

# **User studies, user behaviour and user involvement - evidence and experience from The Danish Dictionary**

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## **Abstract**

Launched in November 2009, The Danish Dictionary (Den Danske Ordbog, DDO) has an online history of just over six years. During that period we have monitored and analysed the way the dictionary is used and also made various adjustments as a consequence of both our own efforts and the feedback we have received. In this presentation, we want to share with you the experience we have gained over the years. Our focus will be on four main aspects: (1) user study, (2) search engine optimisation, (3) logfile analysis and (4) user involvement.

**Keywords:** user studies; user behaviour; search engine optimisation; logfile analysis; user involvement

## **1. User study**

In 2011, we carried out a user study (Johannsen, 2011; summarised in Lorentzen & Theilgaard, 2012) consisting of two parts: an online survey supplemented by qualitative interviews with selected user profiles. In the survey, which was answered by just over 1,000 respondents, we asked who the users were, in what situations they primarily used the dictionary, and how they evaluated the dictionary on various parameters. Our main findings from this part were:

- The typical user is a well-educated man or woman in their thirties. They use the dictionary primarily for reception purposes and usually in a professional capacity. The average user is satisfied with the dictionary and is a returning customer.
- The users generally find the dictionary appealing and easy to use. They appreciate the simple layout free from advertisement, chat function, social media sharing and other functionalities that distract their attention. First-time users are less generous in their appraisal than returning users.
- The most popular look-up items among frequent users were: meaning, use and spelling. Etymology is popular with both frequent and new users. Fixed expressions, the existence of a word and

inflection appeal more to frequent users.

- Among the critical remarks, users report that they want more headwords, more synonyms, etymology and LSP vocabulary. Furthermore, they request more usage examples and would like these to be less complex.

The qualitative part consisted of interviews with 10 respondents selected from different backgrounds in terms of age (17-61 years), gender (6 male, 4 female), education and dictionary experience, each interview falling in two parts. In the first part, the users were asked to perform six different look-up tasks. While performing the tasks, they were invited to think aloud while the examiner recorded what they said and did. In the second part, the respondents were interviewed about the tasks, their strategies and their use of DDO in general.

The interviews confirmed certain parts of the online survey, for example that Google was used by 50% as their first choice when looking up words, and by 30% as their second choice. The main problems with the tasks were to do with (1) selecting the right homograph and (2) locating fixed expressions.

Following the user study, we decided to make various changes to the website, the most important being:

- In the event that a search had no match in the base, the function 'Did you mean' was copied from the right-hand column to the central field as some users were unable to find it in the original position.
- In the event that a search had no match DDO, but did match an entry in the historical dictionary *Dictionary of the Danish Language* (Ordbog over det danske Sprog), also accessible from our website ordnet.dk, we decided to notify the user and create a link. Since then, we have added links to other dictionaries developed by our institution, all digitised versions of historical dictionaries such as *Meyers Fremmedordbog*, a comprehensive dictionary of foreign words from 1924, *Holbergordbog*, a digital version of the printed five-volume dictionary of the complete works of the author Ludvig Holberg (1684-1754), and *Moth's dictionary*, the first comprehensive dictionary of Danish from c. 1700 (for further details, cf. Troelsgård & Sørensen in press). In Sørensen, Lorentzen & Trap-Jensen (2015) further plans are demonstrated to extend linking to external resources.
- In the event of multiple search results due to homographs, we