

# Involving College Students in Social Science Research

*William McConnell, Ph.D., Roger G. Albert, M.A., & John P. Marton, Ph.D.*

## 1. Abstract:

*To explore early-undergraduate exposure to hands-on research opportunities, we invited students enrolled in three second-year social science courses at a community college to participate in a cross-cultural fear of crime project. Thirty-three students participated, conducting community interviews, or coding and entering data. The students completed a ten-item questionnaire to assess their experience, indicating that participation increased their understanding of research, that they believed that all students should participate in research, and expressing very high interest in participating in further research. These findings add to the small literature on early-undergraduate exposure to social science research within the university setting, and show that benefits extend to community college students.*

### **Key words:**

early-undergraduate research, student-faculty collaboration, community college students.

## 2. Introduction

Exposure to research methods is considered a key component of social science education (e.g., Kierniesky, 2005; Rhineberger, 2006). As educators, we endeavour to develop appreciation of how we “know what we know”, to encourage students to be informed consumers of research, and, ideally, to be active producers of research. We also understand that interest in research and appreciation of its relevance is likely best nurtured and achieved through active, hands-on learning. However, unlike students in the natural and life sciences, who access hands-on opportunities regularly through laboratory-based coursework, the social science student’s exposure to hands-on research can be quite limited. While it is possible to integrate active and beneficial learning opportunities into the undergraduate research methods course (Gibson, Kahn & Mathie, 1996; Lutsky, 1986; McBurney, 1995), students in the social sciences typically gain access to hands-on opportunities toward the end of their undergraduate careers, occasionally as research assistants (Landrum & Nelsen, 2002), most commonly through the data-based thesis project (Perlman & McCann, 2005).

Student-faculty research collaboration has been hailed as the “pedagogy for the twenty-first century” (Dotterer, 2002, p. 81), and at least two studies have explored its promise with early-undergraduates in the humanities and social sciences. Chapdelaine and Chapman (1999) worked collaboratively with students enrolled in an introductory psychology research methods course on an evaluation of a community-based domestic violence program. The students critiqued the survey instrument, selected the sample, conducted telephone interviews, entered data, tested a self-selected hypothesis, and submitted a research report as part of the course assignment. Twenty-five students completed a course evaluation, reporting that participation was associated with enhanced learning of course content, and increased interest in and enjoyment of

research. Ishiyama (2002) identified twenty-seven first and second-year liberal arts students in a random sample who reported having participated in (unspecified) collaborative research with a faculty member. Compared to students who did not report participating in research with faculty, the twenty-seven reported greater gains in analytical and learning skills.

While it is not possible to exclude a self-selection explanation for Ishiyama's results (i.e., that students who are more likely to report gains during their education are more likely to seek out research opportunities), they are, nevertheless, consistent with Chapdelaine and Chapman's findings, suggesting collectively that collaborative research is beneficial for early-undergraduates.

A key question that emerges from these two studies is how best to provide research opportunities to larger numbers of early-undergraduates. Given that it takes time for students to establish relationships with faculty with whom they might work on research (Ishiyama, 2002), it would appear that offering opportunities to larger numbers of students would best be achieved by expanding student access to the kind of coordinated project used by Chapdelaine and Chapman. This could be achieved in at least two ways. One would be to run a project across multiple sections of a methods course. While this might be practical in larger institutions, it is less likely to be so in smaller ones, such as community colleges, where multiple sections may not be the norm.

A second approach would be to run a project across *different* courses. Mastery of research is a drawn-out process, spanning undergraduate and graduate training. As such, there is little reason to assume that exposure to research must occur while enrolled in, or after completion of, a methods course. Almost all introductory social science courses expose students to research design, which arguably should provide sufficient grounding to complete at least some of the tasks involved in a research project, such as administration of questionnaires or structured interviews. If so, there is little reason to assume that offering opportunities to students enrolled in different second-year social science courses should not be productive. However, this remains an empirical question. This study, then, examines the feasibility of offering early-undergraduate research opportunities across different second-year social science subject courses at a community college, using student feedback on their experience as the primary evaluative source.

### **3. Method**

#### **Overview of the project**

The project consisted of a cross-cultural experimental investigation exploring, in part, the potential threat posed by variations in perceived neighbourhood to the reliability of fear of crime surveys that use neighbourhood-based questions. The concern was the practice of generalizing from samples to others living in administrative areas such as census tracts, when it is known that average perceived neighbourhoods tend to be significantly smaller than these areas (Coulton, Korbin, Chan & Su, 2001).

