

Returning language to the spotlight

The interdependence of usability and words

Geoffrey Marnell

Like relativity in physics, usability in documentation is a concept that simply can't be ignored. It colors—or should color—every decision we make in designing and writing documentation. But like relativity, pinning down a useful definition of usability is no easy matter.

The International Standards Organization describes usability as “the extent to which a product can be used by specified users to achieve specified goals with effectiveness, efficiency, and satisfaction”.¹ This gives some conceptual traction, but it lacks the necessary concreteness to make it immediately applicable.

A more concrete definition, and one more widely discussed, is based on the work of Gretchen Hargis and her colleagues in defining *quality* documentation.² This view of usability (and quality documentation) has it that the information in documentation must be:

- easy to find
- easy to understand and
- easy to apply.

The linking concept here is provided by the common definition of quality as “fitness for use”. Obviously, if a document is not fit for use, it lacks usability; and if it is fit for use, it has usability—at least to some degree. And it is plausible to judge that degree on how easy the information in it is to find, understand, and apply.

For information to be easy to find, there must be sufficient signposts in places where readers are likely to look. The two most likely places are an index and a contents list, with an index arguably the more important of the two in a document of more than a score or so of pages. A contents list, though useful to the occasional browser, simply hasn't the degree of granularity needed to help the typical reader: the time-poor, deadline-harassed person needing to know in a hurry how to do the particular task at hand. For such a reader, a lengthy document without an index would be deficient in usability.

Other aides in helping users find information easily include running headers and footers, cross-references and hyperlinks, lists of related tasks, breadcrumbs, and a full-text search facility (especially one that enables wildcard searching and Boolean filtering). All these features, to varying degrees, help readers find the information they are after, and thus contribute to the overall usability of documentation.

Once a user has found the information they are after, they need, of course, to be able to understand it. This is where language and usability intersect, and the influence of the former on the latter is the main topic of this paper. I will come back to it shortly.

The other pillar of usability is that the information, once found and understood, must be easy to apply. To that end, it must deliver what it promises. A procedure promising to explain how to set a timer on a video recorder might be easily found and well-written, but if it doesn't fully explain how to set a timer, and under all

likely conditions, then it is less than maximally usable. Moreover, it should not cause the reader to back out of the procedure by introducing prerequisites in the steps rather than in the preamble, nor cause the reader to consult other sections of the user guide in order to complete the procedure they are working their way through. Thus the information must be relevant, accurate, comprehensive, and self-contained.

But let's return to the second pillar of usability: the information presented in documentation must be *easy to understand*. This is arguably the most important facet of usability in the documentation field. There may be a plethora of signposts directing a reader to the procedures they might need (and thus the information is easy to find) and each procedure may well cover all conditions and be self-contained (and thus score not too badly on the easy-to-apply scale); but if a reader has to struggle to understand the information presented to them, then the usability of the document is undeniably deficient.

But what is meant by *easy to understand*?

Understandability and readability

One often hears the KISS principle extolled in technical writing circles: Keep It Simple, Stupid. Alas, the KISS principle is hoist with its own petard. It is just too simple to be of any use. Still, much effort has gone into providing simple measures of understandability, measures that, unlike the KISS principle, have some *prima facie* claim to scientific rigor. These are the so-called text-based readability formulas, the most well-known of which is the Flesch reading-ease formula (the math behind the readability scores generated by Microsoft Word).

For a start, readability and understandability are often used interchangeably:

*"Readability means understandability. The more readable a document is, the more easily it can be understood ..."*³

Hence readability formulas such as the Flesch reading-ease formula can be considered contenders for determining the usability of documentation (or at least that component related to ease-of-understanding).

But the Flesch reading-ease formula errs on the side of KISS-like simplicity. It takes as its input just two features of text: average sentence length and average syllable count. Nothing about the reader is included, such as their familiarity with the concepts discussed. And many features of text that necessarily contribute to, or detract from, understandability are ignored: conventional grammar and punctuation, typographical cueing, contradiction, inconsistency, non sequiturs, ambiguity (especially that resulting from the use of transitional vocabulary), and many more. It is just far too easy to concoct a difficult, or even nonsensical, piece of text that scores well on the Flesch reading-ease formula. Short sentences and monosyllabic words do not understanding make.

To those who accept these limitations but argue that the Flesch reading-ease formula is still the best proxy measure of readability we have⁴, we can retort that *best* does not imply *good*. At one time, the *best* way we had of estimating the number of stars in the universe was to look at the night sky and count them. But that, obviously, was not a very *good* technique. Further, numerous studies have failed to reproduce the sort of validation correlation that excited Flesch – the correlation between Flesch scores and scores on independent comprehension tests – and any such correlation is necessarily inflated by ineradicable sampling bias.⁵

We should not be fooled, then, into thinking that its use in Microsoft Word gives the Flesch reading-ease formula the imprimatur of scientific rigor. The formula is overly simplistic and offers little guidance in determining whether a piece of text meets any likely usability criterion.

