## PLATFORM <br> LEAR

## Tutor.com

# Effectiveness Study <br> (2021-22) 

## Study Type: ESSA Evidence Level II

Prepared for:
Tutor.com

Prepared by LearnPlatform by Instructure:
Meetal Shah, Ph.D., Senior Researcher
Mary Styers, Ph.D., Director of Research

February 2024


## EXECUTIVE SUMMARY

Tutor.com contracted with LearnPlatform by Instructure, a third-party edtech research company, to examine the impact of Tutor.com on K-12 student outcomes. LearnPlatform by Instructure designed this study to satisfy Level II requirements (Moderate Evidence) of the Every Student Succeeds Act (ESSA).

## Study Sample, Measures, and Methods

This quasi-experimental study occurred during the 2021-22 school year and included a matched analysis sample of 1,488 students in grades $9-12$ students (744 treatment, 744 comparison) from one K-12 California district. The sample was predominantly Hispanic (69\%), followed by Asian (14\%), white (8\%), African American (5\%), and multi-racial (3\%). In terms of socioeconomic status (SES), this sample was classified as $80 \%$ economically disadvantaged, and the grade-by-grade breakdown was as follows: Grade 9 (14\%), Grade 10 (22\%), Grade 11 (41\%), and Grade 12 (23\%).

Researchers used administrative and standardized assessment data to examine the impact of Tutor.com on student outcomes. Descriptive statistics were used to examine participant characteristics and understand program implementation. Regression analyses were used to study impact on outcomes. For each impact analysis, researchers created matched samples and conducted baseline equivalence. All analyses met What Works Clearinghouse (WWC) baseline equivalence standards. Researchers also included student-level covariates to control for potential selection bias.

## Program Implementation and Student Findings

Student usage. In the 2021-22 school year, participating students in grades $9-12$ students ( $n=744$ ) each used Tutor.com for an average of four sessions. The average session duration was 28 minutes, with a range of 5 to 92 minutes.

Student outcomes. Researchers examined the influence of different intensities of Tutor.com use on student outcomes. There was a positive statistically significant association between different intensities of Tutor.com use and students' spring 2022 grade point average (GPA). That is, students who spent more than 30 minutes on the platform (in total) had higher GPAs than students who spent fewer than 30 minutes on the platform. Next, researchers examined the impact of Tutor.com on student outcomes by comparing Tutor.com users to demographically similar non-users. Students in grades 9-12 who used Tutor.com had higher spring 2022 GPAs than students who did not use the platform. This result was statistically significant.

## Conclusion

Given positive outcome findings, this study meets ESSA evidence requirements for Level II (Moderate Evidence). Specifically, this quasi-experimental study was properly designed and implemented, documented baseline equivalence, included statistical controls, had more than 350 students across multiple schools, and had multiple positive statistically significant findings.

## ESSA Study Key Takeaways

## Students used Tutor.com primarily for math.

Students in grades 9-12 used Tutor.com for an average of four sessions lasting on average 28 minutes.

Students from all grades most frequently participated in math tutoring sessions.

Tutor.com had a positive impact on students' GPA.
Students in grades 9-12 who used Tutor.com had higher spring GPAs than non-users. This result was statistically significant (Hedges' $g=.12 ; p=.002$ ).


Students in grades 9-12 who spent more time on Tutor.com had higher spring GPAs. This result was statistically significant ( $r=.08 ; p=.02$ ).

Students in grades 9-12 who completed more tutoring sessions on Tutor.com had higher spring GPAs. This result was not statistically significant.