To examine this issue, randomly selected adults from a Dutch and Canadian village were randomly assigned to one of two conditions. Those in the respective experimental

groups answered questions about perceived prevalence of crime, perceived prevalence of disorder, and perceived community cohesion in their neighbourhood, with their village treated as neighbourhood. They also answered additional fear of crime questions, and identified unsafe locations in their village. The controls answered the same questions using their own conceptions of neighbourhood, and outlined their perceived neighbourhood on a map. At the time of writing this article, the data from this fear of crime project have not been fully analysed.

### **Student involvement in the project**

Thirty-three students, representing all but one of the students enrolled in one of three second-year courses (Health Psychology, Research Methods in Psychology, and Sociological Explanations of Crime and Deviance) offered during the same semester at a community college, volunteered to participate in the research project. This participation, coupled with a written report on their participation, served in lieu of the traditional course assignments of term papers in the Health Psychology and Crime and Deviance courses, and exercises on questionnaire and experimental design in the Research Methods course.

The primary option for volunteering was data collection. We also offered the choice of data entry to those unable to attend the data collection days. Twenty-nine students volunteered to collect data, administering in vivo structured interviews lasting approximately thirty minutes to the randomly selected community respondents. Four students coded and entered the data obtained from the interviews. (Approximately one hundred first year Criminology students gathered data in the Netherlands, but did not participate in this study). All thirty-three students were apprised of the background and aims of the project, were introduced to sampling strategies, and were asked to provide feedback on the translation of the questionnaires from their original Dutch. The research project, including the student involvement, was approved by the community college's research ethics committee.

The students who collected data completed training sessions during class time consisting of a general introduction to interviewing, role plays, and practise administration of the structured questionnaires. They were also asked to practise in their spare time. In the interests of safety, and to increase the likelihood of obtaining reliable data, students worked in pairs during data collection. Each pair was asked to reach a target of ten respondents over two consecutive Saturdays. They were able to contact one of the instructors by cellular phone at all times during data collection. The students who coded and entered data completed training sessions on the coding system and data entry outside of class time. To increase the likelihood of accurate input, they worked in pairs during the actual coding and entry sessions.

### **Assessing student perceptions of their involvement in the project**

As part of their course evaluations, the students were asked to complete a questionnaire designed by the authors, consisting of seven forced-choice questions using a five-point Likert scale, and three open-ended questions. The forced-choice questions were constructed to provide a global rating of student participation, to reflect the benefits of hands-on research identified in previous studies - increased

understanding of research (Gibson et al., 1996; Lutsky, 1986), increased understanding of course content and interest in participating in further research (Chapdelaine & Chapman, 1999) - to assess the effects of participation on the social climate in the classroom, to provide feedback on whether we should continue to offer collaborative research opportunities, and to assess their views on the value of research opportunities for students in general. The forced-choice questions and their scale anchors are listed in Table 1.

The open-ended questions were designed to provide more in-depth information on the benefits and drawbacks of participation, and focused on three issues: what students liked about participating in the project; what they did not like; and how the experience differed from writing a term paper. Twenty-seven students completed the questionnaire, five of whom were enrolled in the Methods course. Twenty-three of the twenty-seven students were female, and the average age was twenty-seven.

**4. Results**

Descriptive statistics (means and standard deviations) for the seven forced-choice questions are summarized in Table 1. Items five (*I would welcome further opportunities to participate in research rather than write papers*) and seven (*I believe that college students should have the opportunity to participate in research projects*) tied for the highest rating, with all students endorsing item five, and all but one endorsing item seven. Item three (*Participation in the project helped me understand the course material*) received the lowest rating, endorsed by only nine students.

Table 1. Student responses to the seven forced-choice questions.

	Mean	SD
1. Participation in the project was worthwhile.	4.67	0.48
2. My understanding of the research process increased.	4.11	0.58
3. Participation in the project helped me understand the course material.	3.22	0.75
4. Participation in the project produced a sense of team spirit.	4.15	0.77
5. I would welcome further opportunities to participate in research rather than write papers.	4.74	0.45
6. I recommend that the opportunity to participate in research remain as the major student assignment in this course.	4.37	0.56
7. I believe that college students should have the opportunity to participate in research projects.	4.74	0.53

Note. N = 27. Students rated these items on a five-point scale ranging from 5 (*strongly agree*) to 1 (*strongly disagree*).

