

The Role of Social-Web Specific Epistemic Beliefs in Sourcing Strategies on the Social Web

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Abstract. The present study examined the role of social-web specific epistemic beliefs in $N = 124$ vocational students' sourcing strategies with respect to social web contents. Results indicated that the stronger students' beliefs that knowledge claims encountered on the social web need to be checked against other information sources, reason, and prior knowledge, the more critically they evaluated the quality of a blog article and the blog author's credibility, and the more incomplete source references they identified. Furthermore, the stronger students' beliefs that the social web is a reliable knowledge resource that contains correct and detailed expert information, the more strategies they reported to find experts on a topic by using the social web.

Keywords: Epistemic beliefs; sourcing; social web.

Introduction

In recent years the internet has emerged as an important medium for students to retrieve (academic) information. However, on the internet or particularly on the social web (i.e., in blogs, online forums, wikis, and social networking sites) authors can publish almost anything irrespective of their expertise or intentions. Therefore, sourcing strategies are vitally important. These include evaluating a content's quality (e.g., "Does the article include references?" or "Is it balanced or rather one-sided?"), assessing authors' credibility (e.g., "What is the author's expertise?" and "What are potential intentions of the author to publish the information?"), or knowing how to find information from credible authors. Students' personal epistemology, specifically their personal beliefs about what knowledge and knowing is like on the social web, could be one important variable to predict such sourcing strategies.

Previous research has shown that internet-specific epistemic beliefs (EBs), that is, personal beliefs about the nature and use of information found on the internet, play a role in students' use of self-regulatory strategies (e.g., Chiu, Liung, & Tsai, 2013; Strømsø & Bråten, 2010) as well as their source evaluations (Kammerer, Bråten, Gerjets, & Strømso, 2013) during web search. In particular, the belief that knowledge claims encountered on the internet need to be checked against other information sources, reason, and prior knowledge positively predicted the reported use of self-regulatory strategies on the internet (Chiu et al., 2013; Strømsø & Bråten, 2010) and the construction of a complete and balanced representation of a conflicting issue addressed in multiple websites (Kammerer et al., 2013). Furthermore, beliefs in the internet as a reliable resource of correct and detailed knowledge positively predicted students' self-reported competence in conducting Web searches (e.g., Strømsø & Bråten, 2010) and their trust in a search engine's ranking of websites (Kammerer et al., 2013).

The present study, which was co-funded by the European Social Fund and the German Federal Ministry of Education and Research, aims at expanding this research by examining the role of social-web specific EBs in vocational students' sourcing strategies with respect to social web contents.

Method

In a classroom setting 124 vocational students from the IT sector ($M = 20.4$ years, 93.5% male) were administered an adapted version of the *Internet-Specific Epistemological Questionnaire (ISEQ)* by

Bråten, Strømsø, and Samuelstuen (2005). Other than in previous studies, the 17 items were formulated with respect to course-related knowledge and knowing on the social web instead of the internet in general. Items were rated on 5-point Likert-type response scales ranging from 1 (*totally disagree*) to 5 (*totally agree*).

Items were submitted to a maximum likelihood exploratory factor analysis with oblique rotation. The analysis revealed two factors (eigenvalues 5.10 and 2.40) explaining 44.1% of variance. The two factors were labeled General Social Web (GSW) beliefs and Justification for Knowing (JFK) beliefs. GSW beliefs included 13 items (Cronbach's $\alpha = .86$), with high scores representing the view that the social web is a reliable knowledge resource that contains correct and detailed expert information about course-related contents, and low scores indicating that students had doubts about these issues (sample item: "To almost every question related to my course work the social web can provide me with a correct answer."). JFK beliefs included 4 items (Cronbach's $\alpha = .74$) with high scores reflecting the idea that knowledge claims provided in the social web need to be checked against other sources, reason, and prior knowledge, and low scores indicating that such knowledge claims can be accepted without critical evaluation (sample item: "To find out whether knowledge about my coursework that I find on the social web is trustworthy, I try to compare knowledge from multiple sources.").

