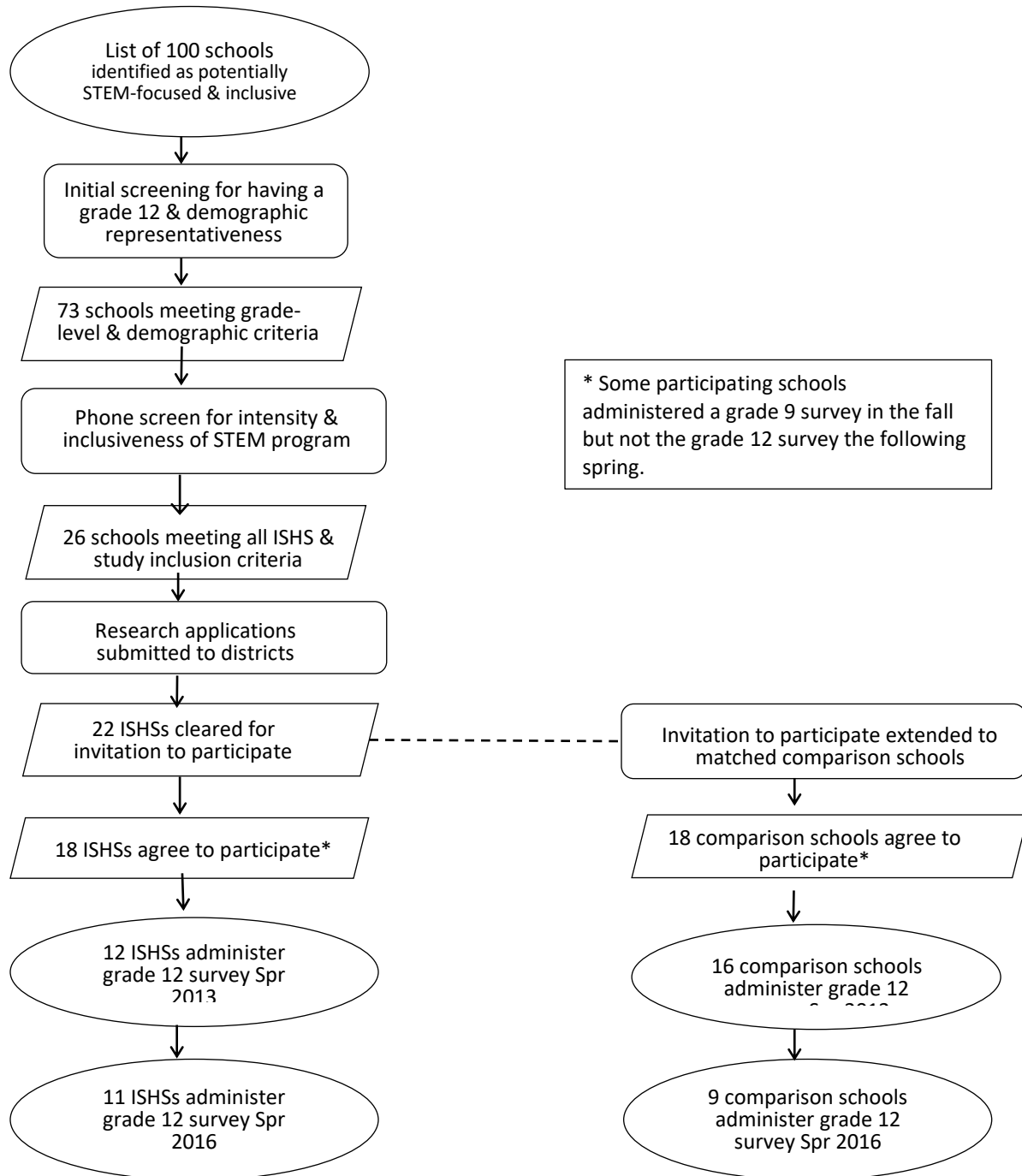
In Texas identification of ISHSs was straightforward because the state requirements for designation as a T-STEM Academy included the school design and implementation criteria stipulated in our definition of an ISHS, and the Texas Education Agency (TEA) maintains a list of these schools. When we did our Texas recruiting in 2013 there were 77 designated T-STEM Academies, 51 of which had opened prior to 2010-11, thus making them likely to have a senior class in 2013-14 that could participate in a survey of 12th graders. We invited 38 Texas ISHSs to participate in our research, and 26 agreed. In the spring of 2014, 23 of these ISHSs and 19

comparison schools administered the Grade 12 Student Survey to their seniors (Cohort 3). In spring of 2017, 21 of the Texas ISHSs and 11 of the comparison schools administered the Grade 12 Student Survey to students who had taken the Grade 9 survey 3.5 years earlier (Cohort 4).

