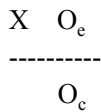


### Pre-experimental designs: natural settings

- 1) One-shot case study: X O<sub>1</sub>
- 2) Pretest-posttest design: O<sub>1</sub> X O<sub>2</sub>
- 3) Posttest-comparison group design (Babbie: static-group comparison)

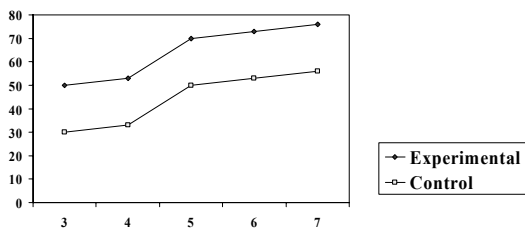


### Quasi-experimental designs (n=3)

- No lab setting possible
- No possibility of randomizing into experimental and control groups
- *Purpose:* to enhance causal inference by strengthening internal and external validity

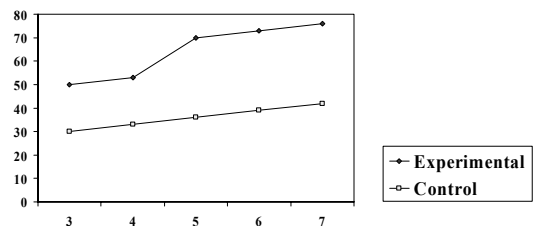
### Contrasted groups design (Babbie: nonequivalent control groups)

Figure A: Reading scores by grade



### Contrasted groups design (Babbie: nonequivalent control groups)

Figure B: Reading scores by grade



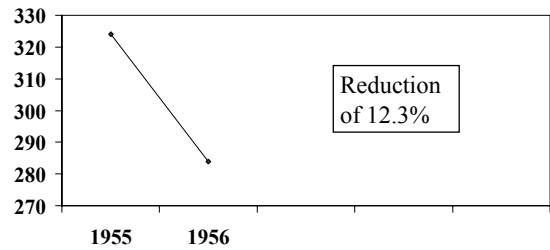
## Time-series design

O1 O2 O3 X O4 O5 O6

- Multiple observations over time
- Example: Connecticut crackdown on speeding (1955)

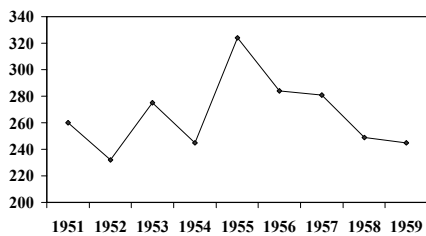
## Time-series design

Figure A: # of fatalities, CT., 1955-56



## Time-series design

Figure B: Number of fatalities, CT., 1951-59



## Control-series design (Babbie: multiple time series)

Fatality Rates, 1951-59

