

**A GROUP PROBLEM-SOLVING APPROACH TO LEARNING ABOUT
GENDER STRATIFICATION AND RESEARCH PROCESS IN INTRODUCTORY
SOCIOLOGY**

PETER LEHMAN

University of Southern Maine

At a recent series of department meetings discussing our Introduction to Sociology courses, I was struck by our agreement that we wanted students to learn to *do* sociology, to be able to *use* it, to *employ* a sociological perspective—as Eckstein, Schoenike, and Delaney (1995) put it in a recent essay, to *speak* with a sociological voice. I was also struck by the confusion we shared about how to accomplish this.

Eckstein, Schoenike, and Delaney (1995:356-57) go on to point out that there is a tendency to confuse a sociological vocabulary with a sociological perspective. Students learn the voice of a discipline, they argue, by practicing it—“by trial and error.” This is essentially a “problem-solving” or “active-learning” approach to learning that, rather than presenting theories and concepts first, and then applying them, makes a problem the centerpiece and helps students learn concepts and theories as *tools* to solve the problem. As Scott Sernau (1995) summarizes it:

A problem-based approach inverts the traditional order. It begins with a problem or problems to be addressed, and draws on theory, concepts, and data as needed in search for solutions. The problem or problems may be used as a source of examples for repeated reference as the course proceeds through the traditional curriculum, or the course may be organized entirely around problem solving (P. 365).

Educational research suggests that a prob-

lem-solving approach is highly effective in increasing motivation, retention of skills and concepts, and critical thinking skills (see Blinde 1995, for a brief review). This approach has been increasingly adopted in a variety of settings, including medical education (Sernau 1995). As Newman (1991) points out, tackling concrete problems also increases student (and teacher) enthusiasm and helps connect course material to students' lives.

I want students to learn to “do sociology.” For my purposes, doing sociology is *using* sociological concepts, theory, and data to understand or explain. In other words, doing sociology is doing research—generating sociological ideas and questions and subjecting them to empirical scrutiny. Thus, if my students are to learn to do sociology they must learn to do sociological research and probably the only way to learn to do it is to practice doing it. (See Markham 1991, for a discussion of research methods in the introductory course.)

I would like students to connect the sociological ideas in the course to their own lives. More importantly, however, I would like them to connect their own lives to the sociological ideas in the course. This is somewhat different, and somewhat more difficult; it challenges their own sense of autonomy and free will to see how their own lives are, to a large extent, reflections of social structural conditions.

Gender stratification is an important and fruitful arena for these connections and one that is especially appropriate for an active-

learning approach. In the past I taught gender stratification by *telling* what it is, how and why it works, and how it gets reflected in their own lives. Now I have them discover it for themselves. One of the anonymous reviewers for this note aptly highlighted one of the benefits of this approach:

I sometimes encounter resistance from students who do not want to be told (through lecture format) that women experience many forms of discrimination in society. Testing their “own” theories and then drawing their “own” conclusions certainly may enhance the learning (and acceptance) process.

In that process, I find that students get a lot further than I expected. They also begin to understand more deeply how gender stratification connects to class stratification as well as to important ideas in other areas such as racial and ethnic conflict.

The following learning module (more than an exercise, it’s a curricular segment) sets a problem for students: the difference between men’s and women’s incomes in the United States. It asks students to theorize about this difference and then to test their theories in collaborative groups. Finally, students are asked to write an essay about their research, connecting it to the sociological concept of differential socialization.

SETTING THE PROBLEM

I use this learning module in my Introduction to Sociology course with 50 to 60 students, mostly 18- to 20-year-old freshmen. The collaborative group part of the module takes up a little more than a week’s class-time—two and a half 75-minute class sessions—toward the middle of the course. At that point in the semester they have some familiarity with basic concepts and the basic textbook version of the research process. The specific context is material on socialization. In addition, at this point we have

already used the research process to explore various issues as a class. They are somewhat familiar with various data sets, including the General Social Survey (GSS) used in this module, and some of their strengths and weaknesses. This course segment is designed to bring the previous material together and to form a foundation for discussion of more structural issues of stratification and intergroup conflict.

