

SPCH 100
Introduction to Public Speaking
An Exercise in Reasoning

Inductive reasoning makes a claim on the basis of the aggregated force of individual instances:

Student X changed his life because of community college.
Student Y changed her life because of community college.
Student Z changed his life because of community college.
Therefore, community colleges change students' lives.

Often, the strength of the claim depends on the number of instances that add up, inexorably, to the conclusion. Are three instances a sufficient basis on which to make the claim, "Community colleges change students' lives." Think about how many instances would constitute sufficiency.

Deductive reasoning begins with a general premise that is applied to an individual instance:

Major premise: Community colleges change students' lives.
Minor premise: Student X is a community college student.
Conclusion: Therefore, Student X will change his life.

It's important to consider whether the major premise may be accepted as a given or is it problematic? In this case, while the major premise is intuitively appealing, it cannot be accepted without reservation and this makes the derived conclusion more tentative.

Please note that both inductive and deductive reasoning prove the same generalization, "Community colleges change students' lives."

Now let us look at some actual data gathered by the State Chancellor's Office (CCBOG) titled, "Chronology of Fees and Enrollment Changes in California Community Colleges;" type up your responses to the prompts that follow and discuss them with the Lab Instructor. Please look at Food for Thought for responses and more information.

Chronology of Fees and Enrollment Changes in the California Community Colleges

- prior to Fall 1984: no fees
- 1984–85: \$5/unit, with \$50 per semester cap
Statewide enrollment drops 7.7% (95,000) over the previous fall
- 1991–92: \$6/unit, with \$60 per semester cap
1.1% enrollment decrease (16,000)
- 1992–93: \$10/unit, cap eliminated; \$50/unit for B.A./B.S. holders (implemented in spring semester)
0.8% increase (12,000)
- 1993–94: \$13/unit; \$50/unit for B.A./B.S. holders – no cap
Enrollment drops 8.2% or 124,251
- 1995–96: fee for degree holders reduced to \$13/unit (spring semester)
Fall enrollment drops by 1.6% (22,000)
- 1996–97: \$13/unit for all students – no cap
Enrollment jumps 5.4% (72,000)
- 1997–98: \$13/unit – no cap
Additional increase of 2.9% (41,000)
- 1998–99: \$12/unit – no cap
3.2% increase (47,000)
- 1999–2000: \$11/unit – no cap
3.6% increase (53,000)
- 2000–Fall 2002: \$11/unit – no cap
4% increase
- Spring 2003–04: \$18/unit – no cap
Enrollment decrease (40,000)
Fall 2003:
90,700 decrease
- Fall 2004 : \$26/unit – no cap
?

1. What is your observation, on the basis of these episodes, about the correlation between fee increases and student enrollment? Express your observation in the form of inductive reasoning:

Instance 1

Instance 2

Instance 3

Conclusion: Therefore, increases in student fees cause decreases in enrollment.

2. What is a deductive argument you could make on the basis of your observation of the correlation between fee increases and student enrollment (use the individual instance of Student Z):

Major Premise: Increases in student fees cause decreases in enrollment.

Minor Premise:

Conclusion:

3. Now go back to the chain of reasoning you constructed in question 1. Look at the data once again. What might be some factors that would render your conclusion problematic? What does that mean to you, when drawing a conclusion on the basis of individual cases?

4. Now look at the deductive argument you created and the conclusion derived from the premises. What realization do you have about the force of the conclusion? With what degree of confidence could you assert the conclusion?

5. Finally, on the basis of the data shown (and realizing the omissions made) what might you predict for student enrollment in Fall 2004 (\$18 to \$26/unit)? How might student enrollment react with the Legislative Analyst's Office proposal to raise tuition from \$26/unit to \$31/unit?

Type up your answers and discuss them to the Lab Instructor. You may want to check your answers against the Food for Thought.

Food for Thought

1. Student fees were raised after fall 1984 (\$0 to \$5) and enrollment decreased.
Student fees were raised in 91-92 (\$5 to \$6) and enrollment decreased.
Student fees were raised in 93-94 (\$10 to \$13) and enrollment decreased.
Therefore: Increases in student fees cause enrollment decreases.

