

# Engaging Undergraduates in Social Science Research: The Taking the Pulse of Saskatchewan Project<sup>1</sup>

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## **Abstract**

*Although student involvement in research and inquiry can advance undergraduate learning, there are limited opportunities for undergraduate students to be directly involved in social science research. Social science faculty members typically work outside of laboratory settings, with the limited research assistance work being completed by graduate students. The challenge, therefore, is to find ways to involve undergraduate social science students in research projects that relate to their field of study and that allow them to develop career-relevant skills. The Taking the Pulse of Saskatchewan project presents a unique model for undergraduate student involvement in social science research. The project involved over 30 faculty members from across the University of Saskatchewan's Division of Social Sciences and over 40 undergraduate students. Students were directly involved in data collection, data analysis, report writing and media communications. Through their involvement, students developed and applied research, inquiry and communications skills. Drawing on academic literature regarding undergraduate involvement in research, this paper will present an overview of the Taking the Pulse project, and reflect on the lessons of the project.*

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## Introduction

Research universities enjoy numerous opportunities for advancing student involvement in research and inquiry due to their “requisite research environment, including extensive libraries, well-equipped laboratories, sophisticated computer capabilities, and, often, university presses” (Boyer Commission, 1998: 2). The presence of research-active faculty, a research culture, and the necessary research infrastructure might be expected to create an environment in which students, including undergraduate students, are involved in ongoing research and inquiry initiatives.<sup>2</sup> Such involvement may take many forms, such as “research-based activity within the curriculum as well as opportunities for students to conduct research alongside academics in special programs (sometimes called vacation scholarship programs, or research internships) designed to give undergraduates real research experiences for a specified period of time” (Brew and Jewell 2012: 47).

Many research universities are increasing their focus on inquiry-based learning (Katkin 2003). Classroom learning experiences, such as the completion of research projects as part of course credit, have the advantage of incorporating large numbers of students. Such experiences are highly valuable, yet at the same time “academic developers need to work within institutions to develop strategies that embrace the notion that the undergraduate learning environment extends beyond the classroom” (Turner et al. 2008: 208). Such strategies may include “providing research opportunities for students over the summer months, whether in the lab, library, or field, or providing research internships with community groups, government, or industry” (Turner et al. 2008: 209). Further, the Boyer Commission on Educating Undergraduates in the Research University argued that student exposure to interdisciplinary research and the use of different research technologies is important (Boyer Commission 1998, 23, 26).

How does engagement in research *outside* the classroom benefit undergraduate students? One study found that students engaged in such activities reported improved confidence in being able to conduct research and to “think and work like a scientist”; improved ability to apply knowledge, link theory to practice, and use critical thinking skills; and skill advancement across a number of areas, including communication (Seymour et al. 2004). Another study confirmed that students advanced their knowledge, skills, and confidence (Gunn et al. 2008).

Yet while student involvement in research and inquiry beyond the classroom presents numerous benefits for undergraduate students, research universities face a number of challenges in making these opportunities available to large numbers of students. Research opportunities are often limited to “higher levels and elite students” (Brew and Jewell, 2012: 55), and research involvement becomes a “reward for hard work” (Brew, 2010: 142). The result is that relatively few undergraduate students are involved in research activities outside the classroom, and these students are often only the strongest students (Katkin, 2003: 26). Participation rates are particularly low for the social sciences and humanities (Katkin, 2003: 26). Limiting factors include the lack of laboratory-based research in these disciplines and limited research funds to pay students for their activities.

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<sup>2</sup> Academic literature distinguishes between research (activities to generate new knowledge) and inquiry (engagement in research processes that does not generate new knowledge) (Brew and Jewell 2012).

In 2012, the University of Saskatchewan's Division of Social Sciences conducted a unique project, Taking the Pulse of Saskatchewan, that engaged over 40 undergraduate social science students in interdisciplinary research. Student involvement ranged from data collection to data analysis, report co-authorship and media engagement. Further, student engagement was not limited to particular social science disciplines nor was it limited to only the top academic students. This project, I suggest, may present lessons for other institutions seeking ideas to create projects that engage undergraduate students in research and inquiry outside of the classroom.

## **Taking the Pulse of Saskatchewan Project**

In 2011, the University of Saskatchewan opened the Survey and Group Analysis Laboratory (SGAL), a key research laboratory within the university's Social Science Research Laboratories (SSRL). Funded by the Canada Foundation for Innovation, with matching grants from the Government of Saskatchewan and the University of Saskatchewan, the SGAL is a survey and focus group research laboratory. Among its data collection capacities are 20 networked computer stations for telephone survey research using computer assisted telephone interviewing (CATI) software. The SGAL is available to researchers for academic research purposes and is managed by a professional lab manager. In addition to fostering research intensiveness at the University of Saskatchewan, the SGAL was designed to allow for student research engagement and training. While funding guidelines stipulate that the lab must be used for research and not teaching purposes, the SGAL plays a critical role in undergraduate research involvement at the University of Saskatchewan.

The Taking the Pulse of Saskatchewan project was the second telephone survey conducted in the SGAL. Inspired by a 2001 research partnership between the University of Saskatchewan and the *Saskatoon StarPhoenix*, the Taking the Pulse of Saskatchewan project was an innovative partnership between the University of Saskatchewan, PostMedia (publisher of the *Saskatoon StarPhoenix* and the *Regina LeaderPost*), and CBC Saskatchewan. Over 30 faculty members across the Division of Social Sciences designed a survey questionnaire covering a range of topics of interest to the province, including crime and public safety, the economy, natural resource development, Aboriginal issues, immigration and diversity, moral issues, and health, wellbeing and families. Employing student interviewers (discussed below), the SGAL administered the survey in March 2012, resulting in 1,750 completed interviews. The media partners devoted considerable resources to disseminating the survey results; indeed, there were approximately 50 news stories resulting from the partnership.

