

Overview: Introduction to Survey and Guidelines for Interpreting Your Results July 2016

Introduction to Survey

The YouScience Student Survey is an online assessment, developed by a team of researchers, industry specialists, school counselors and subject matter experts, and designed to evaluate the impact of YouScience on students' attitudes and intentions to persist towards a career path and/or additional post-secondary training. YouScience is an online career and personal planning discovery tool that helps students identify their potential aptitudes and careers. To assess the efficacy of this tool, the YouScience Student Survey measures students' attitudes across the following major constructs¹:

1. **Student Perceptions:** the degree to which one was engaged and satisfied by the YouScience tool.
 - a. Examples: "In general, I found the YouScience Profile to be useful." "I would recommend the YouScience Profile to a friend."
2. **Self-Awareness:** the ability to describe one's self and identify suitable careers.
 - a. Example: "I can identify which careers are a good fit for me."
3. **Career Decision Making:** confidence in one's ability to make an informed career decision.
 - a. Example: "I have enough information to make a career decision."
4. **Self-Empowerment & Future Confidence:** feeling hopeful and self-assured in one's future path.
 - a. Example: "I have a good sense of where I am headed in life."
5. **Career Exploration:** engaging in activities that provide one with career information, and expanding one's vision of career possibilities.
 - a. Examples: "[I have] sought information on specific careers that interest me." "The YouScience Profile opened my eyes to new career possibilities."
6. **Intent to Persist:** motivation to pursue a career pathway and/or additional post-secondary education/training.
 - a. Example: "I plan to continue my education or training after high school."

Guidelines for Interpreting Report Outcomes

Each table displayed in your report includes the number of students who responded to a question, the frequency (%) per response option, and the computed average (on a 5-point Likert scale from least to most optimal). Some of the items on the survey ask students to only rate their attitudes now, after taking the YouScience tool. Other items on the survey require students to rate both their attitudes before taking the YouScience tool (pre) and their attitudes now, after taking the YouScience tool (post). For the pre/post items, students are asked to reflect on how they felt before taking YouScience and how they feel now, after taking YouScience.

¹ Survey constructs are abstractions which can only be assessed indirectly through a number of survey items. Constructs are used for labeling similar survey items. Through the use of constructs, the observer can begin to classify and group attitudes of a similar nature and communicate these ideas using compact terms.



For items that only ask students to rate their attitudes now, an assessment of the average is provided to guide interpretation:

<i>For Now or Post only items...</i>		
Assessment	Average (on 5-pt scale)	Suggested Interpretation
Above optimal	≥ 4.00	At or above optimal performance in this area
Near optimal	< 4.00 & ≥ 3.50	Approaching optimal performance; may require additional attention to maximize performance
Below optimal	< 3.50	Below optimal performance; may require additional re-examination

Note. The guidelines presented in the table above provide an efficient and convenient method for quickly interpreting students' responses to an item. These are suggested guidelines only. Administrators and stakeholders are welcome to utilize alternative methods for interpreting students' results.²

For items that ask students to rate both their attitudes before and now, a paired samples t-test was used to assess statistically significant differences in responses. If the p-value is at or below (\leq) 0.05, there **is** a statistically significant difference in students' responses from before (pre) to now (post). If the p-value is greater than ($>$) 0.05, there is **not a** statistically significant difference in students' responses from pre to post. In other words, a significant difference suggests that there is a difference in how students' responded to an item before taking YouScience (pre) vs. after taking YouScience (post):

<i>For Before/Now or Pre/Post items...</i>		
p-value	Meaning	Interpretation
≤ 0.050	statistically significant at $p \leq .05$	There is a statistically significant difference in students' responses from before (pre) YouScience to now (post). That is, the differences between the averages are not likely due to chance and are probably due to the YouScience tool. This provides evidence that the YouScience tool has improved attitudes in this area.
> 0.050	not statistically significant	There is not a statistically significant difference in students' responses from before (pre) YouScience to now (post). There is no evidence that the YouScience tool has improved attitudes in this area.

To further guide interpretation of the change in students' attitudes from before to now, a delta (Δ) is provided to show the numerical growth (\blacktriangle) or decline (\blacktriangledown) in attitudes as a result of YouScience.

