

Campus Transportation

Dr. Levine and Yan study transportation behavior and choice as part of the RITMO project, to improve understanding the feasibility of a university ride-sharing program. They used the U-M Sustainability Cultural Indicators Program (SCIP) data set to help identify the travel modes of university affiliates, such as the percentage of faculty or students using buses, the percentage that own cars, etc. SCIP data provides the "revealed preference" for transportation. This type of data is a measure of what people are actually doing. Revealed preference data is input into Mode Choice models to allow researchers to examine current behavior. Using the model, researchers can review behavior prevalence (i.e. how frequently people actually exhibit a behavior). In Levine and Yan's study, it will help them model potential use of a university ride-share program. The other piece they need for their Mode Choice model is "stated preference" data, which is data on what people say they will do in the future—a statement of what they would like to do, not what they are actually doing. Levine and Yan are collecting state preference data by re-surveying people who have already taken the SCIP survey.

For instance, the Graham Institute maintains a database with keys assigned to individuals. "Keys are assigned to emails; we only have access to keys (because SCIP is anonymous) but researchers can use them to resurvey specific people," says Yan.

As part of the revision of the SCIP questionnaire, U-M researchers added questions to get at specific questions and topics they are researching. In this way, the SCIP survey is evolving to help researchers interested in sustainability behavior on a university campus.

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The questions Levine and Yan expect to help their research have been incorporated into the 2018 survey. Their questions focus on transportation to expand on their previous work with the Mode Choice model. Specifically, the new questions they have included look at if and how people might engage in carpooling if the university provided more support for a carpooling or ridesharing program. There are also questions that ask about concerns people have about such a system.

"A lot of universities run transportation systems akin to our little (U-M) buses," says Levine. "There are probably a lot more efficient ways to run transportation systems given available technology. But to plan them, (universities) need data. This would be an example of how surveys like SCIP could be used elsewhere to improve ground transportation systems."



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SCIP Data In Action Case Study Series

In 2012, the University of Michigan's (U-M) Institute of Social Research launched the Sustainability and Cultural Indicators Program (SCIP). Now in 2018 the program is still going strong and helping to elucidate the complex relationship between institutional changes aimed at promoting sustainability and the behavior and knowledge of individuals

within those institutions. The 15-minute survey covers a swath of

and behaviors of the students and faculty and staff. Survey data is helping to continuously improve U-M's sustainability programs, and the survey's design and execution is serving as a model for how institutes of higher learning, and other large institutions, can effectively monitor and adapt their own sustainability programs.

Since SCIP's advent, 138 institutions from around the world have requested the questionnaire, revealing a thirst for change and a way to adaptively manage initiatives. Yet more needs to be done to explore the interplay between sustainability and social science. This exploration is essential to the advancement of sustainability in society more broadly. The SCIP data set is just a small part of that, but it holds a wealth of behavioral knowledge that waiting to be tapped by students and faculty who want to start

advancing the social science of sustainability that one step further.

There are already some U-M researchers who have begun to use the SCIP data set, both in their own research and as a teaching tool. For instance, Dr. Jonathan Levine, a U-M professor of urban and regional planning, and his PhD student, Jacob Yan, are using the newest edition of the SCIP survey to figure out ways to better support carpooling behavior on and around campus. Dr. Victoria Campbell-Arvai is using data from the SCIP surveys to teach students about using social science in environmental and sustainability contexts. Students, too, have begun engaging with the SCIP data. Megan Czerwinski, a nursing PhD student, plans to use the data as part of her dissertation, focusing on sustainability education in the nursing profession.

The following case studies take a closer look at how these diverse researchers are advancing our knowledge of the social pillar of sustainability.



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