

Chapter 48

Using Website Analysis as a Tool for Computer Assisted Language Learning in a Foreign Language Classroom

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ABSTRACT

This research explored how website analysis and design pedagogy could help support analytical thinking and English language production in an EFL context. In this study, 28 EFL-based computer science students took part in a website analysis experiment. The study investigated if students could analyze English websites and comprehend and produce responses in English for eight open-ended questions, divided into two sets of design and inference-based queries. Additionally, students answered a questionnaire on their own awareness about the use of metacognitive reading strategies, during website analysis and questionnaire responses. Results have demonstrated reasonable ability for students to answer most design and inference set queries. Questions on design, organization, audience analysis, and importance of the website were answered with better efficiency, when compared to few others. However, accuracy scores in neither set showed any significant practice effect, and rather performance dropped over the weeks. Further, self-reports indicated use of metacognitive reading strategies and significant correlations with accuracy scores during website analysis.

INTRODUCTION

Structured website analysis with open-ended feedback as a tool for foreign language learning has the potential to be a stimulating exercise because it addresses questions that are unique to the medium. Very little is known about users' ability to

provide open-ended feedback on website content (Elling et al., 2012). Moreover, in an EFL context, website analysis might bring to light a range of issues related to learning difficulties resulting from lack of language proficiency, variable use of cognitive and metacognitive strategies for information comprehension on the web (Lomicka,

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1998), individual differences in learning with hypermedia (Knight, 1994), besides complexity in the web content itself. This research contribute to our overall understanding of how EFL learners perceive English website content and design, and how specific use of reading strategies might explain perceptions about web design.

The web analysis activity as reported in this article, explores EFL students' potential for logical thinking and English language production in a task-based language learning context (Robinson, 2011). Rather than focusing on grammatical proficiency in writing, this study examines ability to process and structure complex responses in English, and especially when such processing stems from variable use of different reading strategies (e.g., use of online translators, dictionaries, groupthink, skimming and scanning content etc). This study could also be construed as a preliminary analysis on how structured design education could be effectively used in foreign language classrooms.

Analyzing a website might include answering how should the many different forms of web expressions, interactivity and mutual relationships be analyzed? How should students understand the role of hyperlinks, and what is the real definition of a website as an object of study? (Brugger, 2009). This study emphasizes that design and content are important and separate features in a website, and its comprehension merits diverse considerations, focus, priorities and learning experiences. *Content* refers to the information, features, or services that are offered in the Web site, *design* to the way the content is made available for Web visitors (Huizingh, 2000). There is research emphasizing websites as mostly a visual media. Factors such as layout, design, and graphics often serve as either credibility markers individuals use to determine if a website merits consideration or as navigational items used to access information on a website. As a result, website designers must consider how visual factors can affect users' perceptions of online information (Amant, 2005). But, a web design analysis should not only test visual design

and its ability to facilitate information access, but also try and understand how well the overall page design and related textual /graphical content in combination (Roy, 2006), might help students to understand the purpose of the website, the possible audience, product goals etc. Thus, how EFL learners read the English webpage (Murray & McPherson, 2004) is a focus of this analysis.

Comprehending the design and content of a website becomes more complicated when students' language proficiency impacts the perception of a website. On today's primarily English-language Web, non-native students encounter problems, even with some fluency in English (Yu & Miller, 2010). This is precisely why we would like to know more about how students used cognitive, metacognitive and support reading strategies for processing English responses related to design and inference-based queries.

The research questions for this study explore whether through English website analysis, students are able to explain and write in English the general purpose, design and content of any given English website. Are students able to understand various design-based (based on visual design, navigation design, use of web technology and text-graphic content) and inference-based queries (overall message/purpose of the website, intended audience, project goals etc.)? While the design-based queries could be mostly explained based on visual literacy (Snyder, 1999, 2002) and preliminary knowledge of application software, ability to read content in the website (Chun, 2001) in most cases, would have provided more definite information about the purpose of the website, product (website) goals, intended audience etc.

This review will investigate research on 1) website analyses and logical thinking, 2) web design and the reading process, 3) cognition and metacognitive reading strategies, and 4) principles of web design in EFL settings. These topics are critical to the understanding of the role of using website design and analyses as a tool for promoting analytical thinking in an EFL learning context.

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