How Do Users Adapt to a Faulty System?
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**Research Questions**
- Q. Do users adapt to a faulty system?
- Q. Do system errors influence adaptation process?
- Q. Is there a threshold for identification as error-prone?
- Q. How do users adapt to an error-prone system?

**Results of the Pilot Studies**

**Pilot Study 1**
- No reliable switching behaviour for < 10% errors

**Pilot Study 2**
- Error-prone letters not reliably identified
- Instead: Global switch to alternate method
- Extra care if error-prone letters were identified

**Final Study**

- Input letters with pen on tablet
  - Primary method: Graffiti (large above)
  - Alternate method: Unistrokes (small above)
  - Suggested usage of alternate if unreliable
- $1$ Recognizer
- Injected 10%, 30%, 50% errors
  - Into three out of seven random Graffiti letters
  - Different letters for each session

**Procedure**
- Within-subject, 12 participants:
  - Initial session × 1 block × 280 letters + Final session × 3 blocks × 280 letters = 1120 letters/user, total 13440 letters

**Summary**
- Users do gradually adapt to a faulty system
- Adaptation is proportional to error rate
- Error rate has to be >10% to be perceived as error-prone
- Users learn to avoid frequently occurring errors faster

**The Usage of Alternate Method**
- Used Unistrokes instead of Graffiti

**Extra Care**
- More time than average to draw a letter
- For both measures:
  - Significant effect for extra care per letter with more time than average to draw a letter error rates
  - Significant learning effect