# Document indexing exercise

Index the following document.

Include subjects and cited authors in the same index. You have unlimited space, so include all entries that might be useful. Choose your own index style, and make a note of the decisions you have made with respect to filing rules, locator style etc.

## *Evidence-based indexing*

Unfortunately little research has been published about the way people use indexes, and much of that research is preliminary work, with small subject numbers, so indexers often rely on 'gut feeling' instead of empirical findings when choosing between alternative approaches. Research that has been done is discussed below, and key points from different projects have been summarised under a heading for the specific finding.

It is interesting to note that even when index test participants are editorial staff or technical writers, they still encounter difficulties using indexes. This suggests that the average user will find it even more difficult. On the other hand, children in Australian schools now learn formally about indexes and other book structures early in their schooling, so we may soon encounter a more index-literate cohort.

Research by indexing and editorial staff at **Macmillan** [i] identified some problems with index use and made recommendations for improvements. For the study they selected books that have multiple editions published, as usability testing is more worthwhile in these cases. Four books were studied using 22 Macmillan staff as participants (future tests will use nonstaff participants).

**Paula Matthews and KGB Bakewell** researched indexes to children's information books [ii]. They found that children were aware of indexes and their role, but that they did not tend to use subheadings, and found cross-references difficult to understand. They found that children had difficulty scanning pages to find the information the index had directed them to – the use of bold to highlight key points on pages might be useful here. They also found that children were confused about page ranges – on encountering the locator '7-10' they asked 'what does 7 minus 10 make'. The initial suggestion was to use each page alone, for example, '7, 8, 9, 10', but a later (and much better) suggestion was to use words, for example, '7 to 10'. They also suggested printing the entire alphabet on the same page/s as the index, and including letters as section headers for parts of the index starting with each letter.

**Corinne Jörgensen and Elizabeth Liddy** investigated index usability with students from the School of Information Studies at Syracuse University as participants. Three features were investigated: [iii]

- Divided (name/title and subject) versus combined indexes

- Absence of *see* and *see also* references

- Minimal use of concept words

They found a high number of successful searches, but also that subjects were sometimes satisfied with incomplete or peripherally related answers. 'Major categories of errors include stopping short of where the information could be found, problems understanding headings and format, general problems with comprehension, and problems with finding correct entry terms. Problems with entry terms included the subjects' use of adjectives or verbs as headings and finding the right level of granularity.' They found that 'Search strategies of users are unpredictable and not necessarily logical', but also that 'index users are creative and can draw upon internal knowledge to develop a search strategy or to make up for a deficiency in an index.' Their results on cross-references are discussed below.

**Susan Olason** [iv] has examined the usability of indexes from a systems engineering and human factors perspective. Since starting a career in indexing she found users referred to indexes as 'confusing', and feels 'we may have fallen into the trap of indexing for indexers at the expense of our users.' She states that in systems engineering, the most important factor for quality is involvement of users throughout the lifecycle of the product. Her study examined the importance of the following features for index efficiency:

- Run-on versus indented style

- Sub-entries beginning with prepositions or conjunctions

- Access paths.

There were 126 participants 'representing a good cross-section of index users', made up of 'friends and friends-of-friends-of-friends'.

## Research into wording of subheadings

**Cecelia Wittmann** [v] analysed subheadings in four award winning indexes. They were found to:

- Be on average five words long

- Start with a significant word (either a noun or a verb, especially avoiding beginnings such as 'and' and 'in')

- Not be related syntactically to their main headings (for example, 'Statistical material: units of measure in' is syntactically related, whereas 'Statistical material: units of measure' is not)

- Not exactly match words from the text.

   These characteristics were not shared by non-award winning indexes to similar books. Conclusions were that the best subheadings are coined, rather than copied directly from the text, and sum up the topic aspect concisely and that prepositions at the beginning of subheadings should be avoided where they do not add meaning or clarity.

**Susan Olason** [vi] found that subheadings that did not begin with prefix words (prepositions or conjunctions) had higher efficiencies and usefulness rankings than those that did. That is, a subheading such as 'emergencies' was preferred to 'in emergencies', and 'feeding and' was preferred to 'and feeding'. 'Comments about prefix words included frustration about being forced to read rather than scan, confusion about sorting (users did not realize that prefix words were ignored in sort),

and confusion about their purpose (did not clarify the main entry/subheading relationship).'

