

Value-Added Redesign

Usability testing helps us...

- Gain a deeper understanding of the user's needs and frustrations
- Discover product flaws or areas of confusion
- Make the product easier to use

"Nothing to prove, only *improve*."

June 20, 2019

Test Moderator:

Group Test "Driver":

Goals

What we set out to achieve through testing and what we hope to gain from the results.

Develop tasks.

Develop brief statements about **how the product should function**.

Transform tasks into scenarios.

Develop narratives that describe **how a real user would interact with the product**.

Reveal friction points and positive experiences.

Identify any difficulties and positive experiences that users may come across.

Participant Outreach & Screening

After an initial round of internal usability testing, the ██████ team used the ██████ on 6/11/2019 as an opportunity for a round of external usability testing.

Screening Criteria:

- ██████ attendees
- All participants should be external
- Different from the initial round of internal testing, these candidates *would* have prior familiarity/experience with the ██████

Testing Setup, Moderation & Scenarios

1 : 1 Sessions

- **5 sessions** of individual testing
- Participants were given paper slips with the scenarios and the moderator read each scenario aloud
- Each participant worked the through scenarios individually
- Each individual session was recorded

Preamble

"As a school principal, you're familiar with using ██████ reporting for resource planning and school-wide initiatives. After logging into your ██████ account, you see the following report."

Scenarios

Each participant worked through these scenarios individually after read aloud by the moderator:

1. What kind of information does it look like this report is providing?
2. As the principal at Mountain Lion Middle School, you've just accessed your school's growth report. How did the 7th graders do in EOG Math in 2019?
3. What does it mean that the Effectiveness Level column shows "Above"?
4. You've shown this report to a teacher at your school. The teacher was curious about what the white dot on the graphs means. How would you explain it?
5. The teacher is also curious about the colors. How would you describe the meaning behind the colored regions of the graph?
6. You're interested in seeing how your school district did this year. Switch to the report for Big City School District.
7. What can you tell me about Algebra I for 2019 in Big City School District?
8. Switch back to the report for Mountain Lion Middle School. What is the growth index value for the 7th grade EOG Math in 2019?
9. How would you interpret the difference between 7th grade EOG Math's growth indexes for 2019 and 2018 at Mountain Lion Middle School?
10. You're meeting with the school's Math coach and together you are examining the value-added report. You see that 6th grade EOG Math in 2018 and 2019 both have a white dot to the far left in the red section of the graph, but the 2019 graph has an additional symbol next to it. What do you think the symbol means?
11. You want to see how 6th graders fared across subjects (not just in Math). Can you see a way to group the report so 6th grade scores are all next to each other?
12. Growth results for 6th grade EOG Math have shifted, and you want to see if there have been changes in the students' achievement. Can you find and describe this shift?
13. You are interested in how this year's 8th graders have done historically. Can you describe the academic growth for these students from 6th to 8th grade?
14. For EOG Math, you're interested in seeing how growth at your school stacks up against growth in your district (Big City School District). What would you do?
15. You want to know more about how the values on the report are determined. What would you do?

Post-Scenario

Play around with the report and give any additional feedback.

Group Sessions

- **2 sessions** of testing in a group setting (*only 1 session was intended, but another was added after others asked to see the report*)
- Group participants worked through scenarios as a group
- Group participants also answered questions on a Google form
- Group sessions were not recorded

Scenarios

The group participants worked through these scenarios together:

1. How did the 7th graders do in EOG Math in 2019?
2. You're interested in seeing how your school district did this year. How would you switch to the report for Big City School District.
3. You want to see how 6th graders fared across subjects (not just in Math). Can you see a way to group the report so 6th grade scores are all next to each other?
4. You want to know more about how the values on the report are determined. What would you do?

Google Forms

Each member of the group completed a Google Form with these questions:

1. What kind of information does it look like this report is providing?
2. How do you think this new functionality will influence your use of this ██████ data?
3. Think about one of your common uses of this data and try to describe how you would locate the same information with the new functionality.
4. Please provide any additional feedback.

Results

An overall summary of the results of testing, followed by details of specific scenarios and suggestions for future considerations.