## Table of Contents

Introduction ..... 3
Program Implementation ..... 6
Student Findings ..... 7
Conclusions ..... 9
References ..... 10
Appendix A. Tutor.com Logic Model ..... 11
Appendix B. Additional Information on Study Design and Methods ..... 12
Appendix C. Grade 3-5 Exploratory Study of Outcomes ..... 14
Appendix D. Grade 6-8 Exploratory Study of Outcomes ..... 17

## Introduction

Tutor.com recognizes that students often need specific, targeted assistance to understand academic content. Learners benefit from Tutor.com's on-demand, individualized tutoring to help clarify complex concepts, review and reinforce prerequisite material, catch up after missing school, or complete homework and in-class assignments. Tutor.com promotes educational equity, opportunity, and achievement for all learners by providing live tutoring and assignment review by highly qualified, rigorously vetted tutors in a virtual environment. Tutor.com is learner-focused, geared toward creating opportunities for students to engage in on-demand, scheduled, and asynchronous tutoring sessions to help them progress beyond roadblocks and close gaps in their understanding (see logic model in Appendix A; Hunt, Long, \& Cavanaugh, 2022).

As part of their ongoing efforts to demonstrate effectiveness, Tutor.com contracted with LearnPlatform by Instructure, a third-party edtech research company, to examine the impact of Tutor.com on student outcomes. LearnPlatform by Instructure designed this study to satisfy Level II requirements (Moderate Evidence) of the Every Student Succeeds Act (ESSA).

The study had the following research questions:

## Implementation Research Questions

1. To what extent did students engage with Tutor.com?
a. How many tutoring sessions did students complete?
b. What was the range and average number of minutes per tutoring session?

## Effectiveness Research Questions

2. What was the influence of different intensities of Tutor.com usage on the spring 2022 grade point average (GPA) of students in grades 9-12?
3. What was the impact of Tutor.com on spring 2022 GPA for students who used the program compared to those who did not?

Researchers additionally conducted exploratory analyses for students in grades 3-8 from the same district. These results are available in Appendices C and D, and were not the focus of the present study due to implementation differences between earlier grade levels and high school students. Tutor.com's user interface is ideal for students who can use technology independently. Additionally, older students tend to be more self-aware of their specific learning gaps and therefore know how to use the platform to close these.

## Methods

This section of the report briefly describes the study design, setting and participants, measures, analysis methods, and baseline equivalence practices.

## Study Design

This study used a quasi-experimental design ${ }^{1}$ with propensity score matching to align with ESSA Level II evidence standards. The treatment group included students who used Tutor.com during the 202122 school year. The comparison group included students who did not access Tutor.com but who were demographically similar, with comparable fall achievement.

## Setting and Participants

This quasi-experimental study occurred during the 2021-22 school year and included a matched analysis sample of 1,488 students in grades 9-12 (744 treatment, 744 comparison) from one K-12 California district. The sample was predominantly Hispanic (69\%), followed by students whose racial and ethnic backgrounds were Asian (14\%), African American (5\%), white (8\%), and multi-racial (3\%). In terms of socioeconomic status (SES), this sample was classified as $80 \%$ economically disadvantaged, and the grade-by-grade breakdown was as follows: Grade 9 (14\%), Grade 10 (22\%), Grade 11 (41\%), and Grade 12 (23\%).

## Measures

This study includes the following measures to provide insights into the impact of Tutor.com on student outcomes.

Tutor.com Usage Metrics. Researchers utilized 2021-22 student-level usage data (i.e., total sessions, total minutes). Usage data informed the extent to which students used Tutor.com during the school year and whether students' use of Tutor.com influenced student outcomes.

Student Outcomes. Researchers additionally utilized administrative data, such as spring semester GPA values, to evaluate student outcomes.

## Data Analysis

Researchers conducted descriptive statistics to describe participant characteristics and support implementation analyses. Researchers then conducted regressions to examine Tutor.com outcomes and impacts. Analyses included student-level covariates and nearest neighbor propensity score matching to account for potential selection bias. In addition, researchers calculated standardized

[^0]effect sizes (i.e., Hedges' $g^{2}$ ) to determine the magnitude of difference in Tutor.com student outcomes compared to similar non-users.

