



INNOVATION ABSTRACTS

Published by the National Institute for Staff and Organizational Development (NISOD) • College of Education • The University of Texas at Austin

PROMOTING CRITICAL THINKING AND ACTIVE LEARNING BY “TEACHING BACKWARDS”

“Teaching Backwards” is an instructional method that explores cause-and-effect relationships by examining a series of connected events, starting with the last event first and proceeding backwards. Inspired by the movie “Memento,” this method promotes critical thinking and active learning by evoking “why” questions that might never have arisen if the events were presented in chronological order. For those who have not seen “Memento,” it begins with a seemingly justifiable homicide, proceeds backwards in time, and ends with a surprising revelation of the true meaning of the opening scene.

In my experience, “why” questions arise more naturally when students are first presented with an unexplained final effect. Tracing this effect backwards to its immediate and ultimate cause makes cause-and-effect relationships more intelligible than when the initial cause is presented first without any mention of its effects. Also, since the ultimate effect tends to generate the most student interest, presenting this effect first and then teaching backwards generates the necessary excitement for students to undertake the difficult process of actively discovering answers for themselves.

A recent activity in my American Government class in which we explored the political and economic consequences of the Smoot-Hawley tariff of 1930 illustrates this method. We began the activity by focusing on the event that occurred last in time, which was the federal government’s destruction of agricultural products in spring 1933. Students formed small groups to discuss how this event was described in our textbook. At first, they could not make any sense of the event. In their minds, farmers were destroying their own cattle because they were too poor to feed them or because their taxes were too high. To get the students unstuck, I focused their attention on these lines: “Federal agents oversaw the ugly spectacle of perfectly good fields of cotton, wheat, and corn being plowed under. Healthy cattle, sheep, and pigs by the millions were slaughtered and buried in mass graves.” Once this description sank in, a student blurted out, “Why did the federal government do that?”

I let students ponder that all-important question for a while, and after some time passed, I said, “Apparently the federal government thought there were too many pigs and too much cotton. Why do you think the federal government thought that was a problem?” After the students struggled with this question for a while, I asked them to think about what happens to the price of a product when there is too much of it. A student explained that its price goes down. This answer helped us see that farmers become poor when a surplus causes the prices of their products to become too low.

Moving backwards in our search for causes, I asked the students to think about why there were too many pigs and too much cotton. I directed their attention backwards in time from spring 1933 to a proposal that leading economists made to President-elect Roosevelt in January 1933. In the words of the proposal, “the urgent immediate problem is the foreign trade situation. Lacking an adequate export market, agricultural products and raw materials bring ruinously low prices.” Upon studying this, and with a little additional explanation from me, students were able to identify the reason why there were too many pigs and too much cotton in spring 1933—farmers were unable to export their products to other countries.

At this point, it was necessary to identify another important consequence of the inability of farmers to export their products. So, I asked students to reflect on the next line in the proposal: “As a result, even the scanty output of the factories is marketed with difficulty.” I then asked them, “What does the inability of farmers to sell their products abroad have to do with the inability of factories to sell their products within the United States?” One student suggested the problem was that there were lots of pigs to cook, but people only needed one oven. In order to redirect students, I asked them to consider what would happen to an oven factory if farmers became poor. After I explained that many Americans in those days were farmers, students were able to see that if the farmers became poor, they would not be able to buy the oven factory’s ovens.

We were now ready to take another step backwards in our search for causes by studying the economists’ proposed solution to these problems: “Our own tariffs should be lowered to such an extent as will admit enough additional imports of diversified finished manufacturers to take out our own agricultural and raw

material exports without the necessity of foreign loans.” After clarifying that a tariff is a tax on imports, I asked students to explain how an inability on the part of people in other countries to export their goods to the United States could possibly cause an inability on the part of farmers to export their products to other countries. With a little help from me, students were able to see that if people in other countries are not able to sell their goods to Americans because of high tariffs, they will not be able to afford to purchase goods produced by Americans. Students were now able to understand the complex series of causes and effects implicit in the proposed solution: If the tariffs were lifted, foreigners would be able sell their goods to us, farmers would be able to sell their goods to them, and American manufacturers would be able to sell their products to American farmers.

Working backwards in time from January 1933 to June 1930, we were finally able to identify the Smoot-Hawley protective tariff of 1930 as the ultimate cause of the crisis of too many pigs and too much cotton in the spring of 1933. The intended purpose of this tariff was to induce Americans to purchase the products of American factories. Thanks to our backwards look at subsequent events, we were able to see clearly why and how badly this policy backfired.

This was the first time I had ever taught this material using the method of teaching backwards, and I can say with certainty that I have never taught it more effectively. I have also found that this technique does not only work with cause-and-effect relationships that unfold over time. At the end of every semester, I emphasize the importance of critical thinking by asking students to look carefully at a secondary source that misrepresents the primary source it cites as evidence. In the past, I asked students to study the secondary source first, and then we would look at the primary source upon which it is based. This semester, I decided to reverse that order, and I asked students to study and discuss the primary source first, and then the secondary source. What I found is that students were able to explain much more precisely the way in which the secondary source misused the primary source. Based on these experiences, I strongly encourage my colleagues to experiment with presenting material in reverse order.

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