The problem posed is illustrated in Table 1, which is taken from the 1994 General Social Survey. Essentially, it is an income distribution for working women and men—it excludes people who had no income.

Table 1.

**Percentage Distribution of
Income by Sex**

Income:	Men	Women
Less than \$10,000	15.4	28.2
\$10-25,000	31.3	41.9
\$25-40,000	25.8	20.7
\$40-60,000	17.1	7.5
Over \$60,000	10.3	1.8
	100%	100%

Source: Compiled by the author from the 1994 General Social Survey.
Note: Those with zero income are excluded.

Collaborative (or cooperative) groups are extremely fruitful for a task such as this. Students are able to draw on the ideas and insights of others, participate much more freely than they would in class, and become much more engaged in the assignment than they would as individuals as group expectations draw them in. The excellent-but-quiet students blossom. The confused students are mentored by their peers. What would be a daunting task for an isolated individual becomes a fun opportunity to play with ideas. Although this sounds romantic and

idealized, it is astonishing to watch these groups develop and prosper (see Rau and Heyl 1990).

The group guidelines, from Smith (1994), are reproduced in Figure 1. Note that there is no “reporter” role assigned in the groups. They often ignore this and decide on their own reporter. I insist that groups are collectively responsible for the task and enforce

this by choosing the spokesperson randomly unless the group ensures that every member of the group will do part of the presentation. Students quickly realize that I am serious that it is the responsibility of each group to ensure that every member of the group can present that group’s solution and answer questions about it.

Figure 1. Cooperative Group Format

COOPERATIVE: One set of answers from the group. Strive for agreement, make sure everyone is able to explain the strategies used to solve each problem

CRITERIA FOR SUCCESS: Everyone must be able to explain the strategies used to solve each problem.

EVALUATION: Best answer within available resources or constraints.

INDIVIDUAL ACCOUNTABILITY: One member from your group may be chosen randomly to explain (a) the answer and (b) how to solve each problem.

EXPECTED BEHAVIORS: Active participating, checking, encouraging, and elaborating by all members.

Note: Whenever it is helpful, check procedures, answers, and strategies with another group

Roles:

Resource manager: Pick up and maintain materials.

Recorder: Record the answers and the strategies.

Checker: Ensure that each member of the group understands and can explain the answers and strategies.

Source: Smith, 1994

In my class of 60 students I assign students randomly to 10 groups. Given the usual absences, this means that most groups will have five members. This is probably more than the optimal number but it ensures group continuity from class to class and 10 is about the maximum number of groups I can handle.

THE RESEARCH PROJECT

The first task for the groups is to put the table into words—narrate the numbers. Ignore this step at your peril. Students are not always proficient at reading tables. It is easy to have groups, or members of groups, bumbling around trying to think about something quite different than the substantive assignment. In the process, notice that they are learning (or reviewing) what per-

centages mean, how to read a table, and (quite quickly) the implicit analyses we bring to them. We then discuss the strengths and weaknesses of various narratives as a whole class.

The next task for the group occupies their energies for a much longer period. The groups are asked to find explanations for the inequality reflected in the table, test their explanation(s), and make a presentation to the class. The group assignment (see Figure 2) explicitly lays out the steps needed. First they need to develop a theory which explains the differences between men’s and women’s incomes. They need to articulate this theory well enough to communicate how and why they believe the theory is plausible enough to warrant our

time.

Figure 2. Group Assignment

Group task:

Your Group will engage in a research project to try to explain the relationship between sex and income in American society. At the end of your project your group, or a member of the group I select, will give a full report on your research to the class. As part of this project, you need to develop a theory, clarify concepts, operationalize your concepts, develop hypotheses, test your hypotheses, and interpret the results. The following steps are designed to help you complete your project.

1. Examine the table you have been given and collectively write a sentence that summarizes, in words, the relationship in the table.
2. Use your sociological ideas and concepts to explain the relationship reflected in the table. Why do you think this relationship exists? What causes the relationship? In other words, what are your theories about the relationship? Jot down at least three ideas. Try to justify each of these theories—give reasons why you believe it is a valid theory.
3. As a group, decide which of your theories you believe is most interesting and/or fruitful to explain the relationship. Why?
4. Develop your theory, clarifying what you mean by the concepts and explaining (giving reasons for) the relationships you suggest.