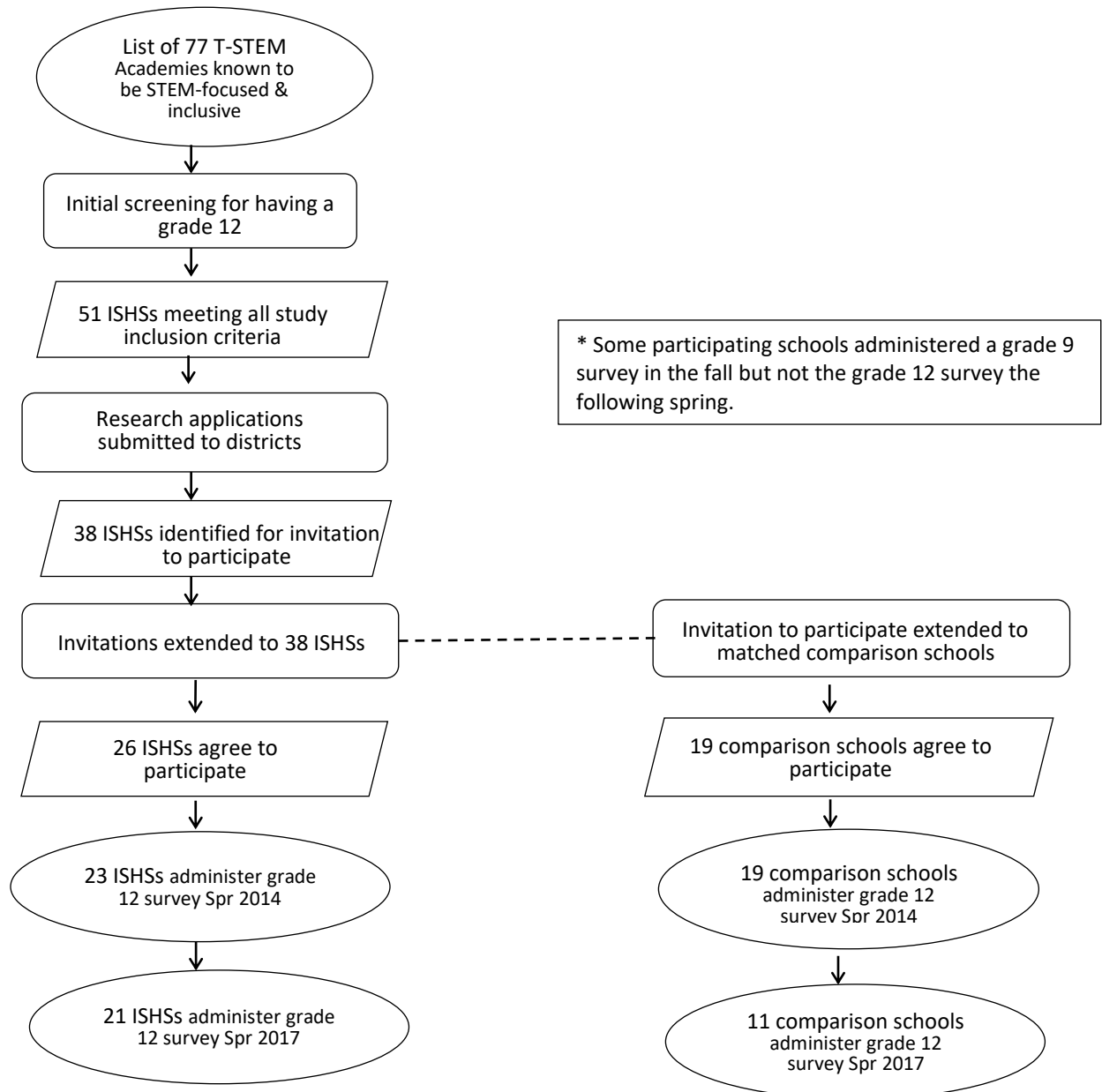
In Ohio, as in North Carolina, the state did not maintain a list of designated ISHSs at the time we were recruiting schools for our research. However, the OLSN and other education organizations within the state identified 22 nonselective Ohio high schools with a STEM focus for the project. Phone screens were conducted to make sure the schools served grades 9-12 (a number of Ohio STEM schools serve grades 11 and 12 only), were inclusive in terms of student admissions processes, and offered an intensive STEM program to all students. We found 15 ISHSs meeting our study inclusion criteria and 10 of them agreed to participate and administered the student survey in spring 2015 as did 8 matched comparison schools (Cohort 5).

The school recruiting and participation stages for the five cohorts in three states are illustrated in Supplementary Figures A-1 to A-3.

Supplementary Figure A-1. School identification and recruiting for Cohorts 1 and 2 in North Carolina



Supplementary Figure A-2. School identification and recruiting for Cohorts 3 and 4 in Texas



Supplementary Figure A-3. School identification and recruiting for Cohort 5 in Ohio