## Baseline Equivalence

To ensure the validity to the study's findings and adhere to ESSA Level II standards, researchers conducted baseline equivalence tests on matched treatment and comparison student samples. These findings are discussed in the Student Findings section and referenced in Appendix B.
${ }^{2}$ Hedges' $g$ represents the standardized mean difference in outcomes between two groups of students.

## Program Implementation

This section presents descriptive findings on Tutor.com implementation. Researchers analyzed program usage metrics to determine the extent to which students used Tutor.com during the 202122 school year.

## To what extent did grade 9-12 students engage with Tutor.com?

Among students in grades 9-12 who used Tutor.com, the average number of sessions completed across all subjects was four, with sessions lasting an average of 28 minutes, and some students having session durations as high as 92 minutes (see Table 1). Math tutoring sessions were most common, with 364 students averaging six sessions over the course of the year and each session lasting 25 minutes. Foreign language tutoring was least common, with just nine students completing tutoring sessions in this subject.

Table 1. Tutor.com tutoring sessions by subject for students in grades 9-12.

| Subject | Average <br> sessions | Range of <br> sessions | Average <br> duration <br> (minutes) | Range <br> (minutes) | Number of <br> students |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Math | 6 | $1-215$ | 25 | $5-92$ | 364 |
| Science | 5 | $1-117$ | 27 | $6-69$ | 72 |
| English Language Arts | 2 | $1-56$ | 31 | $5-61$ | 386 |
| Social Studies | 4 | $1-10$ | 31 | $17-52$ | 8 |
| Foreign Language | 1 | $1-3$ | 28 | $7-50$ | 9 |
| Total | 4 | $1-309$ | 28 | $5-92$ | 744 |

## Student Findings

To answer effectiveness research questions, researchers conducted regressions for Tutor.com students only and regressions using matched samples of users to non-users. The following section details (a) the influence of different levels of Tutor.com usage on student outcomes and (b) the impact of Tutor.com on student outcomes. Researchers report statistically significant findings at the $p=.05$ level. Statistically significant findings are marked green (positive effect) or red (negative effect) in subsequent graphs. Findings that are not statistically significant are marked gray.

What was the influence of different intensities of Tutor.com usage on outcomes for students in grades 9-12?

Researchers conducted regressions for Tutor.com students, exploring the influence of different intensities of Tutor.com usage on spring 2022 GPA. Models included spring 2021 GPA, grade level, English language learner (ELL) status, gender, and absentee status as covariates. Overall, students who completed more sessions and spent more minutes in Tutor.com had marginally higher spring 2022 GPAs, but these differences were only statistically significant for total time spent on the platform (Figures 1 and 2).

## Tutor.com users in grades 9-12 who completed 1-3 sessions had higher GPAs, but this difference was not statistically significant.

2.8

2.97

2.91


More than 3 sessions

Figure 1. Influence of the number of sessions on Tutor.com users' spring 2022 GPA ( $n=744$ ). Mean differences between 1 session and higher usage groups were not statistically significant ( $g=0.10, p>.05 ; g=0.04, p>.05$ ).

Tutor.com users in grades 9-12 who spent 30 total minutes or more had higher GPAs, and this difference was statistically significant.
2.78

2.96


Figure 2. Influence of the number of minutes on Tutor.com users' spring 2022 GPA ( $n=744$ ). Mean difference between less than 30 minutes and the higher usage group is statistically significant ( $g=0.18, p=.006$ ).

What was the impact of Tutor.com on outcomes for students in grades 9-12?
Researchers created a matched sample of Tutor.com users and non-users based on students' spring 2021 GPA, grade level, gender, race, as well as ELL, foster youth, homeless, SES, disability, and chronic absentee statuses. The matched sample demonstrated baseline equivalence (Hedges' $g=0.00$ ) in spring 2021 GPAs. Next, researchers used the matched sample to run a regression model, examining the impact of participating in Tutor.com on students' spring 2022 GPAs, controlling for spring 2021 GPA and other statistically significant demographic variables (i.e., grade level, ELL status, gender, race, and chronic absentee status). Tutor.com users had higher GPAs compared to non-users, and this difference was statistically significant ( $g=0.12 ; p=.002$ ); Figure 3).

