

Validity

Cognitive Interview & Focus Groups

Are students interpreting survey items consistently and do their responses accurately represent the behaviors or perceptions the survey authors intended to capture? Specifically, are there any differences in interpretation and response decision between students of different racial-ethnic categories?

Purpose

If students of different racial-ethnic backgrounds interpret a survey item in different ways, the data collected will not inform the desired avenue of research. The data are irrelevant, because the researcher cannot know if any differences seen are due to differences in the actual behaviors of the students of different racial-ethnic groups or if they are simply reflecting the different ways in which students from these diverse groups make sense of the question. In an ideal situation cognitive interview and focus group data would reveal that students of all racial-ethnic backgrounds, as well as those with different interests, academic abilities, programs of study, etc., make similar meaning of the survey items and thereby process their responses through a similar lens.

Data

In the Spring of 2005, student focus groups were conducted on the campuses of four Minority-Serving Institutions (MSI) and with both underrepresented and minority students at four Predominately-White Institutions (PWI). In total, 163 students participated in the process with 50 males and 113 females. (Institutions List: DePaul University, George State University, Grinnell College, Livingstone College, New Jersey City University, Morgan State University, Texas A & M International University, Winthrop University.) Participants were recruited by interviewing staff located in visible areas of campus buildings. An array of students from all racial-ethnic categories was sought for this study.

Methods

Individual cognitive interviews were approximately 45 minutes long and focus groups were approximately one hour in length. Two staff members were present in each cognitive interview or focus group. One staff member served as facilitator while the other took notes and monitored the taping of each session. Two scripted protocols (A and B) were used during this process. All students received a portion of the questions and then a handful of unique items using protocol A versus protocol B. The cognitive interviews used techniques such as “tell me how you determined your answer” and “what does [question term] mean to you?” The facilitator would ask for additional clarifications as needed and prompt movement through the cognitive interview protocol. The focus groups followed a standard format for all sessions which was informed by information gathered in cognitive interviews with individuals. The facilitator provided additional conversation points and discussion probes as needed.

Following analyses methods recommended by Krueger (1994), Merriam (1988), and Yin (1984), at the end of each interview or day of interviews NSSE staff reviewed audio tapes and notes taken during groups. These notes and later transcriptions of the tapes were used in the analyses. Results from transcriptions were entered into spreadsheets and coded using a standard scheme developed through an iterative process by NSSE staff. Three stages of review took place:

- Understanding the survey questions and response options (how items were comprehended)
- Performing the primary survey task (retrieving information, making decisions, calculations, etc.)
- Formatting responses (matching answer to an available response option).

Data were then reviewed with an eye toward any problems students were having making meaning or handling the cognitive processes associated with the three stages outlined above. For example, stage one items were instances where student did not understand the language of the questions; stage two items included instances where students could not easily recall the details or frequency of an activity, and stage three items were instances where a student had a specific response in mind but was unsure which of the available response items had the closest meaning to the answer they wished to provide.

Interviews were coded at the institution level first so that institution-specific themes could be considered in addition to those seen when results were aggregated. Summary reports were prepared for each institution which could help them better understand meaning of NSSE items within their institutional context.

A limitation of this approach is that it is time and resource intensive, particularly when conducting research at multiple sites as was done in this instance. Also, the researcher is limited to the feedback of participants that can be recruited to participate in the study, which may or may not be representative of all students.

Results

Overall, results suggest that the “NSSE survey generally performs well for students from different racial and ethnic backgrounds across all eight institutions. Overall, students who participated in the cognitive research interviews and focus groups found survey questions to be clearly worded and easy to complete. Students’ first impressions of the survey were favorable. They found the format readable, and because the survey ‘looked short,’ they assumed it would be easy to complete.” A handful of items appeared to be interpreted somewhat differently by students attending MSIs versus PWIs. Thought the findings also suggest that these items may have context specific meanings in some instances, overall they still suggest that the “NSSE instrument appears to be valid for students from different racial and ethnic backgrounds and students at MSIs.”

More specific issues are described below:

Clarity and Comprehension Issues: Some of the clarity or comprehension issues faced by students at MSIs were not specific to their racial or ethnic background or institutional context per se, instead they

were items that might be improved in all settings and with all students with additional refinement of their wording. For example, the phrases “service learning” and “community-based project” were problematic for some students. More importantly, students at HBCU institutions that required community service, but not necessarily as part of coursework were unsure how to answer this item. Further, students of all backgrounds found the “synthesizing” and “analyzing” items challenging. Only students attending a highly selective institution were able to differentiate these two items. Similarly, the “learning community” item was unfamiliar to many students, as were “capstone” and “culminating senior experience.”

