

Credibility: Norwegian Students Evaluate Media Studies Web Sites

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Abstract. This paper investigates Norwegian university students' evaluations of web site credibility and site authors' vested interests with respect to a text-based academic site and an informational site with commercial support. Credibility ratings were higher for some aspects of the academic site even though the non-academic site was rated more highly in presentation design and currency. Negative correlations emerged between academic level and confidence in deciding web site credibility and in detecting misrepresentations.

1 Introduction

Why do people accept or believe information that they read on the World Wide Web? Upon what basis do web users make determinations that some information is acceptable or believable and some is not? These questions are especially important as students, educators and the general public rely more and more upon web-based information.

In this work, we investigate credibility (i.e., information accuracy and veracity) determinations as students evaluate information on the web and web sites generally. To provide background, the following major points emerged previous research in this area:

- Educational levels affect credibility determinations, with those more highly educated in a field (e.g., scientists) particular content rating popular media sources less highly than do less educational preparation in the field [8].
- University-level students have limited understandings of the concept of “vested interests,” particularly they relate it to web site authors’ non-commercial/educational interests [6] [4].
- It appears that cultural and socio-political contexts can affect credibility determinations, a finding that emerges from work in Singapore and should be explored in other cultural contexts.

In response to these points, particularly the latter, the present study examines the credibility judgments of university students in Norway. Of particular interest are cross-cultural dimensions and determinations of students in different content areas, information science and media studies. A question that guided this research was whether they might have considered credibility aspects of web site information and vested interests of web site authors or information sources to a greater extent than students in other fields who may focus less on information sources.

2 Method

2.1 Participants

Participants consisted of 45 students (25 females and 20 males) from a university in Norway. The mean age was 26.27. The students were in the following fields: 27 in information science, 16 in media studies, and 2 in other fields. Fourteen were in B.A. programs, 22 in M.A. programs, and 5 in Ph.D. programs.

2.2 Materials

Materials consisted of a survey that presented two web sites for rating: an academic site focusing on audience studies and a nonacademic site that provides film reviews according to era.

Participants used 5-point Likert scales to rate the sites on 17 characteristics related to credibility that emerged from previous research [2]. They also rated vested interests of web site authors, and provided self-ratings in response to 5 questions about various aspects of confidence and competence (e.g., confidence in deciding that a web site’s information is accurate or truthful).

2.3 Procedure

Surveys were distributed in several media studies and information science classes and collected at the end of class, or afterward.

3 Results and discussion

3.1 Participants' ratings of the two web sites

Examination of ratings for the two different web sites revealed interesting differences (See Table 2). First, web site 1 was rated more highly on many dimensions commonly associated with credibility, including the following characteristics: objective ($M = 3.58$ for academic site 1, versus 2.86 for nonacademic site 2), references ($M = 3.7$ site 1; $M = 2.16$ site 2), and author identification ($M = 3.42$ site 1; $M = 2.57$ site 2). We interpret these findings cautiously, as examination of mean differences is limited. However, it would appear that participants were taking many other aspects into account besides solely design aspects in making determinations about specific aspects of credibility.

In contrast, web site 2 was rated more highly on design-related elements, including information/presentation design ($M = 3.16$) in contrast to site 1 ($M = 1.82$). Also web site 2 was rated as slightly more clear ($M = 3.43$) than site 1 ($M = 2.91$). It appears that students regarded aspects of design separately from other aspects of credibility. Web site 2 was also rated as more up-to-date ($M = 3.59$) in than site 1 ($M = 3.07$). Web site 2 appeared to be regularly updated.

With respect to vested interests, participants rated the first site as more unbiased/objective ($M = 3.33$) than site 2 ($M = 2.8$). The second was rated as more commercial ($M = 3.39$) than site 1 ($M = 1.71$). The second site was also rated more highly on bias ($M = 3.02$) than site 1 ($M = 2.56$), and personal opinion/agenda ($M = 3.6$) than site 1 ($M = 2.91$).

3.2 Confidence and competence ratings

Participants provided reasonably high self-ratings for the following: confidence in deciding a web site's information is accurate or truthful ($M = 3.47$), confidence in detecting misrepresentations on web sites in general ($M = 3.16$), and competence in evaluating the validity of information on the web in general ($M = 3.38$). These high ratings would be expected of university students.

However, they rated themselves less highly for the following: confidence in detecting misrepresentations in the web sites given in this questionnaire ($M = 2.80$), and competence in evaluating the validity of information about the topic in the given web sites ($M = 2.80$). It is possible that students were less familiar with topics like audience studies (although this is a topic covered in the media studies curriculum) or students are less likely to associate credibility determinations with content in this area, or in film studies, or film reviews.

