Elements of LaTeX Style[*]

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The following tables show some common errors in using the LaTeX document preparation system [1]. Most of these are errors you won't find discussed in any ordinary grammar or style guide because they are LaTeX-specific. They do not provoke any LaTeX error message but do result in improper formatting or poor use of notation in the resulting document.

1. Use two single back-quotes to begin a quotation and two single quotes to end it. The usual double quote symbol doesn't produces the correct result.[1]

Example Source Text	`"Four score and \ldots"`
How It Looks	”Four score and . . . ”
Corrected Source Text	``` ``Four score and \ldots'' ```
How It Looks	“Four score and . . . ”

2. Use a special command to produce the correct spacing of ellipses:

Example Source Text	``` ``Four score and ...'' ```
How It Looks	“Four score and ...”
Corrected Source Text	``` ``Four score and \ldots'' ```
How It Looks	“Four score and . . . ”

3. Use a special command to produce the correct font and spacing around a log function:

Example Source Text	`$O(N log N)$`
How It Looks	$O(N log N)$
Corrected Source Text	`$O(N \log N)$`
How It Looks	$O(N \log N)$

[*] A pretentious title, since this note only collects a few of the most common errors I've encountered in reading other people's LaTeX-prepared documents. But I couldn't resist.

[1] If you prepare your source file in GNU Emacs in `latex-mode`, the double quote key is automatically converted to produce the proper pair of single back-quotes or quotes. If you are in `latex-mode` and you need a typewriter font double-quote, as in denoting strings in program code, type Control-Q `"`.

4. Use conventional mathematical notation for multiplication, unless it's actual code:

Example Source Text	`$M*N$`
How It Looks	$M * N$
Corrected Source Text	`$MN$` or `$M \times N$` or `$M \cdot N$`
How It Looks	MN or $M \times N$ or $M \cdot N$

5. Write a long dash as `---` and don't put spaces around it:[2]

Example Source Text	``we can not dedicate - we can not consecrate - we can not hallow - this ground''
How It Looks	“we can not dedicate - we can not consecrate - we can not hallow - this ground”
Corrected Source Text	``we can not dedicate---we can not consecrate---we can not hallow---this ground''
How It Looks	“we can not dedicate—we can not consecrate—we can not hallow—this ground

6. Place a footnote mark after a punctuation mark, not before:

Example Source Text	`\ldots around it\footnote{By modern \ldots}:`
How It Looks	. . . around it[3]:
Corrected Source Text	`\ldots around it:\footnote{By modern \ldots}`
How It Looks	. . . around it:[4]

7. Don't put extra spaces inside parentheses:

Example Source Text	`Similar methods ( see Chapter 10 ) apply \ldots`
How It Looks	Similar methods (see Chapter 10) apply . . .
Corrected Source Text	`Similar methods (see Chapter 10) apply \ldots`
How It Looks	Similar methods (see Chapter 10) apply . . .

8. Put a space before a citation:

Example Source Text	`Similar methods\cite{Lamport} apply \ldots`
How It Looks	Similar methods[1] apply . . .
Corrected Source Text	`Similar methods \cite{Lamport} apply \ldots`
How It Looks	Similar methods [1] apply . . .

[2]By modern standards, writing “can not” as two words is incorrect. We forgive Lincoln, though.

9. Avoid accidentally starting a new paragraph after an environment.[5]

Example Source Text	The equation
	`\[`
	`x^n + y^n = z^n`
	`\]`
	
	`has no solution if $n > 2$.`

How It Looks	The equation $x^n + y^n = z^n$ has no solution if $n > 2$.

Corrected Source Text	The equation
	`\[`
	`x^n + y^n = z^n`
	`\]`
	`has no solution if $n > 2$.`

How It Looks	The equation $x^n + y^n = z^n$ has no solution if $n > 2$.

10. Remember to switch to math mode when mentioning variables used in mathematical expressions.

Example Source Text	`In this equation, x, y, and z` `must be integers.`
How It Looks	In this equation, x, y, and z must be integers.
Corrected Source Text	`In this equation, $x$, $y$, and $z$` `must be integers.`
How It Looks	In this equation, x, y, and z must be integers.

11. Don't use math mode for emphasis or highlighting. The character spacing doesn't come out as it should (because LaTeX treats it as a mathematical expression for the product of variables named by the individual letters).

Example Source Text	`This illustrates $operator overloading$.`
How It Looks	This illustrates $operator overloading$.
Corrected Source Text	`This illustrates \emph{operator overloading}.`
How It Looks	This illustrates *operator overloading*.

[5] This example contains a math environment, but the same problem occurs with `verbatim`, `center`, and the various list environments. Note, however, that Nuweb produces LaTeX source that does not indent the line following a part, even if there is a blank line intervening.

Some other common errors in using LaTeX:

Making the text too wide Avoid using the margin and textwidth commands (or use them only to save paper while creating drafts and then remove them for the final version). Text that is too wide is hard to read, probably because your eyes have to scan back and forth too much.

Using non-standard formatting Unless there's very good reason, stick with the standard commands for creating titles, sections, subsections, etc. Anything else is likely to create glaring layout errors, unless you are willing to invest an enormous amount of time in designing a consistent way of laying things out.

Similarly, avoid using the `\parskip` command (it controls the amount of vertical space between paragraphs; the default is no extra space). Some beginning LaTeXers use this command along with `\parindent 0` to reproduce a paragraph separation style (no paragraph indentation and extra space between paragraphs) they may have become familiar with from technical reports produced with older or cruder document preparation systems. But the way LaTeX does paragraphs by default follows the standard used by almost all professional book, magazine, and newspaper publishers.

References

[1] Leslie Lamport, LaTeX: A Document Preparation System User's Guide & Reference Manual, Addison-Wesley, 1986, ISBN 0-201-15790.