

Comparative Web Design Tool Evaluation

Maria Cordell
Markus Haas
Andriy Naborskiyy
Oriana Williams

The Design Tools

▶ Dreamweaver MX

- commercially available
- has extended features for site management

▶ Mozilla Composer

- freeware
- supports most common Web editing needs

Evaluation Plan

- ▶ Test subjects relatively new to design tools
- ▶ Some experience with HTML authoring
- ▶ Tool quality assessment goals
 - functional completeness
 - learnability
 - pleasantness (lack of frustration)
- ▶ Devise consistent test metrics
- ▶ Devise design to encapsulate tasks

Our Process

- ▶ Six subjects evaluated using both tools
- ▶ Subject activity captured via Camtasia
- ▶ Passive observation of subjects
- ▶ Questionnaires used to capture quantitative and qualitative data
- ▶ Post-session Camtasia capture studies

Coding Scheme

- ▶ number of times help is accessed
- ▶ number of errors
- ▶ number of design omissions (at the end)
- ▶ number of times program help is consulted
- ▶ open existing page as guide
- ▶ time duration for completion of all tasks (overall session time)
- ▶ an “undo” operation
- ▶ idle browsing (hunting) periods
- ▶ number of times code (vs. design) mode used

Questionnaire Results

Question	Familiarity (1 – 7 scale)
How familiar are you with Dreamweaver?	3
How familiar are you with the applications in the Macromedia Studio suite?	3.83
How familiar are you with Mozilla composer?	1
How much experience do you have with creating a web page?	4.67
How much experience do you have with creating Weblog pages?	1.17
How comfortable are you in writing HTML code (with no graphical editor or tools)?	4.33

Dreamweaver Results

- ▶ Five subjects completed tasks in < 18 min
- ▶ One subject did not finish (ran out of time)
- ▶ One subject accessed help
- ▶ User errors: header, image border, text weight, and table height
- ▶ Two subjects started with an existing page
- ▶ Idle browsing: exploring, cell merging, image border, copyright symbol

Composer Results

- ▶ Three users did not finish (ran out of time)
- ▶ Three users completed in < 13 min
- ▶ Three subjects accessed help; one was helped
- ▶ User errors: header, page width, bullet list
- ▶ Two subjects started with an existing page
- ▶ Table column resizing, control handles, and horizontal rule problematic

Dreamweaver vs. Composer

▶ Learnability

- Total time taken related to familiarity with Macromedia products
- Composer required trial-and-error for tables
- Bulleted lists difficult in both
- Patterns in idle browsing

▶ Functional Completeness

- Help system issues in both tools
- Composer had system bugs or nonstandard UI

▶ Pleasantness (lack of user frustration)

- Issues in completeness and nonstandard functionality created frustration
- One user emitted a grunt of disdain while working with Composer

Conclusions

- ▶ Users will transfer gained domain knowledge to a new tool
 - e.g., methods for table modification, and special character insertion (copyright symbol)
- ▶ Almost all users knew how to insert a special character
 - helped tool learnability, since users instinctively knew where to find a function

Conclusions, part 2

- ▶ Composer look & feel led to relatively better performance
 - predictable text- and formatting-oriented functions; had a learnability advantage
- ▶ Dreamweaver had clear advantage in Web page design-specific tasks
 - setting image border and modifying tables
 - more functionally complete
 - this tool has greater learnability for these tasks

Conclusions, part 3

- ▶ Significant functional completeness differences
 - Composer table editing handles non-standard for a modern GUI tool
 - subjects repeatedly tried to adjust table properties
 - horizontal rule couldn't be set in Composer
- ▶ Above led to frustration in using tool
 - many subjects unable to complete due to these complications
 - three users unable to complete task in Composer vs. one user in Dreamweaver

Summary

- ▶ Overall, Dreamweaver is a better tool as the complexity of the task increases
- ▶ Five of six subjects said they'd use it for future, more complex tasks
- ▶ Dreamweaver's extensive functionality did not reduce its learnability
- ▶ Frustrations shown by Composer users indicate some design environment issues that need to be addressed in future product iterations