Overall Summary

THE POSITIVE POINTS

All participants found the report very **user-friendly**, **liked the colors**, **liked the rollovers** on the white dot, **appreciated the legend** and **enjoyed the overall experience** of using the product. Participants overwhelmingly commented that the redesign is **much easier to navigate**.

- "Searching for reports will be so much easier. Have more control over what I need."
- "Growth within a cohort is easier to access by a simple click of a button."
- "Finding student growth would be much easier because everything for 1 school is right in one spot."
- "I LOVE IT!"
- "A valuable tool, viewing the trend of the students year to year, is easily viewed."
- "This is great platform and I can see more district leaders and teachers becoming comfortable having coaching conversations and more intentional feedback based on this new design."
- "How soon can we get this???"
- "It's like pulling teeth to get teachers to look at this, so it being so much easier to read like this is helpful."
- "This would help us tailor our conversations to the districts' needs."
- "This platform makes it easier to find information and navigate."
- "More tailored information; user-friendly."
- "Loved that they can see everything about a school on one page."
- "Current reporting is confusing. This is so much easier to understand."

THE FRICTION POINTS

Some participants had **trouble determining the meaning of the Exceeds Indicator**. Some participants would click a hyperlinked column headers only once, not recognizing that it could be clicked again to move a column from the far right to the far left. So, participants were **more likely to use filtering to group or reorder data**.

- "I don't know what that means." (Referring to exceeds indicator)
- "I thought it would sort." (After clicking hyperlinked column header)

Scenario 1 / Google Form: Question 1

The user can understand the type of information the report is providing.

What kind of information does it look like this report is providing?

"Effectiveness level by grade level and year."

"This report provides longitudinal data across cohorts for each subject area - with regard to teacher effectiveness, growth and achievement."

"Grade level information regarding school scores as well as district/school comparisons and cohort data."

"It is showing the level of performance as well as where the growth measure falls in within that level."

"It is providing data on the growth shown by 6th, 7th, and 8th graders using a different color scheme and displaying it in a different graph."

"██████ data from state testing."

Additional Notes:

- The most common terms participants used to describe the information in the report were "effectiveness," "effectiveness level," and "growth."
- A few participants in the 1 : 1 sessions also pointed out the white dot and referred to the legend to determine the meaning of the dot.

What this tells us:

Participants were able to understand the type of information the report was providing.

Scenario 2 / Group - Scenario 1

The user can interpret the report.

As the principal at Mountain Lion Middle School, you've just accessed your school's growth report. How did the 7th graders do in EOG Math in 2019?

All individual participants were able correctly identify that the 7th graders did well, and a few individual participants also used the menu to filter the data down.

All group participants were easily able to figure out how the 7th graders performed and also recognized the placement of the white dot in the "Above" category.

Additional Notes:

- One individual participant selected "Cohorts", which wasn't necessary, but didn't interfere with finding the answer.

What this tells us:

Participants were able to interpret the graph and determine how a specified group did in a given year.

Scenario 8

The user can find the growth index value.

Switch back to the report for Mountain Lion Middle School. What is the growth index value for the 7th grade EOG Math in 2019?

All participants were able to identify the growth index value.

Most participants identified the growth index value from the rollover.

What this tells us:

Participants were able to quickly and easily identify the growth index value from the rollover and did not have to add more data to the table to find this information.

Scenario 10

The user can determine the meaning of the exceeds indicator.

You're meeting with the school's Math coach and together you are examining the value-added report. You see that 6th grade EOG Math in 2018 and 2019 both have a white dot to the far left in the red section of the graph, but the 2019 graph has an additional symbol next to it. What do you think the symbol means?

2 participants speculated that the symbol indicated that "it was more than two standard errors away."

3 participants were *not* able to determine the meaning of the symbol and looked to the legend for reference.

Additional Notes:

- One participant noted that it meant it is "way off the negative index chart," and figured the symbol could also be on the blue side, if needed.
- Most participants referred to legend and glossary to try to find the answer.
- Two participants tried to find a rollover on the symbol.
- Two of the participants that could not determine the meaning of the symbol were inclined to believe that it meant something bad.
- Participants in the second group testing session *did* understand the meaning of the symbol.

