Which T-test?

Read the following descriptions of possible linguistic experiments. Decide whether you would use an independent-samples or paired-samples t-test.

1 Reading attitudes. ESL students randomly received either a scripted or a non-scripted version of a reading program. Twenty students from the scripted version were interviewed about their attitudes about reading before the semester started, and near the end of the semester. You want to know whether the students’ attitudes toward reading changed over the course of the year.

Choose one: independent paired

2 Reading ability. In the study above, you also want to know whether students using the scripted version of the reading program performed better on a reading test at the end of the year than the ESL learners who used the non-scripted version.

Choose one: independent paired

3 Listening comprehension. One group of advanced French as a second language (FSL) users and another group of beginning FSL users performed a listening comprehension task that had two components. One component was linguistic processing ability and the other was pragmatic processing ability. You want to know whether the beginning and advanced learners differed from each other in their ability to process pragmatic information on the test.

Choose one: independent paired

4 Pitch. A group of English–Spanish bilinguals were recorded speaking to monolingual English and monolingual Spanish speakers. Their average fundamental frequency (pitch) was recorded in each language. You want to know whether these bilinguals use a different pitch when speaking in each of their languages.

Choose one: independent paired

5 Learning strategy instruction. A group of ESL learners in Taiwan received a class detailing how to ask higher-order questions and give more elaborated responses. The learners were measured as to the accuracy of their questions before this training, and again at the end of the course. You want to know whether the students improved in their accuracy over the course of time.

Choose one: independent paired

6 Vocabulary learning I. Students in an English Language Institute were randomly assigned to watch one episode of either Friends or Seinfeld each day for eight weeks. A recorded interview with an unknown but same-sex and same-age native English speaker was recorded for every participant before and after the term. You want to know whether students used more slang terms at the end of the semester.

Choose one: independent paired

7 Vocabulary Learning II. You also want to know whether there were any differences between the Friends and Seinfeld groups in the number of slang terms used in the final interview.

Choose one: independent paired