Understandability and communicative efficiency

We get closer to an understanding of *understanding* if we reflect on why we write, namely, *to communicate*. We communicate if we get our message across. But our success in getting our message across can be judged in degrees. We might achieve effortless communication: our readers get our message immediately, without any cognitive or emotional struggle. At the other end of the spectrum, we might fail completely: ambiguity, vagueness, conceptual denseness, and a host of other factors might block all attempts at deciphering our intended message. And in between are the readers who eventually work out what we mean, but only after some degree of struggle, or an encounter with more words than were necessary to get the message across.

Communicative efficiency captures the notion of ease-of-understanding far better than sentence length and syllable count. Efficiency entails effectiveness: obviously we need to get our message across if our communication is to be efficient. But it also entails that we get our message across *with the least effort on the part of our readers*. In other words, we should write with maximum economy, using language that is most familiar to our intended audience, and which has the least potential for *distraction* (which might arise, for example, if we engage the emotions of our readers with paternalistic or insensitive language, or if we use language inconsistently).

Usability, words and the flight from technical writing

Ease of understanding, and thus usability, depends, then, on our writing exhibiting clarity, economy, familiarity, neutrality, and consistency. And thus it is impossible, in our field, to achieve maximum usability without a pre-eminent respect for language and for the words that are its building blocks. For we risk failing to get our message across if a careless choice of words leads to ambiguity, vagueness, bafflement, offence, or cognitive overload.

Words, then, should be at the center of our professional concerns. And yet words and language can often seem of marginal concern to technical communicators. The threads on discussion forums, the articles published in our journals, and the marketing materials designed to attract students to our university courses, lean strongly toward tools, methodologies, and practices. Issues of language are often missing or downplayed.

Our obsession with broadening our profession's profile – apparent in the number of times we have changed our name – may have contributed to the drift away from appreciating the importance of words. We were once technical *writers*, and when we were, the importance of writing – of words and of language – was explicit. It needed no explaining. But we did, have always done, more than writing, and thus we felt a need to be called something else: technical communicators, content providers, end-user assistance professionals, information designers, and so on.

But other professions are not so touchy about their name. Teachers do more than teach. They also act as playground monitors, sports-day referees, mentors, excursion leaders, and curriculum designers. But they still call themselves *teachers*. We do more

than write, but, unlike teachers – and many other professionals – we have sought to change our profession’s name to make what we do explicit.

In the process, we have ended up achieving the opposite: concocting names of such bland generality as to encompass many clearly distinct professions. (A journalist, graphic designer, and musician can all be seen as *content providers*; and a call-center representative is also an *end-user assistance professional*.) We have failed to identify and differentiate ourselves by adopting names that drown out our particular, unique contribution. And in doing so we may have lost sight of the fact that *writing* is what most of us do most of the time (just as teaching is what most teachers do most of the time). We may be especially fond of tools and methodologies – and there is no harm in that; indeed some degree of tools expertise is essential – but expertise in XSL transforms, DITA, persona mapping, VBA macros, Framescript, wiki design and the like is of no use if our writing – our particular, unique contribution – fails to achieve its primary purpose: effortless communication. It is writing before all else, and that is so even if some in our profession spend all their working time doing things other than writing.

To its credit, our profession has always prized usability. We may not have always agreed on what it means, nor given due respect to the need to clarify its definition. But a moments reflection on why we do what we do, on the ISO definition of usability, and on the work of Hargis and her colleagues, should bring home the fundamental importance of language to our profession. Words are what make or break us. Our technical skills are secondary, and have always been secondary. Their relevance changes from year to year, version to version – unlike that of language. So if we are to continue our commendable respect for usability, we must return language to the spotlight. We must develop a passion for language that matches that of lexicographers. We must put down our prescriptive grammars and become scientists of linguistic flux. We must accept that being a users’ advocate – which most of us do – requires immersion in the users’ language. For what good is an attractive, well-structured document – even a well-crafted sentence, written once and re-used often – if it fails to deliver its meaning to the audience for which it was intended.

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- ¹ International Standards Organization, *Human-centred design processes for interactive systems*, ISO 13407:1999. The definition is repeated in numerous ISO standards directed at technical communicators, such as ISO/IEC 18019:2007 and ISO/IEC 26514:2008.
 - ² Hargis G, Carey M, Fernandez AK, Hughes P, Longo D, Rouiller S & Wilde E, *Developing quality technical information: a handbook for writers and editors*, Prentice Hall, NJ, 2004.
 - ³ *Editing technical writing*, by Donald C. Samson Jr., Oxford University Press, New York, 1993, p. 58.
 - ⁴ See, for instance, William H. DuBay, *Smart language: readers, readability, and the grading of text*, Impact Information, Costa Mesa, CA, 2007, p. 79.
 - ⁵ See Marnell, G, “Measuring readability. Part 2: Validation and its pitfalls”, *Southern Communicator*, issue 15, October 2008, pp. 17–21.