

**GEORGIA
POLICY LABS**



Appendix to:

Placement Tests, Initial Enrollments, and Student Outcomes in the Technical College System of Georgia

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Appendix A. Construction of the Analysis Measures

Files. All the measures in our analyses are constructed from administrative records in the Technical College System of Georgia “Students by Term,” “Leavers,” “Student Attribute,” “Disability,” “Test Scores,” and “GPA” files from Fall 2013 through Summer 2020.

Longitudinal identifiers. Records for students are linked over time using a person identifier constructed by the Georgia Policy Labs (GPL), using the student’s campus and a hashed version of the students’ TCSG identification number. Researchers only utilize de-identified data and do not access the actual student identification number.

Construction of observations. Our sample includes all students coded as a “Beginning student” in the “student_type” variable in the “Students by Term” file.

Initial program level. We collapse the “Students by Term” file to the student level and retain the first recorded values of students’ major (and second majors). Then we link major codes to the program lists provided by TCSG, which contains a program level designation (i.e., certificate, diploma, or degree) for each program.

Demographics. We collapse the “Students by Term” file to the student level and retain the first recorded values of several demographic variables, including gender, race, education level, and age.

Single parent. We use the “Disadvantage” file to create variables that indicate whether students were ever classified as a single parent during their enrollment history.

Out-of-workforce. We use the “Disadvantage” file to create variables that indicate whether students were ever classified as out-of-workforce during their enrollment history.

English learner. We use the “Disadvantage” file to create variables that indicate whether students were ever classified as an English learner during their enrollment history.

Economically disadvantaged. We use the “Disadvantage” file to create variables that indicate whether students were ever classified as economically disadvantaged during their enrollment history.

Disabled. We use the “Disability” file to create variables that indicate whether students were ever classified as having a disability during their enrollment history.

First-generation student. We use the “Student Attribute” file to create variables that indicate whether students were ever classified as a first-generation student during their enrollment history.

Veteran. We use the “Student Attribute” file to create variables that indicate whether students were ever classified as a veteran during their enrollment history.

First test scores. We use the “Test Score” file to obtain the first score of each type of test and test subject in the data. Test scores with test administration dates after the start of students’ initial enrollment term are dropped.

Highest test scores. We use the “Test Score” file to obtain students’ maximum score on each type of test and test subject in the data. Test scores with test administration dates after the start of students’ initial enrollment term are dropped.

Test retaking. We use the “Test Score” file to create variables for each test that indicate whether students took the test multiple times, after excluding test scores with test administration dates after the start of students’ initial enrollment term.

Program level completion. We use the “Leavers” file to generate variables that indicate whether students completed a credential at the three program levels (i.e., certificate, diploma, and degree). We first filter the data for observations that list the student as a “Graduate” in the “status” variable. Then, using the program level designations from the program lists provided by TCSG, we create variables that indicate the program level of the credential earned. Finally, we collapse to the student level, retaining variables that indicate completion of the three types of credential levels.

GPA. We use the “GPA” file to create a variable that represents students’ GPA in their first term in TCSG by using the GPA from students’ earliest enrolled term.

Credits. We use the “GPA” file to create a variable that represents the number of credits attempted in students’ first term in TCSG by using the “attempted_credits” variable from students’ earliest enrolled term. We also create variables that indicate whether students completed 15, 30, and 45 credits by calculating whether the total amount of credits students earned throughout their enrollment history is greater than or equal to these three benchmarks.

Employment outcomes. We use the “Leavers” file to generate a variable that records students reported employment outcomes after their last earned credential. We use the values from the “employment” variable corresponding to the student’s latest earned credential. If multiple credentials were earned at the latest date, we use the employment outcomes reported with the highest credential.