2. Major Premise: Increases in student fees cause enrollment decreases.
Minor Premise: Student Z faces a proposed increase in fees.
Conclusion: Therefore, student Z may drop out.

3. While pre-F 84 to 84-85 show an enrollment drop with an increase from \$0 to \$5 in fees, there is no data for the period 85-91. Why?

While pre-F84 to 84-85 show an enrollment drop when a \$5 fee is imposed and 91-92 show an enrollment drop when a \$6 fee is imposed and while 93-94 show an enrollment drop when a \$13 fee is imposed, along with a \$50/unit fee for degree holders, 92-93 (which show an fee increase from \$6-\$10) reveals an *increase* in student enrollment, contrary to expectation. And 95-96 (which show a reduced fee for degree holders from \$50 to \$13/unit) reveals a *decrease* in student enrollment, contrary to expectation.

Generalizations need to be made tentatively so as to reflect these anomalies.

4. As with the previous answer, in deductive reasoning, the conclusion needs to be asserted tentatively to reduce the force of the claim. There is a difference between “Therefore, student Z *may* drop out” and “Therefore, student Z *will* drop out.”

5. Probably, it feels logical to assume that fee increases lead to declines in student enrollment.

<i>Fall semester</i>	<i>Fee increase</i>	<i>Enrollment decrease</i>
1984	↑ \$5	↓ 95,000
1991	↑ \$1	↓ 16,000
1993	↑ \$7 + \$46 for BA holders	↓ 124,000
2003	↑ \$7	↓ 90,000
2004	↑ \$8	↓ ?

However, what economic factors might contribute to declines in student enrollment? It may interest you, though, to learn that California Community Colleges were founded on the assumption of no-fee, open-access education.

Moreover, if you examine each individual instance that contributes to building the strength of a claim, you will find great complexity. For example, below are the personal testimonies of two California Community College students. Consider how the individuated example can contain the power of specificity but that, sometimes, lived experience contains insufficient force to make a sweeping generalization:

Greg Gilbert, Community College English instructor with 20 years of service.

I was fortunate enough to attend college before fees increased. My education was accompanied by full-time employment and the raising of my children. I changed majors four times and stopped attending school for several lengthy timeouts. My grades dipped and soared according to my circumstances, and because of the affordable flexibility in our system, I eventually succeeded in accruing sufficient skills and transferred to a university. If my own path was so difficult and circuitous, how much more difficult must it be for a non-native speaker of English who is an impoverished single parent, or a recent immigrant from a family with no prior college attendance.

Angela Caballero de Cordero, Community College Counselor.

At nineteen years of age, I started college with a capital of \$40 and the burden of responsibility to help my family financially to help pay the rent and buy the basics for my siblings. My mother and I were working at the fields and we made a good team in sharing the responsibilities of the family. My father, back in Mexico, would send us money to help us with the support of the family too, but earning pesos would not give him a large enough salary to support a family with expenses in dollars. My mother felt overburdened and abandoned by me because she knew that she could not pay for the basics of the family without me. All I knew was that I wanted to go to college and went for it.

I entered college highly motivated but naïve as to the financial and educational demands. Going to college had never been considered as a possibility, not because we did not aspire to a better life, but because we did not know this opportunity existed. I had a sixth grade education and was still learning English.

Although college fees at that **time were very low**, my forty dollars ran out within the first week of school and I was disheartened. I found that I needed money for books, I had transportation needs, as well as clothing and food needs specific to school, in addition to my responsibility to help my family. Financial aid programs at the time were somewhat more in tune with the financial aid packages at the time and with a part time job I was able to stay in school, although the family struggled to make ends meet. All of us kids who could work, would go pick crops on Saturdays to complete the budget we needed on a monthly basis.

Going to college showed me a new life that up to that point had been totally inexistent for me, my siblings, and many of our young friends. My family and I were very excited about my discoveries and we shared them with a sense of awe and adventure. We were dirt poor and this other world had not been visible to us.

With hardships, my father bought me a car that cost him about \$200. It needed wheel alignment and when I drove on the freeway, the two lane road seemed narrow because the car appeared to weave from side to side of the freeway, so every trip I took to college was a stressful one; but I was so excited to have my “new” car. As one might expect, the car broke down soon, and the saga continued...