Inclusion/Exclusion Issues: Interview data help provide greater understanding of what meaning students make of certain items. For example, item 1g “Worked with other students on projects during class” confused some students who understood the phrase “on projects” to mean lab reports or other formal group work. Students at MSIs and PWIs felt this item related more to students in STEM fields. The terms “faculty member” and “administrative personnel” were ambiguous to most students. For example, are graduate teaching assistants included in faculty? Other students at an HSI believed that faculty members are administrators. Thus, it is clear that students do not always clearly differentiate between faculty and administrators fully in the ways intended. Another item that was problematic was item 1j, which asks how often students have “Tutored or taught other students (paid or voluntary).” Some students included work with programs where they tutor younger high school students, while others considered only formal tutoring roles for which they were paid to tutor their peers. Items related to diversity experiences (1e, 1u, 1v, 10c, 11l) were challenging for minority students at both MSIs and PWIs. At MSIs there were few opportunities to interact with students from other races, while minority students at PWIs saw opportunities outside of class as more fostering of interactions, while white students most often cited interactions within classrooms.

In general students think about their college experience broadly and weigh interactions in and out of class when forming responses to questions. Members of Black Greek organizations did not believe the word “social” before fraternity or sorority fairly represented their experiences in these organizations. Some students attending MSIs indicated that they help provide care for dependents, but that they do not live with them, which made them unsure how to answer a question on this topic. Other students did not think this item pertained to their experience.

Temporal Issues: These issues include the ability of students to apply the correct time frame to a question. In general, students appear to consistently make appropriate reference to time periods as specified in the questions. One item unique to students at HBCUs was a tendency to include pre-college and summer experiences as part of their experiences when responding to community service questions.

Logic Problems: Redundant and double barreled items are considered logical problems in survey items. Results from this study indicate only a few possible logical problems on the NSSE survey, as they particularly relate to students at MSIs and minority students at PWIs. For example, students do not think “relaxing and socializing” should be considered synonymous. They see these as two unique activities. Students also often tried to calculate these items in different terms using hours per day to determine time spent “relaxing” and hours per week to determine time spent “socializing.” As a result of these differences, computing total time spent on these two elements is potentially problematic. Others were

also unsure if time spent with friends in a Greek organization was time “socializing” or time taking part in “co-curricular activities.”)

Computation Problems: Items that involve difficult mental calculations can lead to computational problems. Some students saw item 9 where they are asked to calculate time spent in a typical seven day week as “tricky,” but were generally able to calculate a response.

Response Set Issues: Overall, meanings associated with the response sets varied somewhat from item to item, reinforcing that categories for each are item specific. At the same time, students interpreted the meaning of the items in a fairly consistent, accurate manner. For example, when students marked “very often” to the item “asked questions in class or contributed to class discussions,” they agreed that this meant about “three or four times per week,” or “most days in some classes.” When answering the “attended an art exhibit, play, dance or other theater performance” item, students told us that “often” meant that they attended between six and ten events during the academic year, and confirmed this number by identifying multiple arts venues and occasions they attended.”

Additional Insights: Some differences between racial ethnic majority and minority students were seen in terms of where various types of engagement occurred. For example, trying to “better understand someone else’s views...” was more likely to be reported by students at MSIs as taking place outside of classes; however, minority students at PWIs were more likely to have such experiences within a classroom setting. Participation in this process seemed to have some other positive effects for students, as some commented on how they now realized how their effort level compared unfavorably to that of their peers.

Implications for NSSE: Results from this process were used to inform survey revisions in 2006 and subsequent changes to the instrument.

- In 2006 “senior project” was added to the parenthetical on the “culminating experience” item to help more students understand the question.
- In 2006 the word “social” was removed from before “fraternity or sorority” to help this item better reflect the types of experiences students in Black Fraternities and Sororities and to make it clearer how they should respond on this item.
- Other items were referred on for additional testing and possible change in the future. For example, 1g “Worked with other students on projects during class” should consider removing “on projects” to improve clarity of question. Also, 9f “Providing care for dependents living with you (parents, children, spouse, etc.):” should revise item to remove “etc” and the phrase “living with you” so it represented more students’ experiences.

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