Language of Longitudinal Data (part one):

- multivariate

- multilevel, hierarchical, clustered

- repeated measures

- longitudinal

- cross-sectional

- time series

- correlated data

For each of the following study descriptions, which of the above terms could describe it? Why or why not?

Case Study: Surround Sound vs Stereo

1. A random sample of 100 students is taken. Each student individually watches a movie clip in both stereo and surround sound (where the order is randomly determined for each student). For each viewing, they judge how immersive the sound was, on a 0–100 scale.

2. A random sample of 100 students is taken. Half are shown a movie clip in stereo and half in surround sound. They each judge how immersive, how intimate, and how natural the sound was, each on a 0–100 scale.

3. A random sample of 100 students is taken and divided into groups of 10. Each group watches a movie clip together, in either stereo or in surround, and each student judges how immersive the sound was.

4. A random sample of 100 students is taken and divided into groups of 10. Each group watches a movie clip in both stereo and surround sound (where the order is randomly determined for each group). For each viewing, each student judges how immersive, how intimate, and how natural the sound was.

Case Study: Language Development

1. A random sample of 50 children is taken and the number of words they know from a given list is recorded for each child at ages 2, 3, and 4.

2. A random sample of 150 children is taken, 50 each of ages 2, 3, and 4, and the number of words they know from a given list is recorded.

3. 5 early childhood classes with 10 children each are found, and the number of words the child knows from a given list is recorded.

4. A random sample of 50 children is taken and the number of words they know, how many letters they recognize, and how high they can count are recorded at ages 2, 3, and 4.

Language of Longitudinal Data (part two)

- response

- observation

- subject (experimental unit?)

- level

- number of subjects

- within-subject sample size

- total sample size

What do these terms mean in the context of each of the previous case studies?