3.3 Culture and gender

One-way ANOVAs on confidence and competence ratings revealed no significant differences emerged between men and women. This finding is not unexpected, as "in the annual UNDP Human Development Reports Norway...has for several

consecutive years been ranked as the world's leading nation in...gender equality" [1].

3.4 Correlations

Pearson product-moment correlations were carried out between demographic variables (i.e., gender, age, field of study, academic level) and confidence and competence ratings. Two interesting *negative* correlations emerged between academic level and confidence in deciding whether a web site's information is accurate or truthful $r(39) = -.34$ ($p < .05$), and academic level and confidence in detecting misrepresentations in the web sites given in this questionnaire $r(39) = -.35$ ($p < .05$). Similarly, a negative correlation between academic level and competence in evaluating the validity of information on the web in general approached significance $r(39) = -.30$ ($p = .057$). These findings indicate that the higher the academic level, the *less* confidence participants have in deciding a web site's information is accurate, or in detecting misrepresentations in the web sites given in the questionnaire. Additionally, it suggests that the higher the academic level, the less competence people feel they have in evaluating the validity of information on the web in general.

It is very likely that these findings can be explained by considering the work of Kruger and Dunning [9], who found that less knowledgeable people in certain nonacademic areas tended to over-inflate their confidence in areas where they had the least knowledge. In contrast, experts underestimate confidence in areas where they knew most. Kruger and Dunning attributed this to experts' tendencies to overestimate the knowledge of their peers in contrast to themselves. This also relates to the well-known truism: The more you know, the more you know what you don't know.

4 Summary and conclusion

In examining university students credibility determinations of two web sites related to media studies, major findings indicated that students differentiated between presentation/design aspects of web sites and other aspects generally considered to be more central to credibility, such as objectivity and accuracy. This could be considered to be somewhat different from the findings reported by Fogg et al. [3]. Additionally, we found that the more educated students were (as determined by academic level) the less confidence they had in certain aspects of credibility determinations, such as detecting whether a web site's information is true. Although this could appear counterintuitive, it does support the work of Kruger and Dunning [9] and suggests that the more knowledgeable one is, the more critical one is likely to be as one uses information from the web.

Finally, although we carried out this study in Norway, we did not find general evidence of cultural differences in comparison to our previous studies in the U.S., nor did we find evidence of any gender differences. However, asking more general open-ended questions might result in comments that would be more indicative of individuals' aspects of understanding and approaches to the process of credibility determinations. This is a recommended goal for future research in this area.

References

1. *Beijing + 10: Norwegian Alternative Report* (n.d.). Retrieved May 26, 2005 from <http://www.unece.org/oes/gender/documents/question/AlternativeRep/Norway.pdf>
2. Crosby, M. E., Iding, M. K., Auernheimer, B., & Klemm, E. B. (2002). Judging the Veracity of Web Sites. *Proceedings of the International Conference on Computers in Education (ICCE 2002)*.
3. Fogg, B.J., Soohoo, C., Danielson, D., Marable, L., Stanford, J. and Tauber, E. R. (2002). How do people evaluate a Web Site's Credibility: Results from a large study. Retrieved July 1, 2004 from <http://www.webcredibility.org/>
4. Iding, M., Crosby, M.E., Auernheimer, B., & Klemm, E.B. (2005). Web Site Credibility: Why Do People Believe What They Believe? Unpublished manuscript.
5. Iding, M., Singh, J.M., & Crosby, M.E. (2005). What makes Web-based information believable? Unpublished manuscript.
6. Iding, M. K., Auernheimer, B., Crosby, M. E., & Klemm, E. B. (2002). Users' Confidence Levels and Strategies for Determining Web Site Veracity. *Proceedings of The WWW 2002: The Eleventh International World Wide Web Conference*.
7. Iding, M., Landsman, R., & Nguyen, T. (2002). Critical evaluation of scientific websites by high school students. In D. Watson & J. Anderson (Eds.), *Networking the Learner: Computers in Education: Seventh IFIP World Conference on Computers in Education Conference Proceedings*. Dordrecht, Netherlands: Kluwer Academic Publishers.
8. Klemm, E. B., Iding, M., & Speitel, T. (2001). Do scientists and teachers agree on the credibility of media information sources? *International Journal of Instructional Media* 28(1), 83-91.
9. Kruger, J. & Dunning, D. (1999), Unskilled and unaware of it: How difficulties in recognizing one's own incompetence lead to inflated self-assessment. *Journal of Personality and Social Psychology*, 77(6), 1121-1134.
10. Stanford, J., Tauber, E.R. Fogg, & Marable, L. (2002). Experts vs. online consumers: A comparative credibility study of health and finance web sites. Retrieved July 1, 2004 from <http://www.webcredibility.org/>