## Tutor.com users had higher spring 2022 GPAs compared to non-users. This difference was statistically significant.

2.91


Tutor.com
2.78


Non-users

Figure 3. Adjusted mean spring 2022 GPA for Tutor.com users and non-users. Mean difference was statistically significant ( $g=0.12, p=.002 ; n=1,488$ ).

## Conclusions

Given multiple positive outcome findings, this study provides results to satisfy ESSA evidence requirements for Level II (Moderate Evidence). Specifically, this quasi-experimental study met the following criteria for Level II:

Proper design and implementation
Baseline equivalence for treatment and comparison groups
Statistical controls through covariates
At least 350 students in the analysis sample
Representative, multi-site study
At least one statistically significant, positive finding

## References

Hunt, A., Long, C., \& Cavanaugh, S.A. (2022). Tutor.com Logic Model: ESSA Evidence Level IV Report. Raleigh, NC: LearnPlatform.

National Center for Education Statistics (2023). ACS-ED District Demographic Dashboard 2017-21.

## Appendix A. Tutor.com Logic Model

## tutor.com

Problem Statement: Students often need specific, targeted assistance to understand content; for example, to clarify a complex concept, to catch up after missing school, or to complete homework and in-class assignments. Tutor.com promotes educational equity, opportunity, and achievement for all learners by providing live tutoring and assignment review through a network of qualified tutors in a virtual environment. The support provided by Tutor.com is learner-focused, creating opportunities for individualized just-in-time support that allows students to request on-demand, scheduled, and asynchronous sessions and progress beyond roadblocks or gaps in understanding.


## Appendix B. Additional Information on Study Design and Methods

A total of 746 grade 9-12 Tutor.com students had complete demographic, achievement, and usage data. Researchers had a sample of 16,139 grades 9-12 comparison students with complete demographic and achievement data. Using these this dataset of 746 Tutor.com students and 16,139 non-Tutor.com students, researchers used propensity score matching (i.e., nearest neighbor matching without replacement) to create a matched study sample of 744 Tutor.com students and 744 nonTutor.com students with similar spring 2021 GPAs, gender, ethnicity, and grade level. Consequently, the matched study sample for grades $9-12$ included 1,488 students. Additional demographic information on participating students is included in Table B1.

Table B1. Student demographics by group for matched sample based on Grades 9-12 spring 2021 GPA

| Characteristic | Tutor.com students ( $n=744$ ) |  | Non-Tutor.com students ( $n=744$ ) |  | Total sample$(n=1,488)$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Percent | n | Percent | $n$ | Percent | $n$ |
| Gender |  |  |  |  |  |  |
| Female | 64\% | 476 | 65\% | 483 | 64\% | 959 |
| Male | 36\% | 266 | 35\% | 261 | 36\% | 527 |
| Race/Ethnicity |  |  |  |  |  |  |
| Hispanic | 69\% | 515 | 70\% | 519 | 69\% | 1,034 |
| Asian | 13\% | 100 | 14\% | 104 | 10\% | 204 |
| Two or More | 3\% | 23 | 3\% | 25 | 3\% | 48 |
| White | 8\% | 59 | 7\% | 55 | 8\% | 114 |
| Black | 5\% | 40 | 4\% | 32 | 5\% | 72 |
| English Language Learner (ELL) Status |  |  |  |  |  |  |
| Yes | 10\% | 74 | 9\% | 69 | 10\% | 143 |
| No | 90\% | 670 | 91\% | 675 | 90\% | 1,345 |
| SES Status (economically disadvantaged) |  |  |  |  |  |  |
| Yes | 79\% | 590 | 81\% | 599 | 80\% | 1,189 |
| No | 21\% | 154 | 19\% | 145 | 20\% | 299 |
| Disability Status |  |  |  |  |  |  |
| Yes | 3\% | 20 | 2\% | 18 | 3\% | 38 |
| No | 97\% | 724 | 98\% | 726 | 97\% | 1,450 |
| Chronic Absentee Status |  |  |  |  |  |  |
| Yes | 26\% | 196 | 27\% | 199 | 27\% | 395 |