Discuss your theory with me.

5. Using the codebook for the GSS data set I will give your group after discussing your theory, figure out how you will operationalize your concepts. What indicators will you use to measure your concepts? Be prepared to defend your choices.
6. How will you test your theory? What are the specific hypotheses you will examine? Remember that a hypothesis is a prediction based on your theory—if the theory is valid then we expect to find _____. Note that each of these hypotheses is, essentially, a table you will create and what you expect the table will show.

Discuss your hypotheses with me.

7. When you have your hypotheses, check with me before you go to the computer to examine your hypotheses. Be sure to write down the tables you create (your results).
8. Think through your results. Don't be discouraged if your hypotheses were not supported. But you need to be able to explain clearly the relationship between what you found and your theory and draw, at least, tentative conclusions.

Check with me when you are ready to present to the class.

FAQ (frequently asked question):

What to do if another group presents your theory/idea? I don't want two groups to present the same thing. But you may not have to start over. Think through what they did and what you were working on. Can you build on what they did and get further? Can you think of another way to test your ideas? Can you think of other and better indicators for the concepts? Can you think of another way to explain, understand, or explore these ideas?

I actually ask them to develop three theories. This encourages brainstorming and gives more people in the group a chance for input. I then ask them to pick one of the theories to develop and explore further.

Initial theories tend to be simple statements; one group wrote: “More men go on to higher education than women. Giving them more job opportunities to make more money.” I visit each of the groups, listen, and ask questions. I press groups to go further and reflect on *why* they think men might have more education than women. Are there different expectations? Opportunities? Constraints? This particular group theorized that the expectation that women will have children and have primary responsibility for raising them leads to women being discouraged from pursuing higher education.

Next they need to operationalize their concepts and develop specific, concrete hypotheses to test their theory. When I am satisfied with their theoretical work, I give the group a copy of the approximately 100 variables contained in the subset of the 1994 GSS data set I have developed.

They often discover, of course, that their theories are too vague to test—they need to refine their concepts and ideas. They confront the difficulties and ambiguities in operationalizing their concepts. For example, the group exploring education discovered that they needed to refine what they meant by “education” and especially “higher education.” I make it clear that they will need to defend their choice of indicators.

Then they must clarify how they would test the theory, developing concrete hypotheses. The first hypothesis for the group exploring education was that there would be a relationship between educational degree attained and sex. Their second hypothesis was that at any given level of education there would not be any difference between women and men’s incomes. They never

developed a way to directly test their ideas about expectations (a good lesson in the limitations of this type of data). Again, I am very much present throughout the research process: visiting, discussing, and helping the groups.

When they are ready, groups go to the computer and test their hypotheses. I have a computer with a 25-inch monitor in the classroom. The MicroCase data analysis software I use in class throughout the semester is easy to use; after about a minute of instruction they can run the tables themselves so I don’t have to hold their hands. The 1994 GSS gives them almost 3000 cases so that three- and even four-way contingency tables are possible. They quickly find that the thinking process is much harder than the computing process. Although the computer program and data are really central to the whole research project, they remain a tool, not the focus.

Next, since they generally do not find exactly what they expected, the groups need to think through how to interpret their findings and how to present them. I stress the importance of negative findings here. Students also quickly realize that discrimination as a cause of the income disparity is essentially a residual finding with these data—that evidence for this explanation essentially come from eliminating competing explanations. They find this frustrating at first but students comment afterwards that it pushes them to question their own assumptions and preconceptions—to take a fresh look at their taken-for-granted world.

Finally, when they are ready, they do a formal presentation to the class, explaining their theory, indicators, hypotheses, and demonstrating the empirical testing of their ideas with the computer. Students in the presenting group respond to questions and (sometimes) challenges from me and from others in the class. Presentations generally take from five to ten minutes.