What this tells us:

Without a definition in the legend, many participants were not able to easily determine the meaning of the exceeds indicator.

Scenario 11 / Group - Scenario 3

The user can group the table based on filter, grade, or subject.

You want to see how 6th graders fared across subjects (not just in Math). Can you see a way to group the report so 6th grade scores are all next to each other?

Through some combination of filtering the menu and/or clicking the column headers, all individual participants were able to group the 6th grade scores.

The group participants ultimately used the filter menu to go to each subject and deselected 7th and 8th grade, so only 6th grade data would remain in the able.

Additional Notes:

- One individual participant used filters to narrow down to only 6th grade for all subjects rather than re-ordering columns to group.
- One individual participant removed 2018 using the filter menu and clicked the column headers to group.
- One individual participant clicked the Grade column header twice group the 6th grade together.

What this tells us:

More participants used the filter menu rather than clicking the column headers to group the data, but all participants were ultimately able to see the data they set out by using either method or a combination of methods.

Scenario 14

The user can add a comparison.

For EOG Math, you're interested in seeing how growth at your school stacks up against growth in your district (Big City School District). What would you do?

4 out of 5 participants were able to quickly locate the 'Add a Comparison' button and could clearly differentiate the data between the two comparisons.

One participant couldn't see how to add a comparison and looked for checkboxes similar to the other filters.

What this tells us:

Most participants were able to locate the comparison button and differentiate between the comparisons.

Scenario 15 / Group - Scenario 4

The user can locate the legend for reference.

You want to know more about how the values on the report are determined. What would you do?

Most individual participants noted that they would go to the legend or Help to find this information.

The group participants suggested scrolling down to the legend to find additional information.

One individual participant tried to hover over numbers in the additional data columns and click them to get to more information.

Additional Notes:

- One individual participant noted that if he need more help outside of the glossary, then he would go to Help.

What this tells us:

Participants were able to locate the legend and recognized that it was a point of reference for a lot of information in the report. Throughout testing, participants often referred to the legend and glossary when stuck.

Google Form: Question 2

How do you think this new functionality will influence your use of this ██████ data?

"It would be easier to teach and explain to teachers how to use and understand in the classroom. It is more understandable than the reports we currently use."

"This new design will help to me to make more precise data-based decisions about student progress and growth."

"This will allow administrators to view the effectiveness of a particular grade level, subject areas, etc. all on one page and have access to instant updated information."

"You can easily manipulate the data by subject and grade. Even by Effectiveness Level with growth and achievement."

"We use it regardless, but it would make it easier for teachers in our building to feel more successful in locating data they need to make instructional decisions."

"It is much more user friendly and allows for real-time updates, without having to switch screens."

Additional Responses:

- "It looks more user friendly and accessible."
- "It is easier to see all the subjects on one page."
- "There is a lot of information that's overwhelming at the moment but has great potential to really focus on how growth was expressed."
- "It easily shows the achievement of entering and exiting the grade."
- "It is user-friendly. It is tailored to what we need to examine."

What this tells us:

This redesign will have a huge impact on users and will positively affect the way users read, understand and use the information in the report.

Future Considerations

A few suggestions by users that can be considered for future implementation:

Suggested by a few participants:

- The Exceeds Indicator explained in the legend
- A reset button in the menu to reset filter options (*this can currently be accomplished by refreshing the page*)
- The ability to compare more than two schools
 - "I love the comparison capability, but wish you could compare more than two schools. It would be useful to be able to compare reports of feeder schools."
- Ability to drill down to individual teachers
- Ability to link to student level
 - "Click on achievement number and get to the student level, such as viewing a roster of students and their achievement levels such as mastered, proficient, etc."

On-off suggestions:

- Having the growth measure and standard error in the rollover on the white dot, rather than the growth index and standard error
- Rather than "Achievement," it could read "Achievement (NCE)" or "Achievement (Scale Score)" (*David from Fenitress did a presentation on this*)
- "Putting growth and achievement in a form like scatterplots across subjects would be useful at the district level"
- Districts would like to see all schools stacked together