Chapter XLV

Usability and User-Centered Theory for 21st Century OWLs

Dana Lynn Driscoll
Purdue University, USA

H. Allen Brizee
Purdue University, USA

Michael Salvo
Purdue University, USA

Morgan Sousa
Purdue University, USA

ABSTRACT

This chapter describes results of usability research conducted on the Purdue Online Writing Lab (OWL). The Purdue OWL is an information-rich educational Web site that provides free writing resources to users worldwide. Researchers conducted two generations of usability tests. In the first test, participants were asked to navigate the OWL and answer questions. Results of the first test and user-centered scholarship indicated that a more user-centered focus would improve usability. The second test asked participants to answer writing-related questions using both the OWL Web site and a user-centered OWL prototype. Participants took significantly less time to find information using the prototype and reported a more positive response to the user-centered prototype than the original OWL. Researchers conclude that a user-centered Web site is more effective and can be a model for information-rich online resources. Researchers also conclude that usability research can be a productive source of ideas, underscoring the need for participatory invention.

INTRODUCTION

Universities have been leaders in developing virtual workplaces. Campus-based research has led to the development of remote information access, telecommunication, and the infrastructure research that supports the emerging 21st Century virtual workplace. Indeed, in *Datacloud*, Johnson-Eilola (2005) presents studies of a number of campus-situated offices as places of information-age literacy practice. One conception of campus situates academics in ivory towers separated from the realities of the working world, a romantic representation of a detached life of the mind. Contrary to this idealization/criticism, which represents the university and its knowledge workers as out of touch with the
working world, universities have been leaders in
developing cutting-edge flexible and virtual work-
places. Similarly, college campuses have been sites
of the first realizations of emerging problems that
accompany postindustrial knowledge work—cu-
bicle farms and boundary-blurring between work
and home, business and family.

Envisioning the university as a site of change
should not be surprising, as campuses began as
a center for knowledge-making, for research and
development, and then for dissemination of these
findings. Knowledge-making is the basis for land
grant universities (see the NASULGC history).
And recently, corporations have used college
campuses as models for a substantial number
of corporate worksites. That these emerging 21st
Century business architectures are modeled after
college campuses should not come as a surprise.
Corporate universities, designed as educational
institutions, emerge from an earlier model of
collection, organization, and dissemination of
knowledge. Faber and Johnson-Eilola (2003) write
about corporate educational structures built in
imitation of universities. Their investigation of
corporate knowledge creation demonstrates how
reliant these organizations were on their academic
precursors, and also how corporations quickly
shifted from a model of replacing universities to
one of cooperation, collaboration, and strategic
augmentation. Knowledge-making requires inten-
sive investment and long-term commitment.

Indeed, the Purdue Online Writing Lab, or
OWL, described in this chapter is built on the
model of an institution built for 19th Century in-
formation dissemination: the land grant university.
The OWL started as a group of filing cabinets filled
with handouts about classroom-based writing
instruction. Literacy educators began by imitat-
ing their colleagues in the agricultural extension
program, which was designed to bring practical
knowledge from campus to farmers working
their fields. The OWL was originally designed to
bring best teaching practices to the classrooms
of Indiana. As this chapter describes the OWL’s
development, keep in mind how its technological
practices closely follow the development and dis-
semination of information, from paper- and mail-
based dissemination to digital communications
technologies, from file cabinets (early databases)
from which documents were copied and mailed, to
e-mail and early digital formatting, to Web-based
browser searches and always-accessible digital
warehousing of online information resources.
And notice how the scope expands from a local
(state) resource to increasing spheres of influence
with global reach and dissemination.

This chapter presents the results of two gen-
erations of usability research designed to support
creation of user-centered taxonomic and naviga-
tion structures. The technological development
closely follows that described by Rosenfeld and
Morville (2006) in Information Architecture for
the World Wide Web, in which isolated “archi-
pelagoes” of information are gathered together
and formalized under increasingly complex or-
ganizational schemes and centers of institutional
control. User-centered design, which could also
be represented as citizen-centered design, also
informs the research.

Each successive generation of OWL informa-
tion design reflects the commitment to timely
dissemination and integration of applications of
research, following the collaborative spirit of the
land grant University. The University of Wiscon-
sin-Madison has, not surprisingly, named this
commitment to citizen participation the Wisconsin
Idea, reflecting Wisconsin’s progressive history
by bridging participatory design with information
architecture. Often referred to as Scandinavian
Design because of its northern European roots,
the Wisconsin Idea brings Participatory Design
together with Information Design. Key to this
collaborative relationship between the University
and the citizens it serves is mutual respect and two-
way communication, or according to Wisconsin’s
Center for Integrated Agricultural Systems (2004):
experts were “on tap, not on top.”

This chapter describes two steps in an ongoing
commitment to user-based research to improve the
usability and accessibility of Purdue’s OWL. Em-
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