| Characteristic | Tutor.com <br> students ( $\boldsymbol{n}=\mathbf{7 4 4})$ |  | Non-Tutor.com <br> students ( $\boldsymbol{n}=744)$ |  | Total sample <br> $(\boldsymbol{n}=\mathbf{1 , 4 8 8 )}$ |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| No | $74 \%$ | 548 | $734 \%$ | 545 | $73 \%$ | 1,093 |
| Grade |  |  |  |  |  |  |
| 9th | $14 \%$ | 104 | $14 \%$ | 107 | $14 \%$ | 211 |
| 10th | $21 \%$ | 157 | $22 \%$ | 164 | $22 \%$ | 321 |
| 17th | $41 \%$ | 307 | $40 \%$ | 300 | $41 \%$ | 607 |
| 12th | $24 \%$ | 176 | $23 \%$ | 173 | $23 \%$ | 349 |

After matching across groups, researchers conducted regression analyses using the propensity score matched sample to confirm there were no statistically significant differences between student groups. The matched sample met WWC baseline equivalence standards with Hedges' $g$ effect size 0.00.

Table B2. Baseline equivalence on spring 2021 GPAs (grades 9-12)

| Outcome Variable | Adjusted <br> mean <br> (Tutor.com) | Unadjusted <br> $\boldsymbol{n}($ SD) <br> (Tutor.com) | Adjusted <br> mean <br> (non-users) | Unadjusted <br> $\boldsymbol{n}$ (SD) <br> (non-users) | Hedges' $\boldsymbol{g}$ | $\boldsymbol{p}$-value |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| Spring 2021 GPA | 2.79 | $744(1.28)$ | 2.79 | $744(1.28)$ | 0.00 | .960 |

## Appendix C. Grade 3-5 Exploratory Study of Outcomes

## Grades 3-5 Usage

Table C1. Tutor.com tutoring sessions by subject for Grades 3-5 students.

| Subject | Average <br> sessions | Range of <br> sessions | Average <br> duration <br> (minutes) | Range <br> (minutes) | Number of <br> students |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Math | 3 | $1-33$ | 17 | $5-90$ | 422 |
| Science | 1 | $1-3$ | 13 | $5-26$ | 17 |
| English Language Arts | 5 | $1-377$ | 20 | $5-85$ | 116 |
| Social Studies | 2 | $1-5$ | 26 | $11-75$ | 7 |
| Total | 4 | $1-390$ | 18 | $5-90$ | 494 |

## Grades 3-5 Findings

- Grades 3-5 students who used Tutor.com had marginally higher spring GPA and iReady math scores than non-users. This result was not statistically significant.
- Among grades 3-5 users of Tutor.com,
- the amount of time spent on Tutor.com was not associated with higher spring GPA or iReady math scores.
- the number of tutoring sessions completed on Tutor.com was not associated with higher spring GPA or iReady math scores.


## Grades 3-5 Sample

A total of 494 grades 3-5 Tutor.com students had complete demographic, achievement, and usage data. Researchers had a sample of 14,275 grades 3-5 comparison students with complete demographic and achievement data. Using these this dataset of 494 Tutor.com students and 14,275 non-Tutor.com students, researchers used propensity score matching (i.e., nearest neighbor matching without replacement) to create a matched study sample of 494 Tutor.com students and 494 nonTutor.com students with similar fall performance, gender, ethnicity, and grade level. Consequently, the matched study sample for grades 3-5 included 988 students. Additional demographic information on participating students is included in Table C2.

