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HI ED 840
Short-Answer Quiz
July 26th, 2015

State 2 overarching research questions that you or your affiliated institution are most interested in exploring. (1 point)
Since we have student information from their first year to their senior year, I would like to examine student growth and development from when they started at the institution to when they finished at the institution. With that, I would first look at GPAs and see if students did better from year 1 to year 4. I would also want to examine how high impact practices and engaged scholarship played into the students learning and GPA. So I would look at the NSSE questions around high impact practices such practicums, internships, co-ops, clinical assignments, community service/volunteer work, participation in a learning community, work on research with a faculty member, foreign language coursework, study abroad, independent study or self-designed major, and/or a culminating senior experience or capstone.

Lastly, I would like to check to see if those high impact practices had any affect on student learning by comparing student answers on the high impact practices based upon how they answered the questions on grow such as did they learn how to write and speak clearly and effectively, think critically and analytically, analyze quantitative problems, work effectively with others, learn effectively on their own, understand themselves better, understand other people of difference racial and ethnic backgrounds, solve complex real-world problems, develop a personal code of ethics, learn the importance of contributing to their community and developing a deeper sense of spirituality.

Explain why you would or would not need an IRB approval to undertake the above study. (1 point)
When it comes to the research, we would want to eventually publish the information as proof that high impact practices are beneficial to the curriculum, therefore because we want to publish this information publicly, the process would require IRB approval. It is always important to remember that the IR process is about looking for improvement and assessing student outcomes while the IRB process is about protecting human participants from harm. Facilitating friendly, fruitful discussions between IR and IRB boards is important to ensure that the IRB fully understands the point of the research and that all people involved in the research are safe from harm, and with full knowledge that the assessment is voluntary, the risk and benefits, and that participants were selected in a fair manner. I always thought that IRB boards were a part of institutional research departments, but I guess it would make sense that they are not so that IRB's can remain objective to the research that an institution is producing and the assessments that are being generated.

What institutional data (e.g., data stored in your student information system) would you use to supplement or complement the NSSE datasets to answer your research questions? (1 point)
Since the NSSE survey is made up of student responses, I would also utilize institutional data to back up the information. So I would actually look at the actual GPAs of students and not just what they reported in the NSSE survey. I would also look at the students who the institution verified completed high impact practices. We would create database to track all high impact practices that students utilize (internships, study abroad, research, etc) and compare them to actual GPAs and not just student reported GPAs. As for the information about comparing it to if a student learned how to think critically and analytically, or learned about themselves, etc we will have to focus on NSSE data because the institution itself has no way to gauge those answers outside of just student responses.

What methodology would you use to answer the research questions? Please be specific. (1 point)
High Impact practices fall under Earnest Boyer's Engaged Scholarship philosophy so we would use Ernest Boyer's philosophy in light of Terenzini and Reasons Comprehensive Outcomes Model to see if the organizational context of the institution by establishing each student complete high impact practices in their curriculum have any affect on their overall GPA and learning/growth/development. We would compare

first year to senior year GPAs and then cross reference them with those students who participated in high impact practices to see if student with high impact practices in their curriculum faired better than others. We would also want to see if there is a specific high impact practice that has greater affect on a students GPA overall than others. With that, we would then compare student responses on the NSSE survey, expecting that students who participated in high impact practices would have responded higher in learning on their own, developing an understanding of self, working with other people of different races and ethnicities, and thinking critically.

One thing I definitely learned from this lesson though is to make sure that whatever methodology is used, that there is a variation in the assessment techniques. Research cannot just focus on 1 assessment but need to look at the questions from various models, standpoints and views to get a bigger, better picture of the information.

In your opinion, how reliable and valid are the self-reported measures in the NSSE datasets? (1 point)
I think is certain cases students would mislead information when it comes to self reporting. For instance, I think it is extremely important to always remind students that the information they are reporting is anonymous and cannot be tracked back to them. I think if students do not understand how the information is being used or the details of the information being asked that they would be less likely to be honest and upfront in self reporting, especially on certain personal issues such as alcohol and drug consumption, sexual orientation, gender, sexual practices, etc. I think it is interesting that research shows such a close connection between self-reported variables. I think if there is no fear of retribution or identification of who reported what, students will be much more likely to report the truth because there is no fear of consequences. I think that one thing I learned from this lesson, is that it is important when creating assessment plans, it is important to create multiple forms of assessment to measure outcomes so it does not just all rely on one version of assessment. I think it is interesting that the lesson shows that there are 5 conditions that lead to the most reliable answers for self reports. These 5 conditions all make sense. If a person is to answer a question reliably and truthfully, they need to understand the question and know the information, they need to not fear embarrassment from the question, and of course they need to believe that the answer is important.