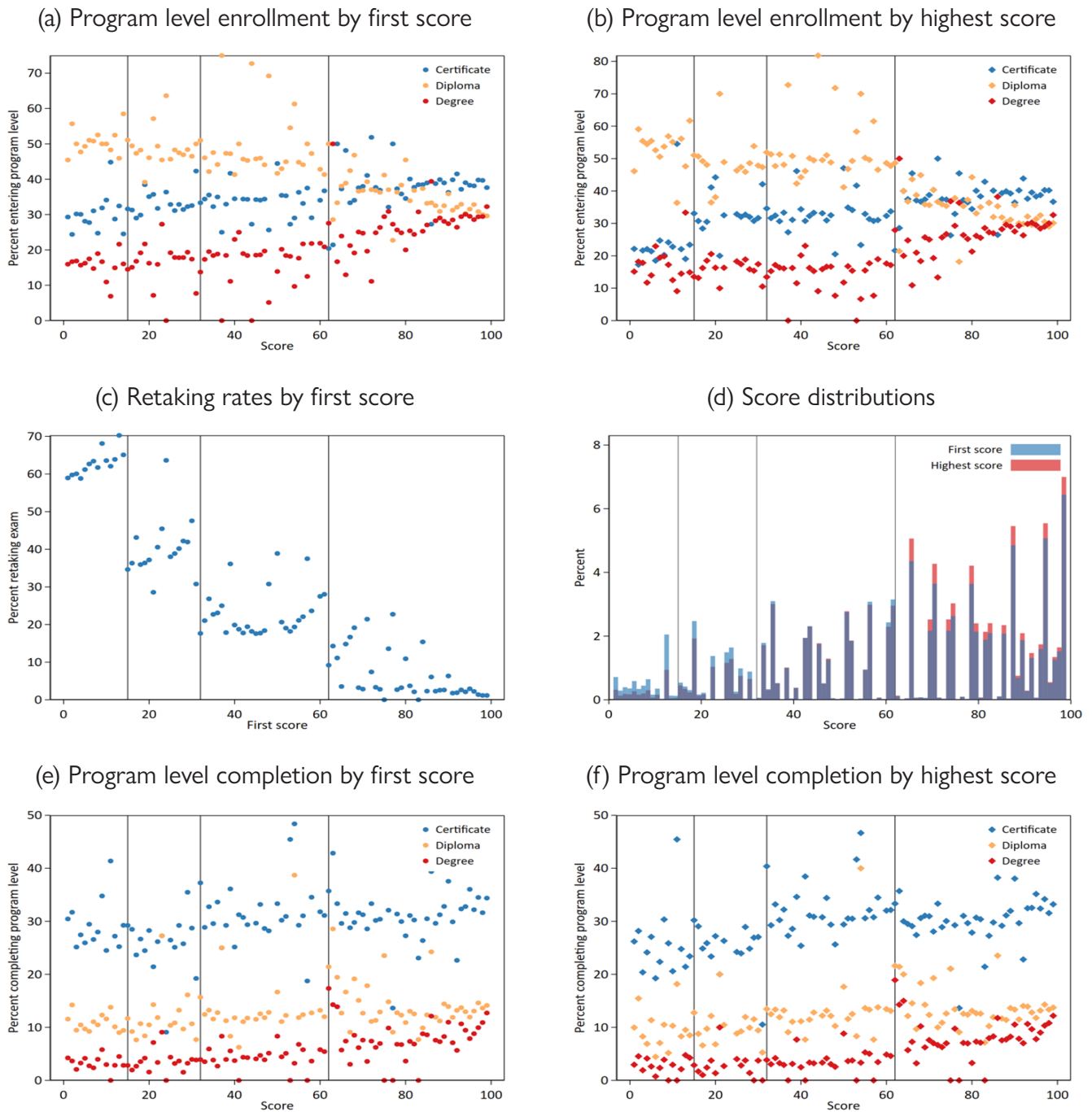
Learning Support subgroups. We use students’ highest COMPASS exam scores and the placement criteria to characterize students based on what Learning Supports would be required upon entering a TCSG program at different levels. We put students into three subgroups as follows:

1. Eligible to enter any program without Learning Support
 - If ALL of the following are true:
 - COMPASS Reading ≥ 79
 - COMPASS Writing ≥ 62
 - COMPASS Numeric ≥ 26
 - COMPASS Algebra ≥ 37
2. Eligible to enter certificate & diploma programs without Learning Support, but would need Learning Support to enter degree programs
 - If ALL of the following are true:
 - COMPASS Reading ≥ 70
 - COMPASS Writing ≥ 32
 - COMPASS Numeric ≥ 26
 - AND at least ONE of the following are true:
 - COMPASS Reading < 79

- COMPASS Writing < 62
- COMPASS Algebra < 37
- 3. Learning Support required to enter any program
 - If ALL of the following are true:
 - COMPASS Reading \geq 41
 - COMPASS Writing \geq 15
 - COMPASS Numeric \geq 17
 - AND at least ONE of the following are true:
 - COMPASS Reading < 70
 - COMPASS Writing < 32
 - COMPASS Numeric < 26