Table C2. Student demographics by group for matched sample based on Grades 3-5 spring 2021 GPA

| Characteristic | Tutor.com students ( $n=274$ ) |  | Non-Tutor.com students ( $n=274$ ) |  | Total sample$(n=548)$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Percent | n | Percent | n | Percent | $n$ |
| Gender |  |  |  |  |  |  |
| Female | 60\% | 298 | 60\% | 295 | 60\% | 593 |
| Male | 40\% | 196 | 40\% | 199 | 40\% | 395 |
| Race/Ethnicity |  |  |  |  |  |  |
| Hispanic | 72\% | 355 | 76\% | 373 | 74\% | 728 |
| Asian | 7\% | 36 | 7\% | 37 | 7\% | 73 |
| Two or More | 4\% | 20 | 3\% | 13 | 3\% | 33 |
| White | 6\% | 29 | 5\% | 26 | 6\% | 55 |
| Black | 8\% | 41 | 8\% | 39 | 8\% | 80 |
| English Language Learner (ELL) Status |  |  |  |  |  |  |
| Yes | 22\% | 109 | 23\% | 113 | 22\% | 222 |
| No | 78\% | 385 | 77\% | 381 | 78\% | 766 |
| SES Status (economically disadvantaged) |  |  |  |  |  |  |
| Yes | 89\% | 438 | 89\% | 442 | 89\% | 880 |
| No | 11\% | 56 | 11\% | 52 | 11\% | 108 |
| Disability Status |  |  |  |  |  |  |
| Yes | 6\% | 29 | 5\% | 24 | 5\% | 53 |
| No | 94\% | 465 | 95\% | 470 | 95\% | 935 |
| Chronic Absentee Status |  |  |  |  |  |  |
| Yes | 38\% | 189 | 39\% | 194 | 39\% | 383 |
| No | 62\% | 305 | 61\% | 300 | 61\% | 605 |
| Grade |  |  |  |  |  |  |
| 3rd | 19\% | 95 | 20\% | 100 | 20\% | 195 |
| 4th | 45\% | 220 | 45\% | 220 | 45\% | 440 |
| 5th | 36\% | 179 | 35\% | 174 | 36\% | 353 |

After matching across groups, researchers conducted regression analyses using the propensity score matched sample to confirm there were no statistically significant differences between student groups. The matched sample met WWC baseline equivalence standards with Hedges' $g$ effect size of 0.01.

Table C3. Baseline equivalence on spring 2021 GPAs (grades 3-5)

| Outcome Variable | Adjusted <br> mean <br> (Tutor.com) | Unadjusted <br> $\boldsymbol{n}$ (SD) <br> (Tutor.com) | Adjusted <br> mean <br> (non-users) | Unadjusted <br> $\boldsymbol{n}$ (SD) <br> (non-users) | Hedges' $\boldsymbol{g}$ | p-value |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| Spring 2021 GPA | 2.24 | $494(1.32)$ | 2.22 | $494(1.31)$ | 0.01 | .845 |

## Appendix D. Grade 6-8 Exploratory Study of Outcomes

## Grades 6-8 Usage

Table D1. Tutor.com tutoring sessions by subject for Grades 6-8 students.

| Subject | Average <br> sessions | Range of <br> sessions | Average <br> duration <br> (minutes) | Range <br> (minutes) | Number of <br> students |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Math | 4 | $1-59$ | 20 | $5-75$ | 273 |
| Science | 2 | $1-30$ | 16 | $6-53$ | 32 |
| English Language Arts | 2 | $1-9$ | 22 | $6-64$ | 55 |
| Social Studies | 1 | $1-1$ | 6 | - | 2 |
| Total | 4 | $1-69$ | 20 | $5-75$ | 324 |

## Grades 6-8 Findings

- Grades 6-8 students who used Tutor.com had marginally higher spring GPA and iReady math scores than non-users. This result was not statistically significant.
- Among grades 6-8 users of Tutor.com,
- the amount of time spent on Tutor.com was not associated with higher spring GPA or iReady math scores.
- the number of tutoring sessions completed on Tutor.com was not associated with higher spring GPA or iReady math scores.