Three major themes were apparent in the students' open-ended responses to what they liked about participating in the project: "Understanding the reality of research",

endorsed by thirty-seven percent; “Interacting with the public”, endorsed by thirty-seven percent; and “Working as part of a team”, endorsed by thirty percent. The single dominant theme in what they did not like about the project was “Bad weather”, endorsed by sixty-eight percent of students. Three major themes were identified in how participation differed from writing a term paper: “Active learning”, endorsed by sixty-three percent of students; “More interesting”, endorsed by forty-four percent; and “Interacting with peers”, endorsed by thirty percent.

## **5. Discussion**

It is clear that the students in all three courses saw value in participating in the research project, suggesting that it is meaningful to conduct early-undergraduate student-faculty collaborative research across different social science subject courses in order to provide hands-on research opportunities to relatively large numbers of students. All but one of the students enrolled in the three courses volunteered to participate, every student who participated agreed that participation was worthwhile, the vast majority reported increased understanding of the research process, and some reported increased understanding of course content. The responses to the open-ended questions were consistent with these forced-choice items, highlighting the importance of active learning, and pointing to an appreciation for participating in “real life” research (including the “reality” of collecting data in inclement weather). Overall, the obtained data are consistent with the consensus in the literature that hands-on research experience is viewed positively by students, and that it enhances understanding of research (e.g., Chapdelaine & Chapman, 1999; Gibson et al, 1996; Landrum & Nelsen, 2002; Lutsky, 1986).

While the students did not generally report that participation enhanced their understanding of course content (a not altogether surprising finding given that some were enrolled in Health Psychology, which has little direct overlap with fear of crime), the project, nevertheless, served effectively as a common point of reference for in-class discussion of research issues, such as ethics and the purpose of cross-cultural and multi-site designs. Moreover, the data on increased interaction with class-mates were consistent with our impressions of increased levels of “liveliness” within the three courses after data collection.

The value of the project was also apparent in the students’ endorsement of the provision of research opportunities for others, with all but one recommending that college students in general should have the opportunity to participate in research, and all but one recommending that we continue to offer collaborative opportunities in our courses in lieu of term papers.

The positive feedback from the students has increased our interest in early-undergraduate student-faculty collaborative research considerably. We plan to incorporate hands-on research opportunities into our courses on a more regular basis, and have encouraged colleagues to do likewise. We are contemplating more focussed research courses, with the second author developing a course on “Selected Topics in Community-based Research”. We have also developed an interest in conducting further research on the potential benefits of hands-on opportunities, with a particular interest in choice of outcome variables (e.g., the learning value of particular research tasks,

appreciation of the relevance of research), and the question of how best to assess them.

We were struck by the fact that every student expressed interest in participating in research in the future (expressed, albeit, as a preference over term papers). Student interest is considered an important motivational factor, and, as such, a key element of effective education (e.g., Montcalm, 1999). Topics such as sleep and dreams, hypnosis, and fear of crime readily capture students' interest. Quantitative methods tend not to. Murtonen (2005), for example, found negative attitudes toward quantitative methods among education, psychology, social policy and sociology students, while Secret, Rompf and Ford (2003) suggest that female social work students may be more fearful of research than male social work students. Vittengl et al (2004) found low to moderate interest in research among psychology students, and found that interest varied with personality (specifically, openness to experience), mathematics aptitude, perceived relevance of research to post-undergraduate activities, and graduate school plans. While aware that we may have capitalised on a "honeymoon" effect, particularly given the perceived cache of participating in cross-cultural research (mentioned anecdotally by many students) investigating a particularly "hot" research topic (Jackson, 2005), and while conscious of the perils of drawing conclusions in the absence of pre-testing and comparison groups, we suspect that the uniformly high expressed interest in further research among predominantly female students is attributable to their research participation.

To address this critical issue of causality, we have planned an ex post-facto study in which students enrolled in two sections of introductory psychology will have the opportunity to participate in a follow-up to the current investigation of the reliability of fear of crime measures, while students enrolled in two other introductory sections, with assignments consisting of term papers, will act as a comparison group. Although this design will not, of course, fully address causality (Smith & Davis, 2007), it represents a practical alternative to a true experimental design, and should shed clarity on whether early participation in collaborative research results in the development of interest in research that would not otherwise have been realized. The proposed study will also include a scale that we have developed to more reliably measure student interest in research.

Is it likely that we might find positive results with first-year students? We speculated in the introduction to this paper that research opportunities need not be tied to a methods course, and suggested that completion of a first-year social science course covering basic research design can provide rudimentary but minimally adequate preparation for participating in a collaborative project. Our findings are consistent with this position. Given this, and given that coverage of research design occurs typically at the beginning of first-year courses, we see no reason to deny hands-on research opportunities to students enrolled in first-year social science courses.