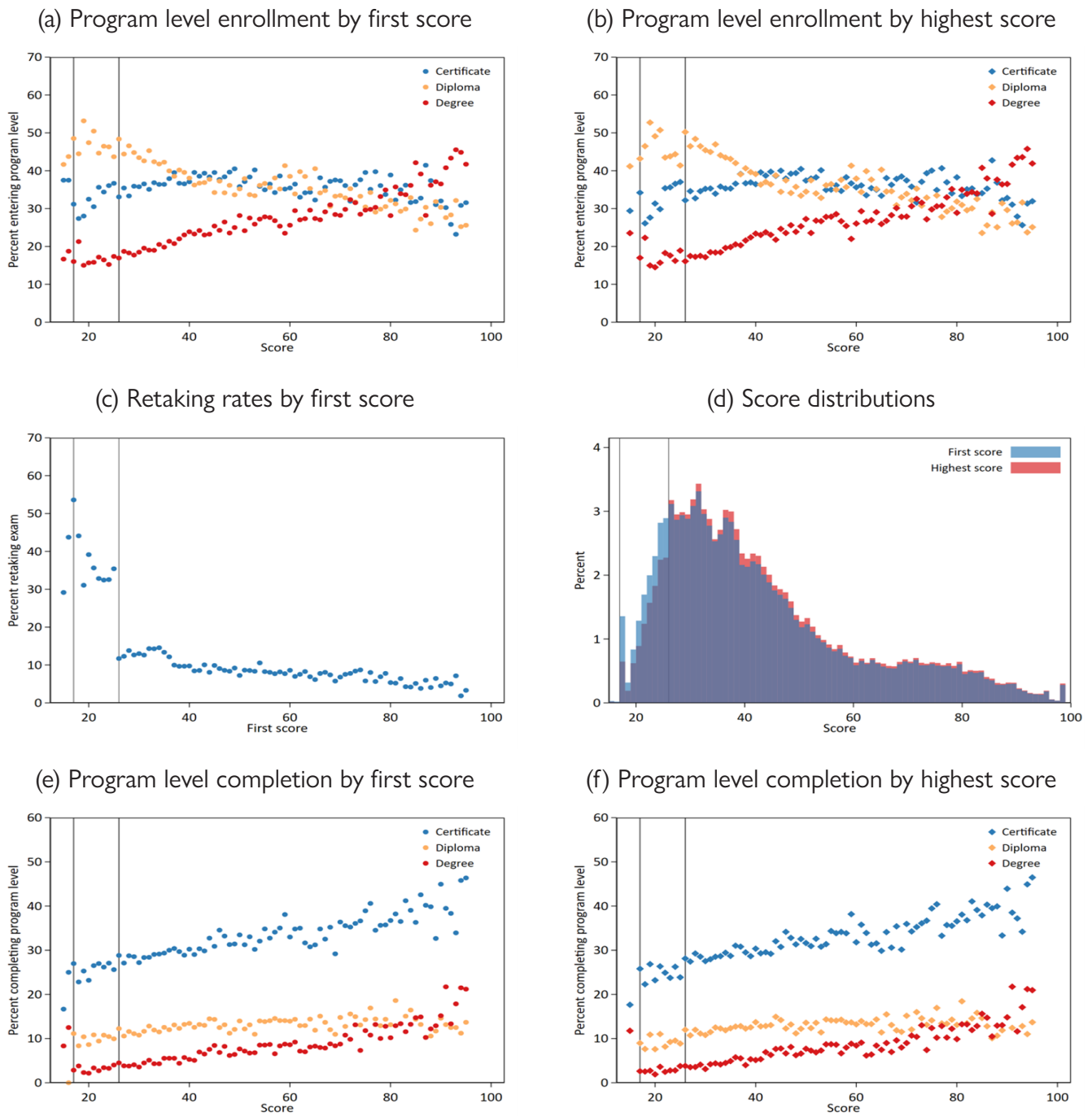
Appendix B. Additional Results

Figure B1. COMPASS Writing Test Scores, Program Level Enrollment and Completion, and Test Retaking



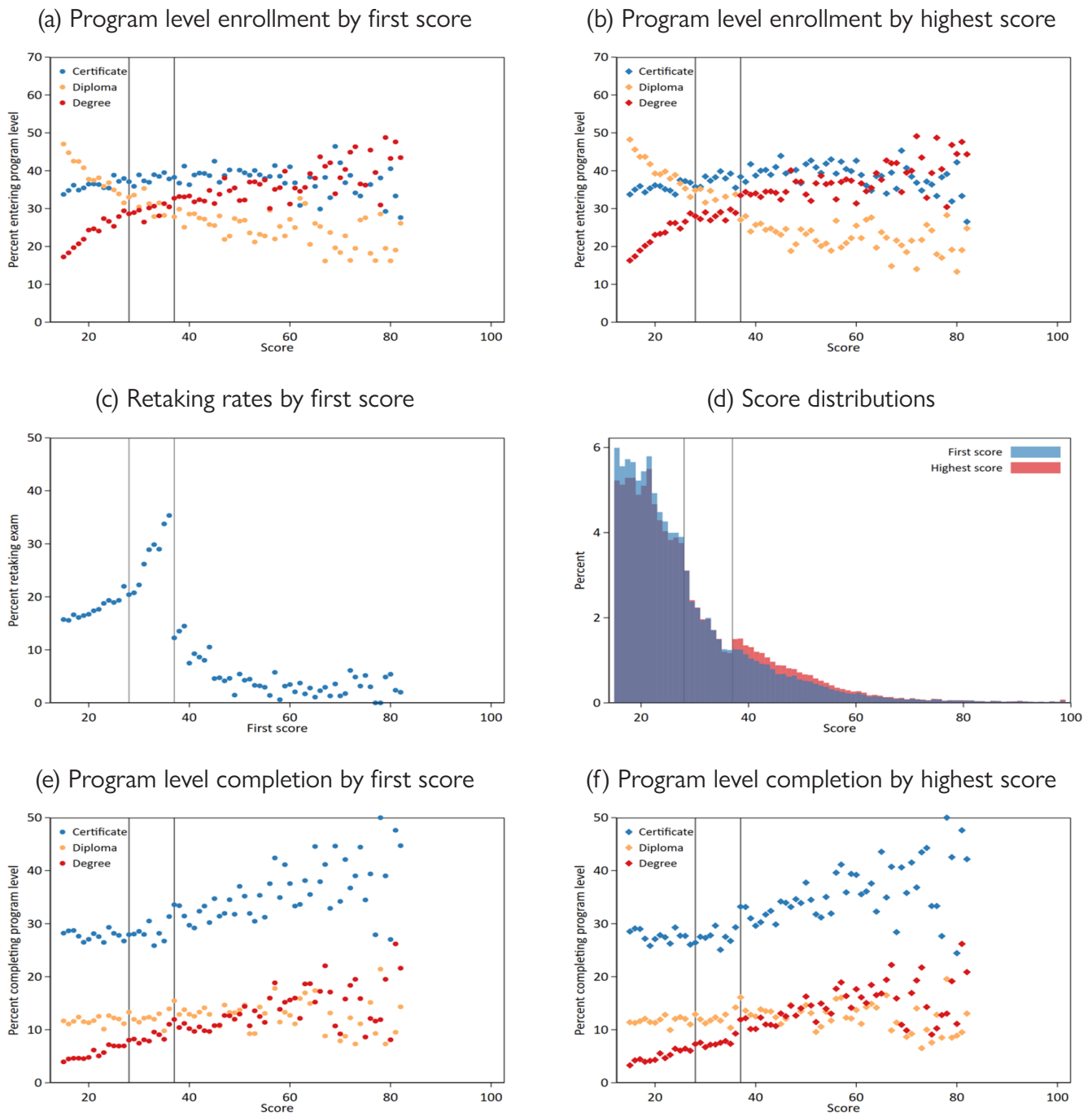
Notes. The horizontal axes in each graph are scores on the COMPASS Writing test. Panels (a) and (e) group students by their first score and plot the percentage entering and completing each program level for each score, respectively. Panels (b) and (f) group students by their highest score. Panel (c) uses first scores and plots the percent of students who retook the test. Panel (d) plots the distribution of both first and highest scores. The vertical lines represent the placement criteria score thresholds. 62 is the threshold for degree-level courses, 32 for diploma-level courses, and scores below 15 send students to adult education.

