

Psychology Research Methods

T-test practice

Read the following account of a research study and analyse the data provided

A researcher was interested in children's perception of play and the influence of this on performance in classroom activities. A group of 20 children were divided into two separate groups – a 'playful' group (n=10) and a 'formal' group (n=10) and each child was given a jigsaw to complete in the setting to which they had been assigned

A 'playful' setting was defined as a setting where the task was conducted while sitting on the floor, with minimal adult supervision. A 'formal' setting was defined as a setting where the task was conducted while the children were sitting at a table with an adult who was directly supervising the activity. Previous research has indicated that these types of settings can influence children's perceptions of a task.

The researcher recorded the amount of time (in seconds) taken by each child to complete the jigsaw. The children completed the jigsaw puzzle on two occasions – during the actual 'playful/ formal' intervention and a 'post-test' situation one week after the playful/formal intervention. The data set obtained is presented in Table 1 below:

Table 1: Results of study.

Child	Group	Test score	Post test score
1	Playful	90	95
2	Playful	170	167
3	Playful	110	114
4	Playful	85	90
5	Playful	82	75
6	Playful	100	100
7	Playful	74	70
8	Playful	187	175
9	Playful	179	180
10	Playful	70	80
11	Formal	115	105
12	Formal	230	210
13	Formal	220	220
14	Formal	110	100
15	Formal	97	92
16	Formal	85	77
17	Formal	100	94
18	Formal	85	80
19	Formal	210	198
20	Formal	215	209

Your task

Set up the data in table 1 as a data file in SPSS and use SPSS to obtain the difference between each child's pre and post test scores.

- a. What were the mean change scores for each group? (regardless of group)
- b. Was there a significant difference between the change scores of the playful and formal groups?