

EVALUATE YOUR LARGE PRINT EFFICACY STUDY

HOW TO INTERPRET QUANTITATIVE DATA AND OUTCOMES

STEP-BY-STEP STUDY DATA ANALYSIS GUIDE

The purpose of this guide is to help school and district leaders understand how to analyze and interpret quantitative data collected as part of your replication of the Large Print Efficacy Study with one or more schools. Project Tomorrow®, a national education nonprofit organization, designed and implemented the original efficacy study in collaboration with Thorndike Press. This guide provides an easy-to-use, step-by-step process for connecting the outputs from your collected data to your study goals.

➔ **Access the Research Replication Guide at gale.com/thorndike/replication**

In this guide, we assume you have used the simplified set of Project Tomorrow pre and post intervention surveys to collect two sets of feedback data from your students and teachers. Your first set of data (data set #1) should be the feedback you collected from students and teachers prior to the use of the large print books in the classroom. The second set of data (data set #2) is the feedback you collected after the students completed reading the large print books. If you did not use the Project Tomorrow sample surveys, you can still use this guide to help with your data analysis. The focus of this guide is on the outcomes that relate to changes in students' reading mindsets as a result of using the large print books.

➔ **Download the white paper from Project Tomorrow's nationwide study at gale.com/thorndike/ylp-research**

Step 1

To get started, identify the survey questions that relate to changes in the reading mindsets of students. Here are our recommendations on the most appropriate survey questions and potential response options from the Project Tomorrow student and teacher surveys (both the preintervention surveys and postintervention surveys).

DESIRED OUTCOME	STUDENT SURVEY QUESTION TOPICS	TEACHER SURVEY QUESTION TOPICS
Improved student reading mindsets	Students' self-assessment of their reading skills (both pre and postsurvey results)	Teachers' evaluation of the reading challenges they see in their students most often (postsurvey results)
	Students' attitudes or valuations on their reading challenges (both pre and postsurvey results)	Teachers' narrative statements on their observations about the changes that they saw in their students as a result of reading a large print book (postsurvey results)
	Students' valuation on the extent in which they like reading for schoolwork purposes (postsurvey results)	Teachers' assessment of the outcomes of their students reading a large print book (postsurvey results)
	Students' valuation on their level of enjoyment reading a large print book (postsurvey results)	Teachers' assessment on the likelihood of continuing to use large print books in their classroom (postsurvey results)
	Students' views on the impact of the large print book on addressing their reading challenges (postsurvey results)	
	Students' views on whether school reading would be more enjoyable if all books were large print (postsurvey results)	

Step 2

The key with this step and step 3 is to organize your data for effective comparative data analysis between the presurvey data (data set #1) and the postsurvey data (data set #2), where appropriate. First, identify the questions on the presurvey and postsurvey for students that mirror each other. For example:

Survey question #5:

How would you rate your reading skills compared to your classmates?

- My reading skills are better than most of my classmates.
- My reading skills are about the same as most of my classmates.
- My reading skills are not as good as most of my classmates.

This question is the same on the student presurvey and the postsurvey. Analyzing data from both questions will help you understand the impact of using the large print books on students' reading mindsets. For example, do students' self-assessment of their reading skills change after reading a large print book? Flag all of the companion questions on the surveys (or related response options across different questions) that can provide you with this type of comparative data.

Step 3

Now build a spreadsheet with both your presurvey and postsurvey data results side by side for each aligned question on the student surveys. Build a separate spreadsheet for the postsurvey responses that do not have a companion presurvey response. For both students and teachers, you will be using aggregated data (percentages of respondents who chose the various question response options) from all of your students or teachers who were included in this study. As an alternative, you could look at each school in your study group individually if you identified the students or teachers by school.

Here is an example of what that spreadsheet might look like for the sample question from step 2:

STUDENT SURVEY QUESTION AND POTENTIAL RESPONSE OPTIONS	AGGREGATED PRESURVEY DATA % OF STUDENTS WHO CHOSE THIS RESPONSE	AGGREGATED POSTSURVEY DATA % OF STUDENTS WHO CHOSE THIS RESPONSE
Q: How would you rate your reading skills compared to your classmates? A: My reading skills are better than most of my classmates.	20%	30%
Q: How would you rate your reading skills compared to your classmates? A: My reading skills are about the same as most of my classmates.	40%	50%
Q: How would you rate your reading skills compared to your classmates? A: My reading skills are not as good as most of my classmates.	40%	20%

Create the same tables for your survey questions (student and teacher) that do not have the comparative data.