Figure B2. COMPASS Math Test Scores, Program Level Enrollment and Completion, and Test Retaking



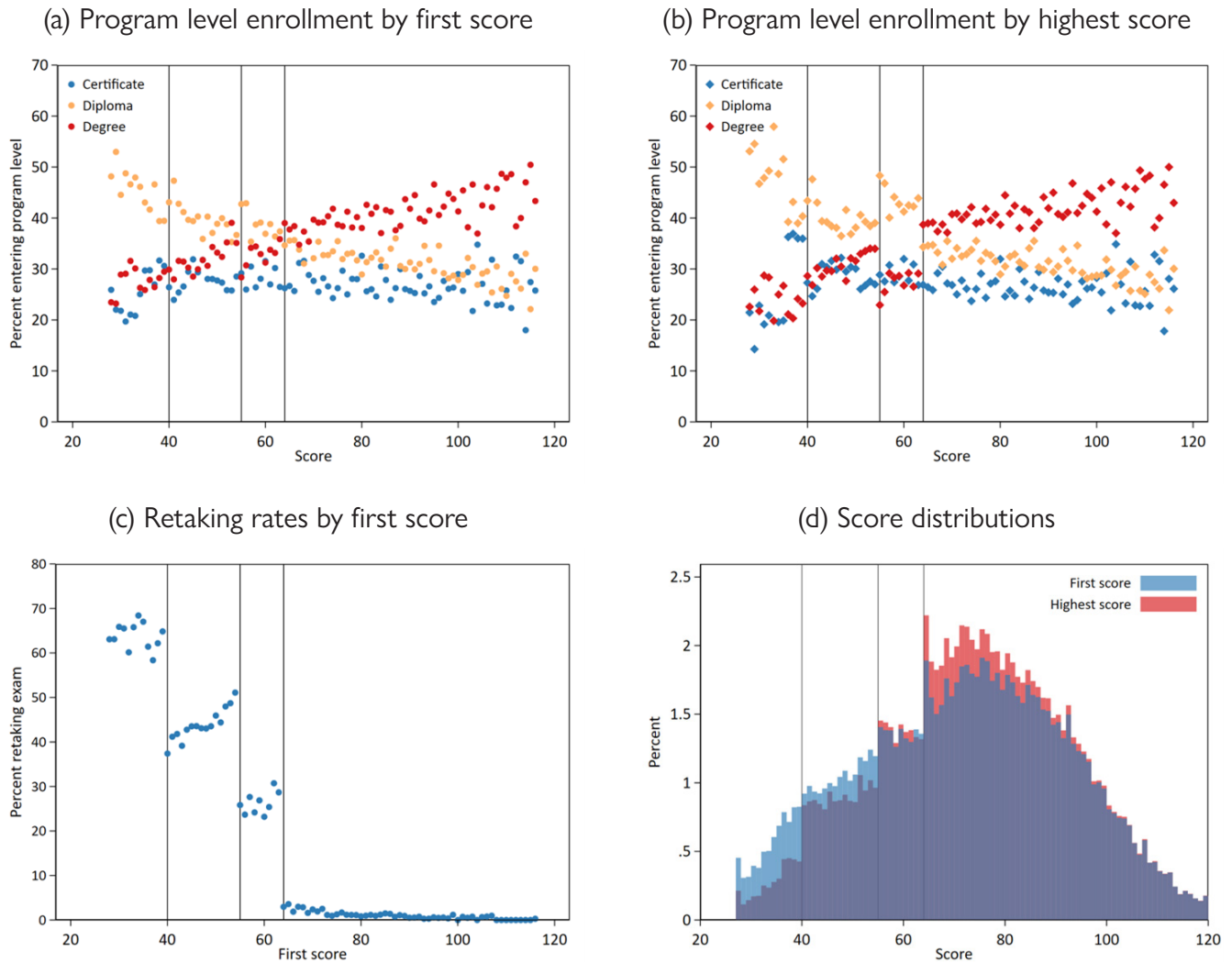
Notes. The horizontal axes in each graph are scores on the COMPASS Math test. Panels (a) and (e) group students by their first score and plot the percentages entering and completing each program level for each score, respectively. Panels (b) and (f) group students by their highest score. Panel (c) uses first scores and plots the percent of students who retook the test. Panel (d) plots the distribution of both first and highest scores. The vertical lines represent the placement criteria score thresholds. 26 is the threshold for diploma-level courses and scores below 17 send students to adult education.

Figure B3. COMPASS Algebra Test Scores, Program Level Enrollment and Completion, and Test Retaking



Notes. The horizontal axis in each of the graphs are scores on the COMPASS Algebra test. Panels (a) and (e) groups students by their first score and plots the percent of students entering and completing each program level for each score, respectively. Panels (b) and (f) are the same but instead groups students by their highest score. Panel (c) again uses first scores and plots the percent of students who retook the test. Panel (d) plots the distribution of both first and highest scores. The vertical lines represent the placement criteria score thresholds. 37 is the threshold for degree-level math courses and 28 is the threshold for a higher diploma-level math course (MATH 1013).