How does response rate (particularly low response rate) impact the reliability of the results? (1 point)
Response rates can greatly affect the average and the quality of the data reported. Because of the way data is measured and recorded, the data can look very misleading in many categories. For instance, when I was doing the NSSE project, I realized that in the 2nd semester, domestic students did much better than international students. However by the 3rd semester, the international students were fairing far better than domestic students, but these numbers are misleading because actually looking at the data, the male international students were doing far far better than any student while the female international students were doing either the same or worse than male domestic students. Since the female international students did not have a high percentage of responses, the male international students were skewing the data in favor of international students doing better when that is not necessarily the case. Response rates should be a consistent as possible across the board, in my NSSE project, if people did not have a specific percentage of their response, I eliminated the data or combined it with another category which could also "skew" the data or the way the data looks or is presented. Regardless, eliminating data can carry serious consequences and can weaken the power of the reporting. If the variable is not consequential and there are many missing pieces of data, you can eliminate the variable. Listwise/casewise deletion allows you to delete any list or case with missing data. With the introducing of technology, using expectation maximization (EM) and multiple imputation, researchers can better predict the missing variables through reactionary measures. In the end, the best way to address missing data is to use pro-active measures to ensure that the data is completed in its fullest form. If offering incentives, tell students that if they miss more than 1 or more questions, they will not be eligible for any incentives for completing the survey.

Read the following resource about weighting. Under what circumstance would you use NSSE weight variables? Under what circumstance would you calculate your own weight variable or choose not to use weight at all? (3 points)

Weighting allows for adjusting the data to be a better representation of the population for the survey. For instance, if the population at the institution is 60% male and 40% female and only 30% of males respond while 35% of females respond, there is going to be a discrepancy on the male averages because so few males responded. Weighting is used as "a multiplier to adjust the number of cases used in a condition," (NSSE).

Weighting ensures that no one population is over or under represented in the survey data and weighting allows an opportunity to provide balance to the respondents in a survey to make it more proportional (Applied).

NSSE cautions that their weights should not be used to examine sub-populations but are meant to give a best estimate for the entire institutional population (NSSE). With that in mind, if I were to use weights, I would use weights to help make the data more proportional based upon a response rate to the actual population.

When using weights, it is important that weighing is not used to mis-represent the data and make data look more favorable in areas where it should not be favorable. I think I would run the analysis twice and if the data is not greatly affected by the weights, I would go ahead and use the weights, but if the data tends to greatly change because of the use of weights I would not use the weights. The problem with all data analysis and research is that all data can be skewed to reflect positively on a specific goal, to me the importance of data analysis is to truly get to the bottom of a research question without utilizing processes that are going to misrepresent the data.

Cited:
http://www.applied-survey-methods.com/weight.html
http://www.amstat.org/sections/srms/proceedings/papers/1990_018.pdf

Previous research suggested conditional effects and compensatory effects of student engagement on persistence, particularly for historically under-represented students. Read a related research paper and summarize the findings. (3 points)

The article I looked at was Promoting Persistence and Success of Underrepresented Students: Lessons for Teaching and Learning by Jillian Kinzie, Robert Gonyea, Rick Shoup and George Kuh, published in New Directions for Teaching and Learning in the Fall of 2008. The article stresses the importance on using information, especially obtained from NSSE, related to student engagement to focus on positive student outcome such as persistence, growth, and GPA. The article breaks down what "student engagement" looks like and explains there are two main categories for engagement: 1) how students take place in educational practices and 2) what the university does to organize activities that foster learning as presented by Chickering as student-faculty contact, cooperation among students, respect for diverse talents and ways of learning, etc. Furthermore the article shows that it is important for students to engage in high-level practices such as study abroad, research, internships, capstones, etc but note that even with these practices, undeserved populations may not fully get everything out of these educational activities because of socioeconomic status, parental education, familial obligations, especially if students in underserved populations cannot afford study abroad opportunities or do not sign up for other high impact practices.

Through the connect the dot program, analysis of first year and senior students from 18 diverse institutions (4 of which were HBCUs and 3 were HSIs). The study showed that students who engaged in college had a better chance of returning for their second year (.91) than those who did not (.85) and students who participated in co-curricular activities on campus greatly increased their chance of returning for year 2 than those who did not. The article also shows the importance of incorporating these engagement practices in all aspects of the institution, especially in the classroom. The study suggests that promoting engagement practices for students with lower ACT scores in their first year will do significantly in creating an environment where students will be more successful and stay for their second year. Lastly the article talks about the importance of the environment (Astin) and that institutions need to make more hospitable

environments on college campuses that will be more accepting of underserved populations.

Cited:

Kinzie, J., Gonyea, R., Shoup, R. and Kuh, G. D. (2008), Promoting persistence and success of underrepresented students: Lessons for teaching and learning. New Directions for Teaching and Learning, 2008: 21–38. doi: 10.1002/tl.323