## Grades 6-8 Sample

A total of 324 grades 6-8 Tutor.com students had complete demographic, achievement, and usage data. Researchers had a sample of 14,539 grades 6-8 comparison students with complete demographic and achievement data. Using these this dataset of 324 Tutor.com students and 14,539 non-Tutor.com students, researchers used propensity score matching (i.e., nearest neighbor matching without replacement) to create a matched study sample of 324 Tutor.com students and 324 nonTutor.com students with similar fall performance, gender, ethnicity, and grade level. Consequently, the matched study sample for grades 6-8 included 648 students. Additional demographic information on participating students is included in Table D2.

Table D2. Student demographics by group for matched sample based on Grades 6-8 spring 2021 GPA

| Characteristic | Tutor.com students ( $n=226$ ) |  | Non-Tutor.com students ( $n=226$ ) |  | Total sample$(n=452)$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Percent | n | Percent | n | Percent | n |
| Gender |  |  |  |  |  |  |
| Female | 60\% | 196 | 60\% | 194 | 60\% | 390 |
| Male | 40\% | 128 | 40\% | 130 | 40\% | 258 |
| Race/Ethnicity |  |  |  |  |  |  |
| Hispanic | 72\% | 232 | 71\% | 231 | 71\% | 463 |
| Asian | 6\% | 21 | 6\% | 20 | 6\% | 41 |
| Two or More | 3\% | 11 | 2\% | 7 | 3\% | 18 |
| White | 9\% | 30 | 11\% | 37 | 10\% | 67 |
| Black | 8\% | 26 | 7\% | 24 | 8\% | 50 |
| English Language Learner (ELL) Status |  |  |  |  |  |  |
| Yes | 14\% | 45 | 14\% | 45 | 14\% | 90 |
| No | 86\% | 279 | 86\% | 279 | 86\% | 558 |
| SES Status (economically disadvantaged) |  |  |  |  |  |  |
| Yes | 82\% | 266 | 83\% | 270 | 83\% | 536 |
| No | 18\% | 58 | 17\% | 54 | 17\% | 112 |
| Disability Status |  |  |  |  |  |  |
| Yes | 10\% | 31 | 9\% | 29 | 9\% | 60 |
| No | 90\% | 293 | 91\% | 295 | 91\% | 588 |
| Chronic Absentee Status |  |  |  |  |  |  |
| Yes | 34\% | 109 | 34\% | 109 | 34\% | 218 |
| No | 66\% | 215 | 66\% | 215 | 66\% | 430 |
| Grade |  |  |  |  |  |  |
| 6th | 53\% | 172 | 55\% | 179 | 54\% | 351 |
| 7th | 27\% | 86 | 26\% | 84 | 26\% | 170 |
| 8th | 20\% | 66 | 19\% | 61 | 20\% | 127 |

After matching across groups, researchers conducted regression analyses using the propensity score matched sample to confirm there were no statistically significant differences between student groups. The matched sample met WWC baseline equivalence standards with Hedges' $g$ effect size of 0.01.

Table D3. Baseline equivalence on spring 2021 GPAs (grades 6-8)

| Outcome Variable | Adjusted <br> mean <br> (Tutor.com) | Unadjusted <br> $\boldsymbol{n}($ (SD) | Adjusted <br> (Tutor.com) | Unadjusted <br> (non-users) | (non-users) <br> (SD) | Hedges' g | p-value |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Spring 2021 GPA | 2.40 | $324(1.38)$ | 2.39 | $324(1.37)$ | 0.01 | .94 |  |


[^0]:    ${ }^{1}$ A quasi-experimental design compares the outcomes of Tutor.com users to non-users.

