

Social Studies 201 – Fall 2006

Problem Set 2

Due Friday, October 6 (if you wish to ensure problem set is graded prior to the October 13 midterm) or Wednesday, October 11, 2006

1. Retirement experiences. Table 1 gives percentage distributions of income for Saskatchewan respondents aged 45 or more who were retired at the time they were surveyed, classified by their experience with retirement. Many respondents were satisfied with their experiences but some were dissatisfied because of being forced to retire for health reasons or a mandatory retirement policy of their employer.

- For each of the two groups in Table 1 (satisfied and not satisfied), construct a histogram of household income.
- For respondents in each of the two groups, obtain the mode, median, and mean of household income.
- Using the histogram of part a. and the measures of centrality of part b., write a short note comparing the two distributions.

Table 1. Experience with retirement, Saskatchewan respondents, classified by household income

Household income in thousands of dollars	Percentage of respondents who were:	
	Satisfied with retirement experiences	Not satisfied with retirement experiences
0 to 19	11	28
20 to 29	18	20
30 to 39	16	13
40 to 59	24	19
60 to 99	31	20
Total	100	100

Source: Adapted from Grant Schellenberg and Cynthia Silver, "You can't always get what you want: Retirement preferences and experiences," *Canadian Social Trends*, Winter 2004, pp. 2-7.

2. Undergraduate student survey. The data in Table 2 come from a 2003 survey of undergraduates across Canada. Grades are measured on a seven-point scale, from the lowest grade of 1 to the highest of 7; the hours spent at community service refer to the approximately one-half of students who perform some community service during the week.

- a. Using the data in Table 1, compute the mode, median, mean, range, and standard deviation for each of the variables grade and hours per week at community service.
- b. If you were to summarize each variable by presenting an average for that variable, which of the three averages, mode, median, and mean would you report? Which measure might not be worth reporting? Explain your reasoning in each case.

Table 2. Canadian undergraduate students, grades and hours per week in community service, 2003

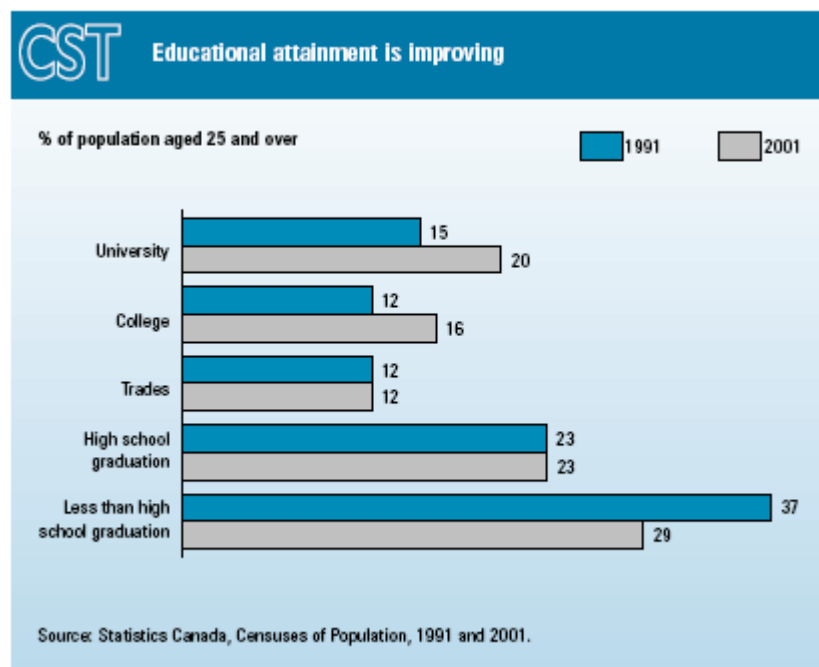
Discipline	Average grade on a seven-point scale	Average hours per week in community service, among those involved
Arts and Humanities	5.0	4.5
Biological Science	4.9	4.2
Business	4.6	4.3
Education	5.2	4.4
Engineering	4.6	3.8
Physical Science	4.7	3.4
Professional	5.2	5.4
Social Science	4.6	4.7

Source: Canada Undergraduate Survey Consortium, *2003 Graduating Students Survey*. Tables 17 and 36. Available from University of Regina, Office of Resource Planning, <http://www.uregina.ca/presoff/orp/surveys.s>

3. Education of parents of high school graduates and dropouts. Figure 1 compares the educational attainment of Canadian adults aged 25 and over for 1991 and 2001. This table comes from “Update on education,” *Canadian Social Trends*, Winter 2003, pp. 19-22. Use the distributions in Figure 1 to answer this question.

- What is the modal level of education in each year?
- Regarding education as an ordinal variable, for each of the two years, obtain the median, thirtieth percentile, and seventieth percentile (do not attempt to interpolate).
- Which of the measures you obtained in a. and b. would be best to illustrate the title of the article, “Educational attainment is improving”? Explain your rationale, commenting briefly on the differences in the two distributions.

Figure 1. Educational trends in Canada, 1991-2001



4. Sense of belonging to Saskatchewan. The frequency distributions in Table 3 represent responses of Saskatchewan adults concerning their sense of belonging to the province. Use the data in Table 3 to obtain the mode, median, and mean sense of belonging for each of the two age groups. Write a short note comparing the sense of belonging to Saskatchewan for those in the two age groups.

Table 3. Frequency distribution of sense of belonging of Saskatchewan respondents aged 15-24 and 55-64

Sense of belonging to Saskatchewan	Age of respondents	
	15-24	55-64
1 – very strong	36	73
2 – somewhat strong	83	78
3 – somewhat weak	44	15
4 – very weak	14	2
Total	177	168

Social Survey of Canada, 2001. Statistics Canada. General Social Survey of Canada, 2003. Cycle 17: Social Engagement [machine readable data file]. 1st Edition. Ottawa, ON: Statistics Canada [publisher and distributor] 10/1/2004.

5. Averages. What measure or measures of centrality are implied in each of the three following quotes? Briefly explain your reasoning.

“Most Canadians could lose some fat” was the title of the article that stated “Roughly three out of four adult Canadians have a bulge of abdominal fat that’s enough to raise their risk of heart disease.” *Leader-Post*, Regina, September 26, 2006, p. 1.

While only about one-third (32%) of adult Canadians attend religious services at least monthly, over one-half (53%) engage in religious activities on their own at least monthly. Eleven percent engage in religious activities on their own a few times a year, while 18% never engage in such activities.

From Warren Clark and Grant Schellenberg, “Who’s Religious,” *Canadian Social Trends*, Summer 2006, p. 3.

On average, Canadian adults entered into their first marriage when they were about 25 years old, (for 89%, their first marriage is their current marriage). The grooms had been about two and a half years older than the brides, at 26.2 and 23.6 years old, respectively.

From Warren Clark and Susan Crompton, “Till death do us part?” *Canadian Social Trends*, Summer 2006, p. 24.