Subsequently, students were presented three tasks that addressed different aspects of sourcing when using the social web. The tasks were presented on laptops and required free text entry. In the first task, students were asked to read a blog article about health risks of laser printers and to argue whether or not they would use this website for a school assignment and to justify their decision with as many reasons as possible. The blog article did not include any references and was written in a one-sided, somewhat subjective style. When clicking on a hyperlink with the author's name, one was informed that the author was a PR consultant of a well-known printer company. Therefore, students received points for arguments like "The article did not contain any source references.", "The author was a PR-consultant and thus might be biased.", and "One should search for additional sources in order to verify the article's content." In the second part of this task, participants were presented the page containing the information about the author and were asked explicitly to rate the author's credibility. It was analyzed whether or not participants argued that the author was a PR-consultant and thus might provide biased information. In the second task, participants were presented another blog article on the topic, and were asked to identify paragraphs with incomplete source references (there were four paragraphs with incomplete source references) and to explain why. In the third task, students were asked to imagine that they wanted to find and contact an expert on the topic by using the social web. An open question asked them about strategies to do so. Correct answers were, for instance, to search for trustworthy articles and find out who is the author, to search in social networking sites and peruse profile information, to join social network groups on the topic, or to write a post asking whether anyone knows anyone who is an expert on the topic.

Results

We performed four multiple regression analyses or logistic regression analyses, respectively, using GSW beliefs and JFK beliefs as predictor variables in all analyses. Except for the dichotomous variable on the assessment of author credibility, the dependent variables were square-root transformed because of strong positive skewness (i.e., the majority of participants had rather low achievement scores).

With regard to students' achievement in critically evaluating the blog article ($M = 0.95$ arguments, $SD = 0.79$), EBs explained a significant amount of variance, $R^2 = .10$, $F(2, 121) = 5.93$, $p < .01$, with JFK beliefs being a significant positive predictor, $\beta = .32$, $p < .001$. It should be noted that at this stage only 10.4% of the students mentioned that the author was a PR-consultant and thus might provide biased information. With regard to students' subsequent assessment of author credibility in the second part of the task, specifically, the identification of the author as potentially biased (38.7% of the participants did so), a logistic regression showed that EBs explained a significant amount of variance, Nagelkerkes $R^2 = .14$. JFK beliefs were a significant positive predictor, $B = .91$, Walds $\chi^2 = 9.61$, $p < .01$. Similarly, with regard to students' achievement in identifying incomplete source references ($M = 1.19$, $SD = 0.75$), the regression model was also significant, $R^2 = .07$, $F(2, 121) = 4.40$, $p < .05$, with JFK beliefs being a significant positive predictor, $\beta = .26$, $p < .01$. Finally, with regard to students' reported strategies to find experts by using the social web ($M = 0.72$, $SD = 0.60$), EBs also explained a significant amount of variance, $R^2 = .05$, $F(2, 121) = 3.61$, $p < .05$. GSW beliefs were a significant positive predictor, $\beta = .21$, $p < .05$.

Discussion and Conclusion

Our results provide new intriguing findings about social-web specific EBs and their relationship with sourcing strategies on the social web. First of all, the items that were formulated with respect to the social web resulted in two meaningful factors that correspond to the factors found in previous studies on internet-specific EBs (e.g., Bråten et al., 2005; Kammerer et al., 2013). Second, the results of the regression analyses indicate that particularly the belief that knowledge claims encountered on the social web need to be checked against other information sources, reason, and prior knowledge plays an important role in sourcing. It positively predicted a critical evaluation of the blog article and the author's credibility, as well as the identification of incomplete source references. While beliefs that the social web is a reliable resource that provides correct and detailed expert knowledge about course-related contents were not related to these sourcing strategies, they positively predicted strategies to find experts by using the social web. This indicates that those students who consider the social web as a useful and reliable knowledge resource might be those who use it more frequently to consult experts or who know more strategies to do so, respectively.

It should be noted, however, that our correlational data do not warrant conclusions about causality. Moreover, as EBs were assessed directly before the tasks, we cannot exclude that the EB items positively influenced students' achievement in the tasks. Future work should address those limitations.

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