Figure B4. Classic ACCUPLACER Reading Test Scores, Program Level Enrollment, and Test Retaking

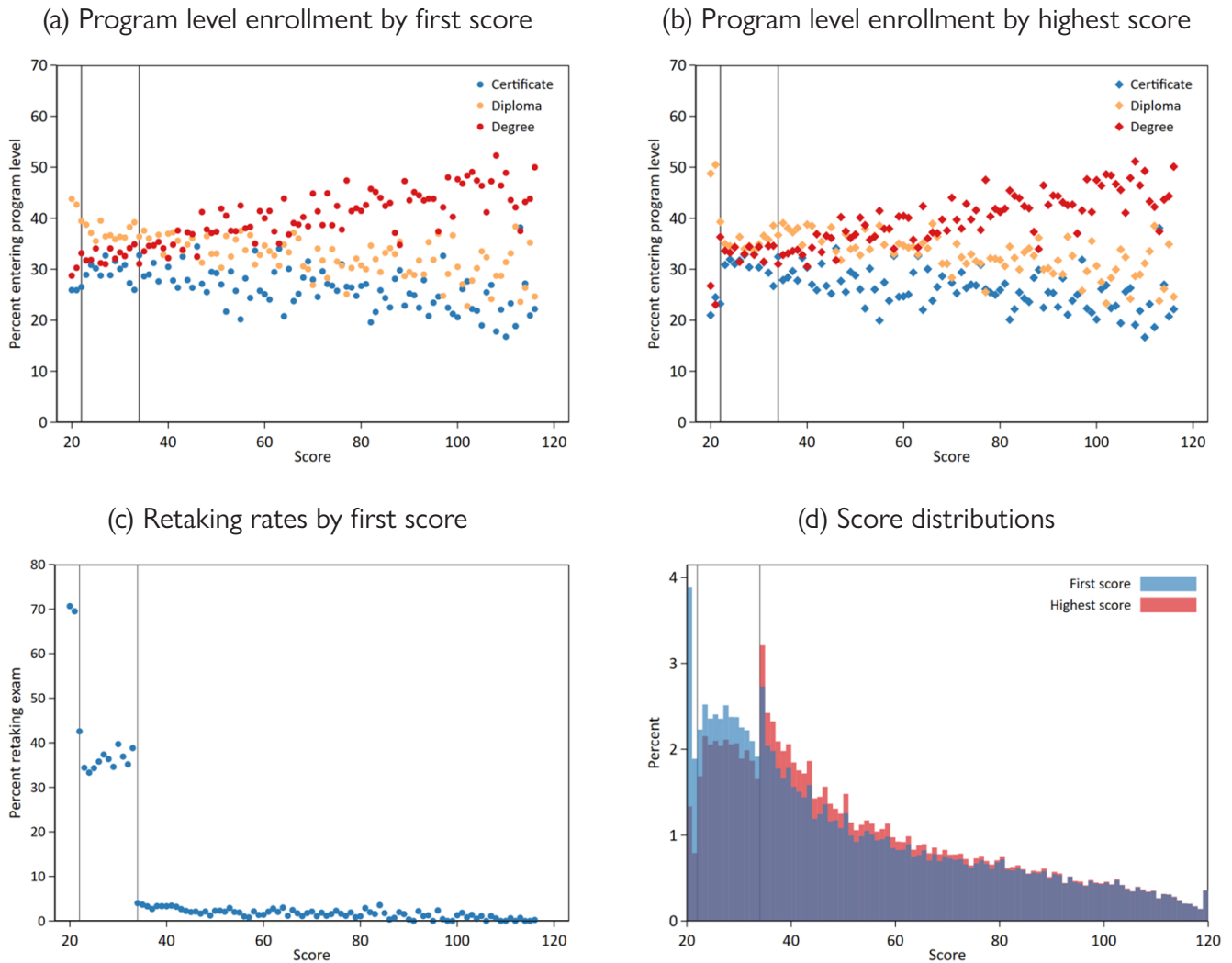


Notes. The horizontal axis in each of the graphs are scores on the Classic ACCUPLACER Reading test. Panel (a) groups students by their first score and plots the percent of students entering each program level for each score. Panel (b) is the same but instead groups students by their highest score. Panel (c) again uses first scores and plots the percent of students who retook the test. Panel (d) plots the distribution of both first and highest scores. The vertical lines represent the placement criteria score thresholds. 64 is the threshold for degree-level English courses, 55 for diploma-level English courses, and scores below 40 send students adult education.

Figure B5. Classic ACCUPLACER Sentence Skills Test Scores, Program Level Enrollment, and Test Retaking