Students played a critical role in the Taking the Pulse of Saskatchewan project. Over 40 undergraduate students were involved in the data collection. Hired to work as telephone interviewers, these students received training in survey interviewing techniques and were paid salaries according to preset university rates of pay. Beyond the benefits of salary and work experience, the student interviewers gained direct research knowledge and improved their interpersonal and professional skills. (Many of these students, it should be noted, returned to work on future survey projects at the SGAL, and thus the Taking the Pulse experience resulted in longer-term research and employment opportunities.) The student employment costs were paid by the Division of Social Sciences, which identified Taking the Pulse as a strategic investment in research collaboration, experiential learning and community outreach.

Student involvement continued after data collection was completed. In summer 2012, two graduate students were hired as research assistants to assist with the production of policy briefs

(short, accessible documents summarizing the main survey findings). The graduate students worked directly with three undergraduate students who were enrolled in a student internship classes offered by the Departments of Sociology and Political Studies; these courses were adapted to meet the needs of the specific project and had an academic supervisor. All three of the interns had worked as Taking the Pulse interviewers and were enthusiastic about being trained in data analysis. Working with the academic researchers, the graduate research assistants and the undergraduate interns compiled contextual information, conducted data analyses, created data presentations, and wrote summary reports. The students were all listed as coauthors on the policy briefs; indeed, due to the students' contributions, the researchers requested that the students be listed as first authors on the policy briefs. (The policy briefs are available at <http://ssrl.usask.ca/takingthepulse>). All five of the students stated that the experience of working on the policy briefs was invaluable to their education.

The Taking the Pulse project results were publicly released in October 2012 and we continued to involve students through the project dissemination. The media partners each profiled the student involvement in the project; for example, the *Saskatoon StarPhoenix* ran an article about the student interviewers, while CBC Saskatchewan featured one of the graduate research assistants on its live radio morning show. The partners hosted a public forum at the University of Saskatchewan to discuss the findings and roughly one-third of the audience comprised undergraduate and graduate students (many of whom had been uninvolved with the project) who were interested in discussing the survey findings.

Finally, the Taking the Pulse survey data have been used by students in their own research projects. The survey dataset is available for analysis through an online “data cube”, and the dataset has been used in classroom teaching at the University of Saskatchewan.

## Lessons and Reflections

While the presence of the Social Sciences Research Laboratories provided the University of Saskatchewan with a unique opportunity to create this undergraduate research experience, I believe that there are broader lessons from the Taking the Pulse project.

- **Importance of Institutional Leadership.** The Taking the Pulse project was the direct result of the Division of Social Sciences deliberately seeking to engage scholars and students in an interdisciplinary research project. While this project happened to center on a telephone survey, it is easy to imagine other research options. The Division-level support was necessary not only to provide the funding for the student interviewers, but also to facilitate the engagement of scholars, establish and manage the media partnership, and coordinate communications. The priority that researchers placed on student engagement was evident throughout the project, and was clearly demonstrated by the researchers' desire to allow students to use the project as a co-authorship opportunity.
- **Value of Providing a Range of Undergraduate Research Opportunities.** The project engaged students at varying levels; while most students worked as student interviewers, a small number were able to extend their engagement into data analysis, co-authorship of reports, and even media engagement. At the same time, as the project developed we recognized that not all opportunities for student involvement were realized. In particular, the project did not involve students in the survey design or in the ethics approval process. Doing so would have provided students with unique understandings of research decisions and tradeoffs, and of the centrality of research ethics to research design.

- **Challenges of Funding Undergraduate Student Research Experiences.** As noted earlier, the Division provided funding for the student interviewers. Further, the graduate research assistant salaries were funded through a SSHRC Public Outreach grant. The challenge, of course, is that such approaches are not always feasible nor sustainable. At the same time, the project suggested new opportunities for affordable undergraduate student research; specifically, the success of the internship course led the Division to create a new, permanent Social Science internship course. Students enroll in the course, paying regular tuition, and work a specified number of hours on a research project under direct supervision while fulfilling additional academic requirements. This internship model could be adapted to other institutional contexts.
- **Student Appreciation of Undergraduate Research Opportunities.** The reaction of the students to their involvement in the Taking the Pulse project was more positive than we anticipated. Indeed, we were very pleased that many of the students voiced satisfaction with the learning opportunities afforded by the experience; clearly, for many, the experience went beyond simply a pay cheque and an employment line on their resumes. A Political Studies student stated, “It gives me a sense of purpose. ... It’s a fantastic opportunity, completely different from the classroom.” As a Regional and Urban Planning student explained, “There’s a lot of collaboration and community involvement that happens in urban planning and obviously people skills are incredibly important. What better way to get people skills than to talk to people?” And in the words of a Psychology student, “I think it was really great to apply what I have been learning in the classroom in an educational way and an applicable way. It’s a lot different to learn about research methods in the class and to actually apply them, to call people on the phone and to analyze the data. I think it was a really great experience.” The positive feedback from students, while anecdotal, suggests that students do value efforts to engage them in ongoing faculty research projects.

Given the benefits of undergraduate involvement in research and inquiry, many institutions are exploring opportunities to create projects and initiatives to expand student research engagement. While social science research may require creativity to identify and establish such projects, the Taking the Pulse of Saskatchewan project demonstrates that such efforts can be both successful and beneficial.

### **Author’s Biography**

Dr. Loleen Berdahl is an Associate Professor of Political Studies at the University of Saskatchewan, the Project Leader for the Survey and Group Analysis Laboratory (SGAL), and was the Principal Investigator of the Taking the Pulse of Saskatchewan project.

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