² Emerging research suggests that interventions that facilitate positive outcomes typically yield participant response averages that are at or above 4.0 on a 5-point Likert scale (e.g., 1, Strongly Disagree to 5, Strongly Agree). However, these guidelines have not been empirically verified in the literature and, thus, should not be used without additional contextual information (e.g., school environmental factors, implementation issues, etc.).

Here is an example of a table that you will see in your report with computed p-values; an interpretation of the data is provided in red:

Construct	Survey item		# of Students	Average	p-value	Δ	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
							(1)	(2)	(3)	(4)	(5)
Personal Growth	29. I have a good sense of where I am headed in life.	Before	88	3.58	0.000	▲ 0.51	3%	11%	28%	38%	19%
		Now	88	4.09	significant		0%	6%	16%	42%	36%
Hope	30. I feel optimistic that I will find a good job in the future.	Before	88	3.88	0.002	▲ 0.32	2%	5%	27%	35%	31%
		Now	88	4.19	significant		1%	3%	14%	39%	43%

*Significant difference between before and now!
There is evidence that YouScience was effective at enhancing students' personal growth.*

The average change (Δ) from Before to Now was .51.

88 students responded to survey items 29 and 30.

Before YouScience, the average for item 29 was 3.58; now, after YouScience, the average is 4.09 on a 5-point Likert scale (1, Strongly Disagree to 5, Strongly Agree).

Before YouScience, 57% of students either "agree" or "strongly agree" that they have a good sense of where they are headed in life. Now, after YouScience, 78% either "agree" or "strongly agree." Thus, the number of students who have a good sense of where they are headed in life increased by 21%.

Take home message: Overall, the example table above provides evidence to suggest that YouScience was effective at improving students' personal growth and hope for the future. As a result of YouScience, more students have a good sense of where they are headed in life. Also, the number of students who feel optimistic that they will find a good job in the future increased. That is, before YouScience, 66% of students agreed or strongly agreed that they felt optimistic vs. 82% now, after YouScience.

Navigating the Report

Your report is organized as follows:

- **Summary of Major Findings** (*page 1*): The first page provides a snapshot of students' findings on the 2016 YouScience Student Survey across 6 major survey constructs. This information provides a quick overview of the major findings or takeaways of students' responses. Only select survey items are highlighted in this section. For example:

Construct	Major Findings:
<i>Perceptions:</i>	<ul style="list-style-type: none">• xx% of students felt that YouScience was a good use of their time.
<i>Self-Awareness:</i>	<ul style="list-style-type: none">• After taking YouScience, the percentage of students who said that they can describe their natural abilities increased from xx% to xx%.
<i>Career Decision Making:</i>	<ul style="list-style-type: none">• The percentage of students who said that they have enough information to make a career decision increased from xx% to xx% after taking YouScience.
<i>Self-Empowerment:</i>	<ul style="list-style-type: none">• After taking YouScience, xx% of students said that they have a good sense of where they are headed in life, compared to xx% before YouScience.
<i>Career Exploration:</i>	<ul style="list-style-type: none">• xx% of students reported that YouScience opened their eyes to new career possibilities.
<i>Intent to Persist:</i>	<ul style="list-style-type: none">• After taking YouScience, the percentage of students who indicated that they plan to complete courses in a college and career pathways during high school increased from xx% to xx%.• The percentage of students planning to continue their education or training after high school increased from xx% to xx% after taking YouScience.

Note. Percentages described in the table above were calculated by adding the percentage of students who said either "Agree (4)" or "Strongly Agree (5)" on a 5-point Likert scale (1, Strongly Disagree to 5, Strongly Agree). Only select items are displayed. For more information on individual survey items, see the *Detailed Findings* section.

- **Detailed Findings** (*pages 2-5*): The body of the report includes detailed statistics on students' responses to the items on the survey. The tables on pages 2-5 are organized by survey categories or constructs.
- **Student Background** (*page 6*): Information pertaining to your students' demographics are provided on page 6 of the report. Page 6 also includes when students took the YouScience profile and when/if they discussed their results with a school counselor.