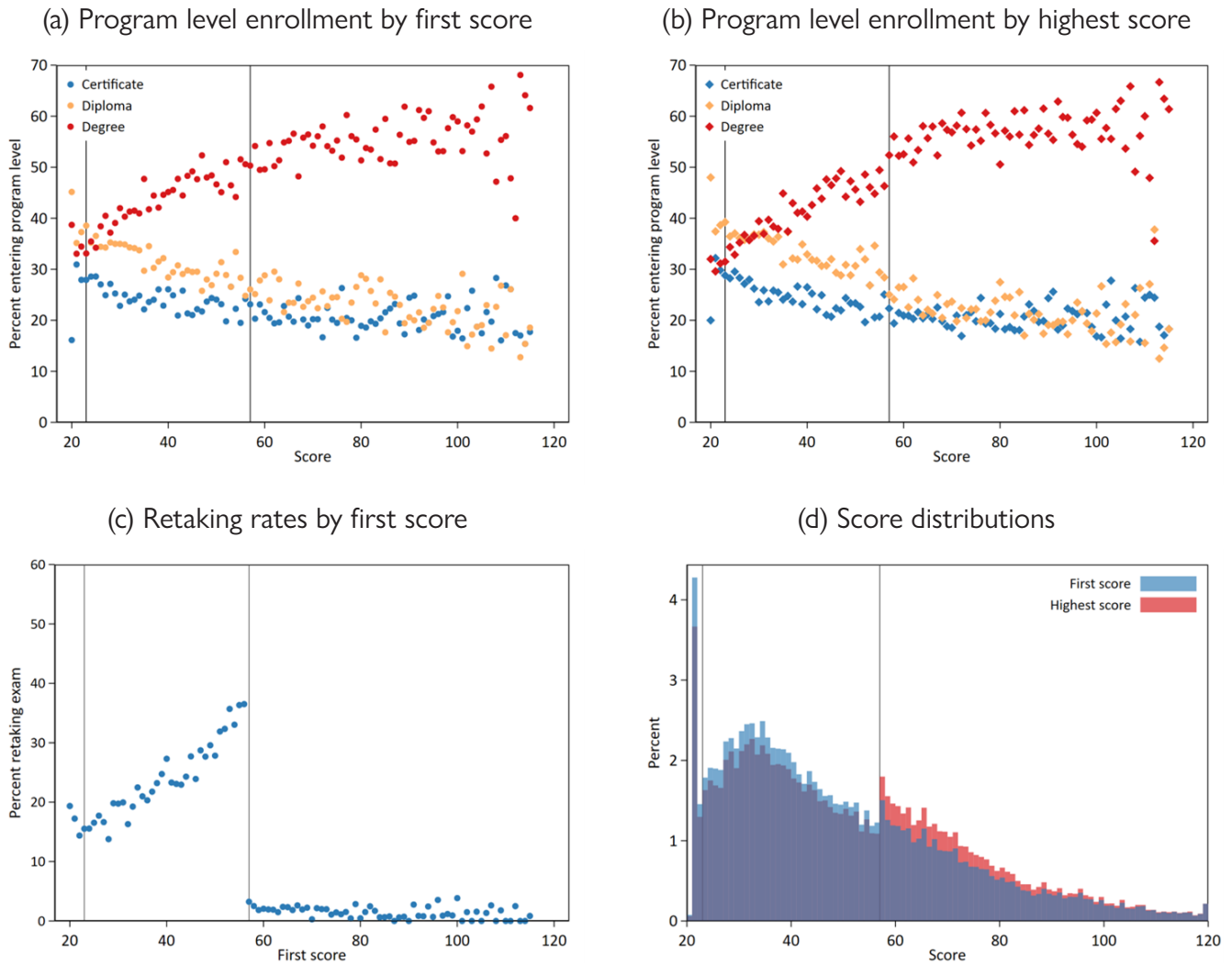


Figure B6. Classic ACCUPLACER Arithmetic Test Scores, Program Level Enrollment, and Test Retaking



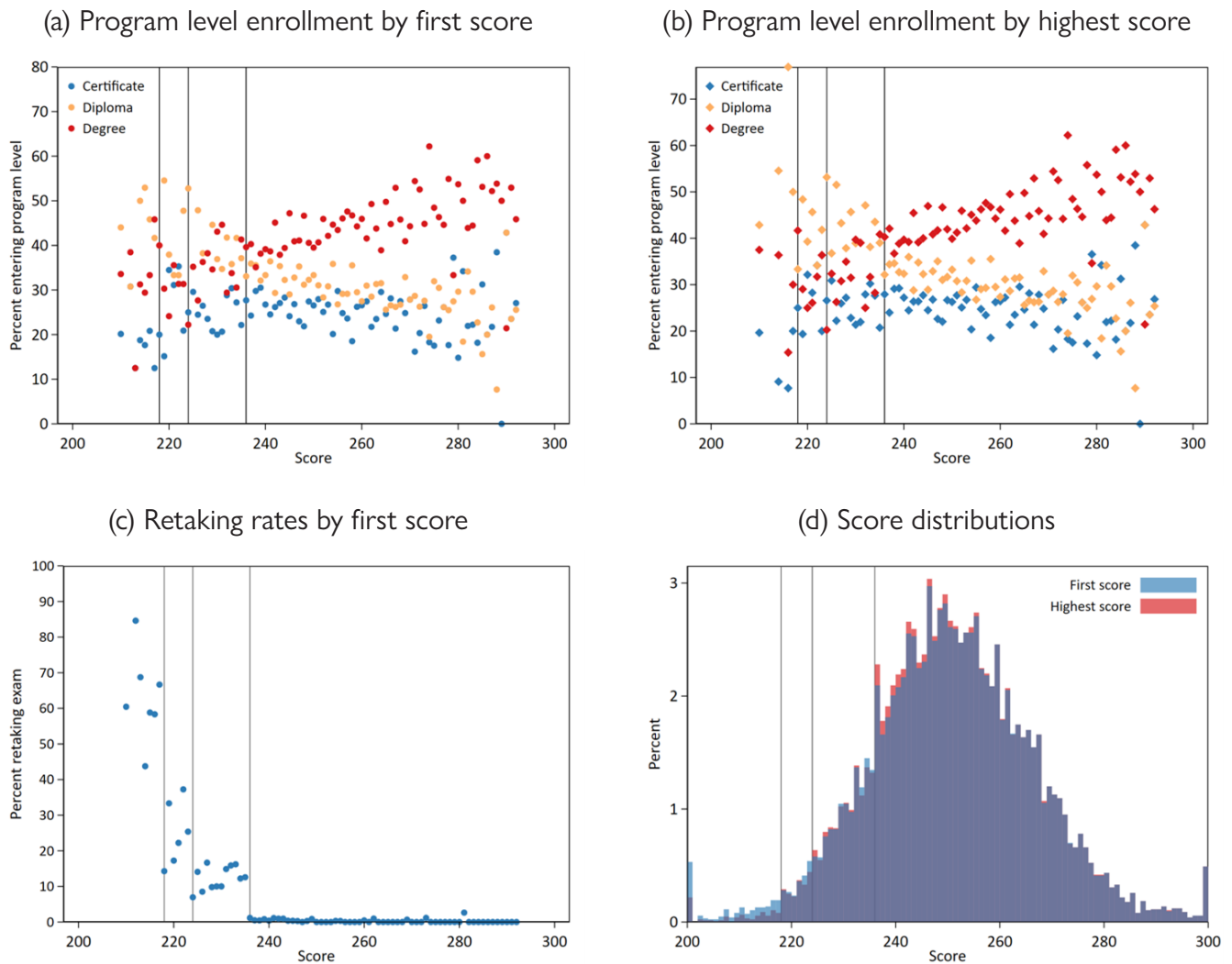
Notes. The horizontal axis in each of the graphs are scores on the Classic ACCUPLACER Arithmetic test. Panel (a) groups students by their first score and plots the percent of students entering each program level for each score. Panel (b) is the same but instead groups students by their highest score. Panel (c) again uses first scores and plots the percent of students who retook the test. Panel (d) plots the distribution of both first and highest scores. The vertical lines represent the placement criteria score thresholds. 34 is the threshold for diploma-level math courses, and scores below 22 send students adult education.

