

Carefully read the description of the experiment below. Be prepared to answer the questions that follow the design description as a class quiz.

A graduate student in education believes that “both adults and children learn better under constructivist practices using more hands-on interactive approaches, not traditional methods such as lecturing.” He recognizes that lectures can cover more material more quickly, but suggests that “passive learners get tired of such an approach.” He used a constructivist approach to teach an experimental group of 25 sixth-grade students in Covington, Kentucky. The end of the exercise he asked 4 questions;



1. Do you prefer to learn math straight from the book or using computers and hands-on activities?
2. Do you feel that you learned more from using the book or activities?
3. Is math more fun using the book only or incorporating activities?
4. Would you like to see all subjects taught using hands-on activities and computers?

Each question was analyzed separately to determine if there were differences in the proportion of students who preferred one of the teaching approaches. What type of analysis would he use to determine if the three possible responses (prefer books, prefer activities or find no difference) occurred in equal proportion? Results for question 4 are given below.

| Question                      | Yes | No | No Preference | Sum |
|-------------------------------|-----|----|---------------|-----|
| All subjects with activities? | 13  | 6  | 6             | 25  |