Step 4

We are now ready to examine the data and look for evidence to understand how the use of the large print formatted books supports your desired outcomes. Using the spreadsheet you have built, review your data and write preliminary statements about what you are observing in the data. These will be your study findings.

Here are a few potential findings statements from the example data provided above:

After having used a large print formatted book for reading, students in our schools were more likely to say that their reading skills were better than their classmates.

Students' assessment of their reading skills compared to their peers increased as a result of reading a large print book.

As a result of reading a large print book, students were less likely to say that their reading skills were not on par with their classmates.

Consider the following when writing your findings statements:

- For the pre and postsurvey comparative questions, did the percentage of students who chose different response options increase, decrease, or stay the same? For example, from the data provided in step 3, we can see that the percentage of students who said their reading skills were not as good as most of their classmates decreased by 20 percentage points.
- For the postsurvey responses, are the responses from teachers and students similar or different? For example, are the percentages of teachers who say that having access to a large print book reduced student anxiety about reading similar to the percentage of students who hold the same view? If not, why do you think that is the case?
- Are the percentages of students and teachers choosing different responses significant? Since this is a simple analysis, you can estimate if you think the change is significant or not. For a more sophisticated analysis, there are analytical tools that will help do that significance testing for you. Please contact us if you would like more information on how to do that testing.
- Do these findings make sense to you? Use your inherent “smell test” to evaluate the accuracy and validity of your findings.
- What are the implications of these study findings on your decisions to provide students with access to large print titles to support classroom reading?

Step 5

Compile all of your findings in a document or slide show to share with others at your school. That sharing group may include your administration and the teachers in the study group. Ask them to evaluate the findings and provide you with feedback. Do the conclusions reached by the findings seem appropriate and accurate to them? What surprises them in the findings? What do they recommend the next course of action should be relative to large print books?

Step 6

Finally, it is time to evaluate if you have met the requirements for the Tier 3: Promising Evidence designation. Revisit the criterion for that designation:

1. A well-designed and well-implemented correlational study
2. Collect and analyze data to demonstrate relationship between the intervention and the outcomes
3. Intervention has a positive effect on the outcomes
4. There are no overriding negative effects from the intervention

Ask yourself these important questions:

- Was the study well designed and well implemented? If you followed the Project Tomorrow protocol for this study, you can be assured that it was well designed. You will have to evaluate if your study participants followed the study protocols to ensure validity.
- Is it a correlational study? A correlational study looks at the results of an intervention. When you are examining the pre- and postsurvey data or teachers' assessment of the changes in their students' reading capacities, you are looking for a correlational relationship between the intervention and the impact.
- Did you collect and analyze data to determine the relationship between the intervention and the outcomes? Yes, if you followed the recommendations from Project Tomorrow.
- Did the intervention have a positive impact? Through your analysis of your data findings, you should be able to determine if the intervention appeared to have a positive impact. As part of that analysis, you should also look to see if other factors or variables outside of the intervention may have contributed to that positive impact as well.
- Were there any overriding negative effects? This should be uncovered in your data analysis.

We hope that this research guide from Project Tomorrow is a helpful tool for you. If you need additional support for your efficacy study or if you would like Project Tomorrow to implement and manage the study for you, please contact us at research@tomorrow.org.

This guide was created to support schools in obtaining Elementary and Secondary School Emergency Relief (ESSER) funds.

➔ [Learn more at gale.com/thorndike/esserhowto](https://www.gale.com/thorndike/esserhowto)



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ABOUT PROJECT TOMORROW

The mission of Project Tomorrow®, a national education nonprofit organization, is to ensure that all students are well prepared to become tomorrow's leaders, innovators, and engaged citizens of the world. For the past 18 years, the organization has focused efforts on national research projects and the design and implementation of evaluation, efficacy, and feedback studies examining the impact of innovative learning models in the classroom. Learn more about our research activities, including our globally recognized Speak Up Research Project, at tomorrow.org.

ABOUT THORNDIKE PRESS

As a leading large print publisher, Thorndike Press helps people of all ages enjoy reading. In 1999 we extended our offerings to include middle grade and young adult titles. Now our catalog consists of over 1,000 titles and grows monthly with high-interest fiction and nonfiction books, including contemporary classics, award-winners, and bestsellers. We're committed to producing high-quality, unabridged reprints, with a 100% guarantee on binding, that will support students as they develop the skills necessary to become successful, confident, lifelong readers.

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