Figure B7. Classic ACCUPLACER Algebra Test Scores, Program Level Enrollment, and Test Retaking



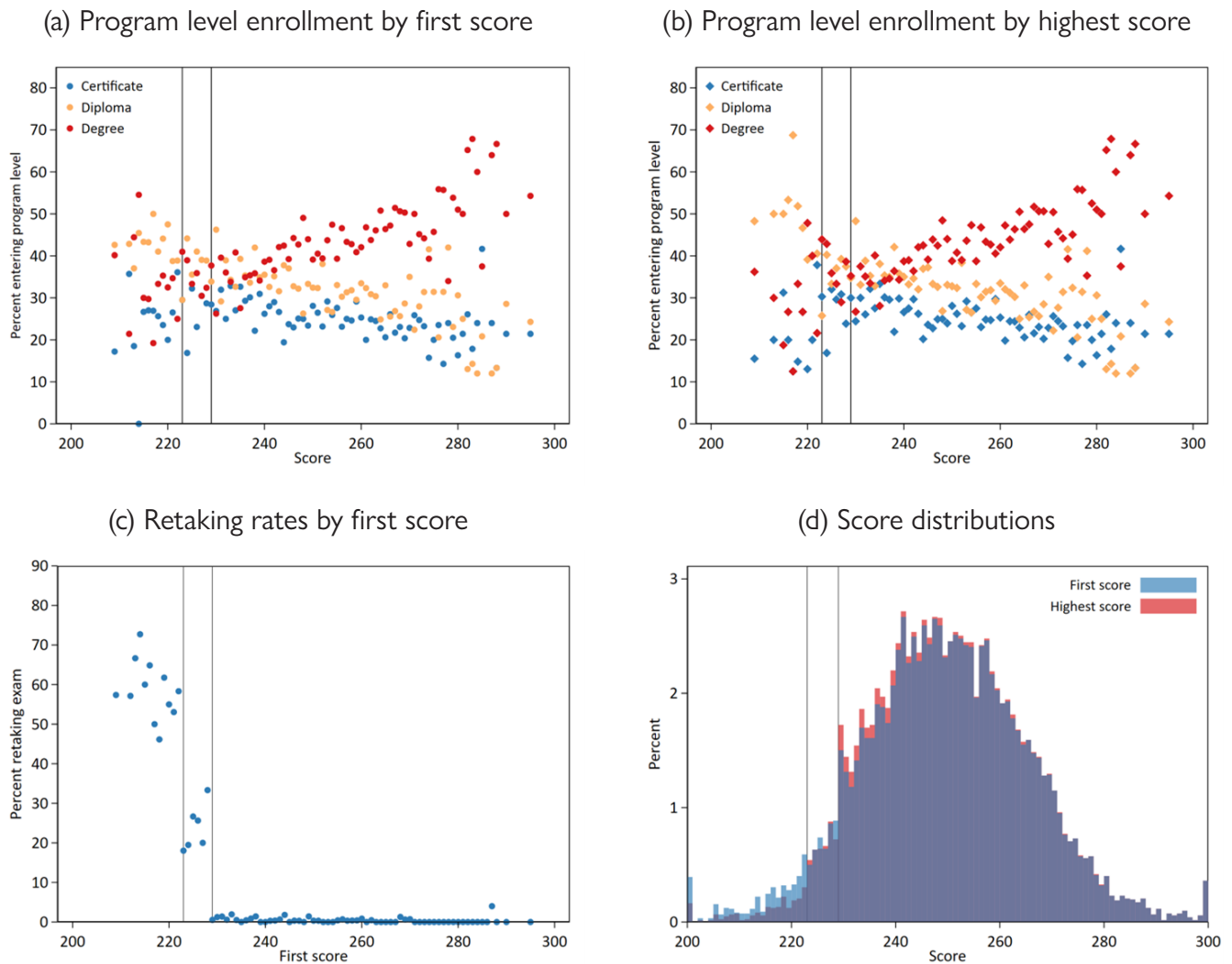
Notes. The horizontal axis in each of the graphs are scores on the Classic ACCUPLACER Algebra test. Panel (a) groups students by their first score and plots the percent of students entering each program level for each score. Panel (b) is the same but instead groups students by their highest score. Panel (c) again uses first scores and plots the percent of students who retook the test. Panel (d) plots the distribution of both first and highest scores. The vertical lines represent the placement criteria score thresholds. 57 is the threshold for degree-level math courses and 23 is the threshold for a higher diploma-level math course (MATH 1013).