Groups present whenever they are ready, not all at the same time. It is not unusual that one or even two groups will present in the first class session. This arrangement increases the interplay among groups. After the first few groups have presented, there are often substantive ideas and extensions suggested by other groups.

Students quickly realize that there is a competitive dimension to the exercise. Not only are they trying to impress me (and hopefully others), but if another group beats them to “their” theory, they may need to start over. More likely, they will need to present an elaboration or refinement of the previous presentation, perhaps by using different indicators or by reconceptualizing the issue(s). To add another incentive for effective group functioning, I offer extra credit to groups who present more than once.

These presentations are time consuming but most students seem to enjoy doing them and students in other groups remain involved and interested. This may be because the ideas, insights, and approaches developed by other groups relate to their own group’s work.

After students have spent some time grappling with their projects I find that it is helpful to model the process. I select something that none of the groups are working on, such as the “full-time worker theory.” I ask students whether women are more likely than men to work part-time. I ask students why they think so. Would gender expectations lead to this? They then hypothesize that there will be a relationship between sex and working part-time, which we find supported. The next hypothesis is that the differences between men’s and women’s incomes will disappear when they compare part-time workers only or full-time workers only. Of course, we find that this control *helps* explain the initial difference but doesn’t make it disappear.

The last time I did this, groups examined differences in education, occupation, age at first marriage, religiosity, number of children, age, supervisory responsibilities in their occupation, occupational prestige, attitudes about gender roles, and marital status. Some of these led to extensive discussions (reviews) of criteria for causal arguments, covering such issues as causal order and spuriousness. One of the most sophisticated projects was a group which suggested that having children would make a great deal of difference for women and none for men, regardless of the current age of the children. They were right, of course.

INDIVIDUAL ESSAYS

In addition to the group reports, I assign students individual essays as part of a mid-term examination. This gives them an opportunity to reflect more on what they, as a class, discovered in their research project and how it connects to the more formal concepts they have been reading about. This assignment also holds them individually responsible for the group work of their own and other groups.

The question I posed for them last semester was:

Explain the concept of differential socialization. Explain how the concept of differential socialization can help us understand inequality between men’s and women’s incomes reflected in the table.

This question functions as a conceptual tool for them to various groups’ findings of many of the groups in explaining the differences between women’s and men’s incomes. Most students cite the class discussions and group presentations to argue for the connections between differential socialization and income disparity. Most students are also keenly aware that the ideas, stereotypes, and/or ideologies that underlie differential socialization also underlie and

justify discrimination. In terms of both clarity and depth, the essays I received from these freshmen were much better than I expected or usually receive. This reflects, in my judgment, the influence of this learning module.¹

CONCLUSION

What do students get from all this? First, students gain a much deeper and thorough understanding of gender stratification and some of the social mechanisms that tend to perpetuate it. Many begin to reflect on their own, and their friends', choices and aspirations in a new light.

Second, students become more skeptical of individualistic accounts and even simple socialization accounts that ignore more structural issues. This skepticism leads many to a deeper understanding of the importance of social structures and the flaws in individualistic explanation. This is reflected in their increasing linkage of the gender stratification problem to more general stratification issues and dynamics, including the issue of economic competition as a source of intergroup conflict as we move on to other topics in the course. For many it is also reflected in their increased (and uncomfortable) awareness of the im-

¹ While this note was being reviewed and revised I have had another semester's experience with the process. This time I used the following examination question:

During this section of the course we have discussed socialization, social construction of reality, deviance, and gender. Choose one of these important concepts. Explain what the concept means. Explain how this concept can help explain or understand the relationship found in the table.

In this case, each of the concepts was the subject of a whole text chapter. Again, the essays were thoughtful and more developed than I usually receive. Indeed, the exercise proved so successful at integrating the text material that most students actively explored more than one of these basic concepts in their essays.

pact of these structures on their lives.

Third, students experience the research process in a meaningful way. The mechanics, or steps, of conducting research are part of this experience. Just as important, they discover that to learn one needs to be creative and call into question the automatic perspectives we bring to a problem. In this sense, they learn something about critical thinking as well as the sociological imagination.

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