This research confirms Wittmann's findings, and suggests that prefix words should be avoided when possible. To complete the research, however, it would be necessary to compare the lack of prefix words with the results when prefix words are *not* ignored in sorting.

## Research into indented versus run-on subheadings

> **Indented style index**: indented indexes start each subheading on a new line, indented under the main heading. For example:
>
>     names
>         indexing rules for  41-42
>         keyword searching and  5
>
> **Run-on (run-in) style index**: run-on indexes list all subheadings in sequence, separated by punctuation such as semicolons. For example:
>
>     names: indexing rules for  41-42; keyword
>         searching and  5

**Susan Olason** found that indented-style indexes had higher efficiencies and higher usefulness rankings than run-on-style indexes. Indented indexes were ranked as user-friendly 90% of the time, while run-on indexes were never ranked as such. 'Comments about run-on indexes included frustration about being forced to read rather than scan, confusion about sorting and confusion about which page references went with which sub-entry.'

## Research into distinguishing main entries from subheadings

Participants in the **Macmillan** [vii] study commented that 'first-level entries [that is, main entries] in bold type greatly enhanced the usability of the index'.

**Jörgensen and Liddy** [viii] suggest that 'more effort and thought needs to be put into making scanning an index an easy task, particularly in the area of distinguishing between headings and subheadings.'

## Research into entry points

The **Macmillan** study recommends that indexers include more double and triple postings to provide as many entry points as possible. They wrote: 'Observers were surprised at what participants looked up…participants searched for terms they [that is, the observers] would never have thought of including in the index'.

**Susan Olason's** research suggested that users needed a broad entry point for the main topic of the book, with *see also* references leading to narrower topics. This entry acted as a miniature table of contents within the book.

## Research into cross-references

The **Macmillan** [ix] study found: 'that *see* references were not a problem…*See also* references, on the other hand, were confusing to some. For example, if they saw "Web

pages. *See also* Web sites," some expected to see "Web pages" as a subheading under "Web sites." That is, they were reading *see also* as *see under*.

On the other hand, in an online help project I worked on we used *Search using* instead of *See* because of anecdotal evidence that users were confused by the *See* reference. One of the advantages of *Search using* is that it is clearly distinguished from *See also*.

**Jörgensen and Liddy**[x] found that when using an index without cross-references (*see* and *see also*) users were slower and made more errors than those using an index with cross-references. However, they also found that the overall success rate was higher for the index without cross-references. Common errors in using cross-references include 'reading the see/see also as part of a main heading, part of a subheading, running separate references together, or reading a heading and subheading as part of a *see also*. Across all uses of the Basic Index, many users did not understand the structure or the function of *see also* references, and many exhibited an openly hostile reaction to them, saying, for example: 'This thing is so trivial. [Why?] Because it keeps going back and forth and it doesn't ever give you a page for what you're looking for.'

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[i]  Ryan, Christine Nelsen and Henselmeier, Sandra. 'Usability testing at Macmillan USA'. *Key Words* v.8 n.6 November/December 2000, pp198-202.

[ii]  Matthews, P. and Bakewell, KGB. 'Indexes to children's information books'. *The Indexer* v.20 n.4 October 1997.

[iii] Jörgensen, Corinne and Liddy, Elizabeth. 'Information access or information anxiety? – an exploratory evaluation of book index features'. *The Indexer* v.20 n.2 October 1996.

[iv] Olason, Susan. 'Let's get usable! Usability studies for indexes'. *The Indexer* v. 22 n.2 October 2000, pp. 91-95.

[v] Wittmann, Cecelia. 'Subheadings in award-winning book indexes: a quantitative evaluation' *The Indexer* v.17 n.1 April 1990.

[vi]  Olason, Susan, *op. cit.*

[vii]  Ryan and Henselmeier, *op. cit.*

[viii]  Jörgensen and Liddy, *op. cit.*

[ix] Ryan and Henselmeier, *op. cit.*

[x] Jörgensen and Liddy, *op. cit.*