

QUAID: A questionnaire evaluation aid for survey methodologists

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QUAID (Question Understanding Aid) is a software tool that assists survey methodologists, social scientists, and designers of questionnaires in improving the wording, syntax, and semantics of questions. The tool identifies potential problems that respondents might have in comprehending the meaning of questions on questionnaires. These problems can be scrutinized by researchers when they revise questions to improve question comprehension, and thereby enhance the reliability and validity of answers. QUAID was designed to identify 9 classes of problems, but only 5 of these problems are addressed in this article: unfamiliar technical term, vague or imprecise relative term, vague or ambiguous noun-phrase, complex syntax, and working memory overload. We compared the output of QUAID with ratings of language experts who evaluated a corpus of questions on the 5 classes of problems. The corpus consisted of 505 questions on 11 surveys developed by the U.S. Census Bureau. Analyses of hit rates, false alarm rates, d' scores, recall scores, and precision scores revealed that QUAID was able to identify these five problems with questions, although improvements in QUAID's performance are anticipated in future research and development.

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