Figure B8. Next Gen ACCUPLACER Reading Test Scores, Program Level Enrollment, and Test Retaking



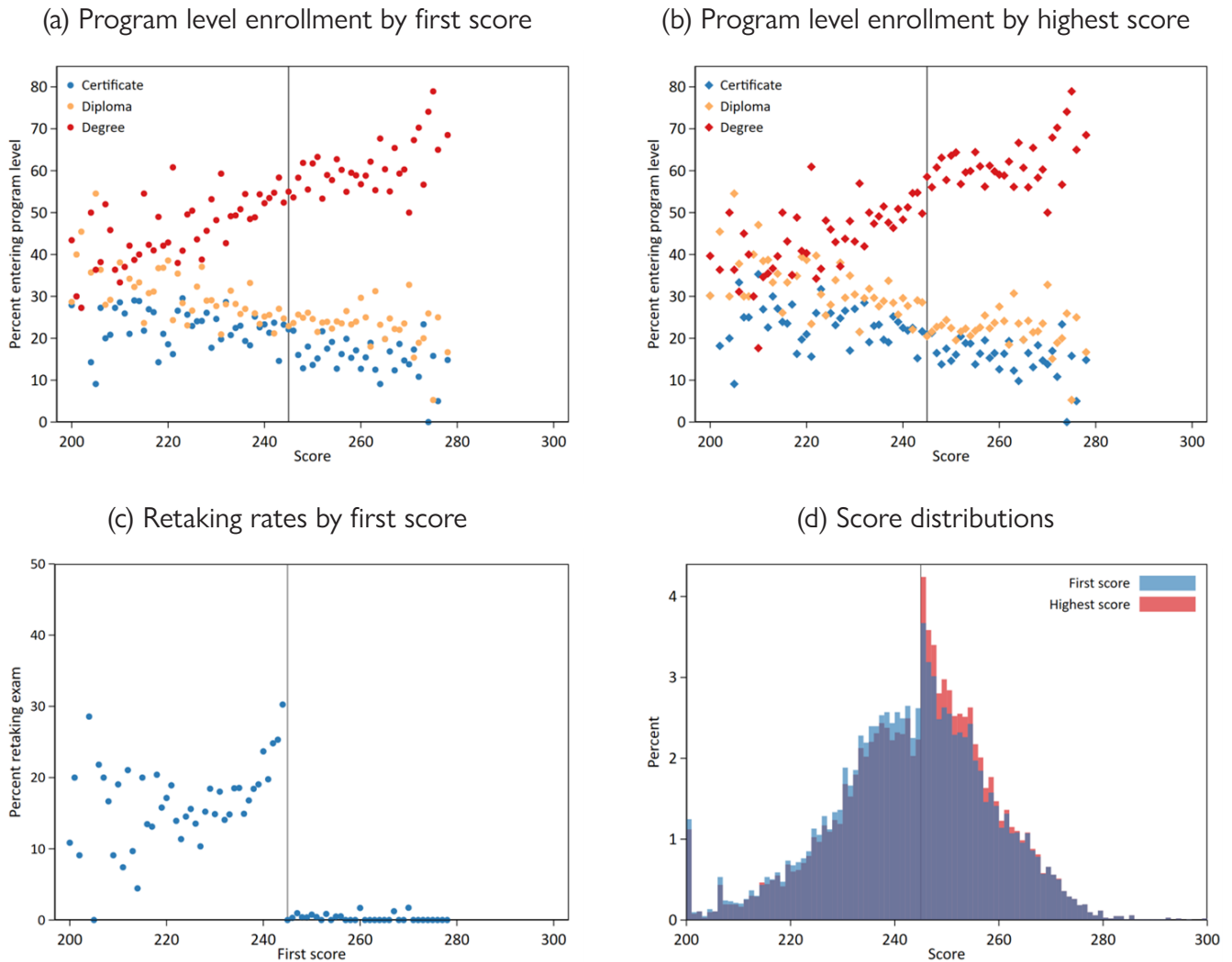
Notes. The horizontal axis in each of the graphs are scores on the Next Gen ACCUPLACER Reading test. Panel (a) groups students by their first score and plots the percent of students entering each program level for each score. Panel (b) is the same but instead groups students by their highest score. Panel (c) again uses first scores and plots the percent of students who retook the test. Panel (d) plots the distribution of both first and highest scores. The vertical lines represent the placement criteria score thresholds. 236 is the threshold for degree-level courses, 224 for diploma-level courses, 218 for certificate-level courses.

Figure B9. Next Gen ACCUPLACER Arithmetic Test Scores, Program Level Enrollment, and Test Retaking



Notes. The horizontal axis in each of the graphs are scores on the Next Gen ACCUPLACER Arithmetic test. Panel (a) groups students by their first score and plots the percent of students entering each program level for each score. Panel (b) is the same but instead groups students by their highest score. Panel (c) again uses first scores and plots the percent of students who retook the test. Panel (d) plots the distribution of both first and highest scores. The vertical lines represent the placement criteria score thresholds. 229 is the threshold for diploma-level courses and 223 for certificate-level courses.

Figure B10. Next Gen ACCUPLACER Quantitative Reasoning Test Scores, Program Level Enrollment, and Test Retaking



Notes. The horizontal axis in each of the graphs are scores on the Next Gen ACCUPLACER Quantitative Reasoning test. Panel (a) groups students by their first score and plots the percent of students entering each program level for each score. Panel (b) is the same but instead groups students by their highest score. Panel (c) again uses first scores and plots the percent of students who retook the test. Panel (d) plots the distribution of both first and highest scores. The vertical line represents the placement criteria score threshold. 245 is the threshold for degree-level math courses.