The current study is the first we are aware of that explores the benefits of student-faculty research collaboration across different social science subject courses at a community college. With low student-faculty ratios intended to foster student-faculty interaction, the community college appears ideally suited for collaborative research. However, given the community college's traditional emphasis on teaching, research

opportunities for faculty are limited, with faculty rarely receiving release time for research, and rarely receiving external research funding. When research occurs at community colleges, it tends to be funded internally, which is dependent upon the value placed on undergraduate research by local administration (Perez, 2003).

The fear of crime project described in this study unreservedly fell within the realm of “personal interest” research. However, without the students’ contributions, and those of the students in the Netherlands, it would not have been possible. Over one hundred and thirty students interviewed over two hundred and eighty community respondents in two countries, producing a data set with more than adequate statistical power. Thus, in addition to providing opportunities to study the effects of integrating research opportunities into the curriculum and class-room, collaborative research appears to represent a particularly relevant template for college instructors wishing to pursue applied research.

### **Authors' contact Information**

*Dr. William McConnell*

*North Island College*

*Department of Humanities and Social Sciences, North Island  
College, 2300 Ryan Road, Courtenay, B.C., V9N 8N6*

Contact: [bill.mcconnell@nic.bc.ca](mailto:bill.mcconnell@nic.bc.ca). 250-334-5000 ext. 4160

### **References**

- Chapdelaine, A., & Chapman, B. L. (1999). Using community based research to teach research methods. *Teaching of Psychology*, 26, 101-105.
- Coultin, C. J., Korbin, J., Chan, T., & Su, M. (2001). Mapping residents’ perceptions of neighborhood boundaries: A methodological note. *American Journal of Community Psychology*, 29, 371-383.
- Dotterer, R. L. (2002). Student-faculty collaborations, undergraduate research and collaboration as an administrative model. *New Directions for Teaching and Learning*, 90, 81-89.
- Gibson, P. R., Kahn, A. S., & Mathie, V. A. (1996). Undergraduate research groups: Two models. *Teaching of Psychology*, 23, 36-38.
- Ishiyama, J. (2002). Does early participation in undergraduate research benefit social science and humanities students? *College Student Journal*, 36, 380-386.
- Jackson, J. (2005). Validating new measures of the fear of crime. *International Journal of Social Research Methodology*, 8, 297-315.
- Kierniesky, N. C. (2005). Undergraduate research in small psychology departments: Two decades later. *Teaching of Psychology*, 32, 84-90.

Landrum, R. E., & Nelsen, L. R. (2002). The undergraduate research assistantship: An analysis of the benefits. *Teaching of Psychology, 29*, 15-19.

Lutsky, N. (1986). Undergraduate research experience through the analysis of data sets in psychology courses. *Teaching of Psychology, 13*, 119-122.

McBurney, D. H. (1995). The problem method of teaching research methods. *Teaching of Psychology, 22*, 36-38.

Montcalm, D. M. (1999). Applying Bandura's theory of self-efficacy to the teaching of research. *Journal of Teaching in Social Work, 19*, 93-107.

Murtonen, M. (2005). University students' research orientations: Do negative attitudes exist toward quantitative methods? *Scandinavian Journal of Educational Research, 49*, 263-280.

Perez, J. A. (2003). Undergraduate research at two-year colleges. *New Directions for Teaching and Learning, 93*, 69-77.

Perlman, B., & McCann L. J. (2005). Undergraduate research experiences in psychology: A national study of courses and curricula. *Teaching of Psychology, 32*, 5-14.

Rhineberger, G. M. (2006). Research methods and research ethics coverage in criminal justice and criminology textbooks. *Journal of Criminal Justice Education, 17*, 279-296.

Secret, M., Rompf, E. L., & Ford, J. (2003). Undergraduate research courses: A closer look reveals complex social work student attitudes. *Journal of Social Work Education, 39*, 411-423.

Smith, R. A., & Davis, S. F. (2007). *The psychologist as detective* (4th ed.). New Jersey: Pearson/Prentice Hall.

Vittengl, J. R., Bosley, C. Y., Brescia, S. A., Eckhart, E. A., Neidig, J. M., Shelver, K. S., & Sappenoff, L. A. (2004). Why are some undergraduates more (and others less) interested in psychological research? *Teaching of Psychology, 31*, 91-97.