

Parallelism

This handout explains how to practice parallelism to ensure clarity in your writing.

Use the Same Pattern of Words to Show that Two or More Ideas Have the Same Importance

Written English is most clear and concise when ideas are expressed in a parallel pattern. Patterns fall into four areas:

- Words and phrases
- Forms
- Clauses
- Lists

Words and Phrases

Remain consistent, or *parallel*, in your words and phrases. A common mistake is mixing patterns with the –ing form (gerund) of words:

Not parallel: The construction manager established a protocol that includes reviewing plans every morning, asking questions at stated intervals, and the summarization of work at the end of the day.

Parallel: The construction manager established a protocol that includes reviewing plans every morning, asking questions at stated intervals, and summarizing work at the end of the day.

Another common mistake is mixing patterns of infinitive phrases:

Not parallel: A daily protocol was established to review plans, field questions, and summarize work.

Parallel: A daily protocol was established to review plans, to field questions, and to summarize work.

Forms

Mixing forms is another common misstep:

Not parallel: The production manager was asked to write his report quickly, accurately, and in a detailed manner.

Parallel: The production manager was asked to write his report **quickly**, accurately, and **thoroughly**.

Clauses

A parallel structure that begins with clauses must continue using clauses.

Not Parallel: The coach told the players **that they should get** a lot of sleep, **that they should not eat** too much, and *to do some warm-up exercises* before the game.

Parallel: The coach told the players **that they should get** a lot of sleep, **that they should not eat** too much, and **that they should do** some warm-up exercises before the game.

Lists

Be sure to keep all the elements in a list in the same form.

Not Parallel: The dictionary can be used for these purposes: to find **word meanings**, **pronunciations**, **correct spellings**, and *looking up irregular verbs*.

Parallel: The dictionary can be used for these purposes: to find **word meanings**, **pronunciations**, **correct spellings**, and **irregular verbs**.

Practice Writing Clear, Concise Prose

How many words can you eliminate without changing the meaning and intent of the paragraph? Remember that **conciseness** means saying what you mean in the most economical way, ***not cutting meaning***.

NDT is the most popular method in the pavement evaluation and overlay because of its advantages of low operational cost, short test duration and full scale model testing. Falling Weight Deflectometers (FWD) are widely used to evaluate the structural properties of pavements nondestructively. Backcalculation of pavement properties from FWD data is usually carried out by matching the measured deflections under a known load with theoretical deflections generated by an analytical model of the pavement by varying the elastic moduli. Such procedures usually

use error minimization techniques to minimize either the absolute or the squared error, with or without weighing factors.

For decades, numerous backcalculation computer programs have determined layer moduli. Most of these programs are based on iteration techniques, which repeatedly use a forward analysis method within an iterative process. The layer moduli are repeatedly adjusted until a suitable match between the calculated and measured deflection basins is obtained. A number of computer programs, such as BISDEF (Bush, 1985), BOUSDEF (Roesset, 1995), CHEVDEF (Bush, 1980), and COMCOMP (Irwin, 1994), have been developed for backcalculation analysis using this method. **(178 words)**

