PROVOCATIONS

Summarizing Human Factors Literature With Haikus, Limericks, and Other Poetic Forms

BY PAUL GREEN

Once a year, since the early 1980s, I have taught a class called "Human Factors in Computer Systems" (Industrial and Operations Engineering IOE 436) at the University of Michigan. This three-credit class typically attracts 40–45 students, mostly seniors in industrial and operations engineering who have already completed the introductory human factors lecture and laboratory courses.

IOE 436 has four expected objectives. The first requires me to convince students that designing computer hardware and software that is easy to use is as important as other aspects of computer system design (in other words, "converting" them to the "human factors religion"). The second is to teach how to design and evaluate computer systems for ease of use utilizing human performance experiments, analytic models and methods, rapid prototyping, and the research literature. The third and fourth objectives are to teach students to learn on their own and to improve their oral and written presentation skills.

When students graduate, there is a reasonable chance they will be either the human factors expert on a team or, after a few years, a project team leader. In those roles, they will need to spend time looking for information on the usability of alternative interfaces or interface characteristics, methods to conduct an evaluation, and similar topics. To find that information, they will examine the human-computer interaction literature.

But how can students learn about a body of literature consisting of journal articles and proceedings that emphasize methods and data? After all, the reading experience of engineering students is almost solely textbooks that present equations in a ready-to-use format. Thoughtlessly typing words into Google provides a dump of everything. What they will need in the future are the most important, high-quality (reviewed) articles, and they will need them quickly. Where should they look?

Accordingly, on the first day of class, students are given an assignment to skim seven primary journals in human-computer interaction: *ACM Transactions on Computer-Human Interaction, Behaviour & Information Technology, Human-Computer Interaction, Interacting with Computers, International Journal of Human-Computer Interaction, International Journal of Human-Computer Studies,* and the *Journal of Usability Studies*. They also examine the *ACM SIGCHI Proceedings*. To keep the assignment current, only issues from the last three years of these publications are considered. The effort to complete this assignment is minimal: Students do not need to go to the library, as all publications are online (University of Michigan eLibrary) and free.

Students are asked to summarize one article from the publications listed and provide five keywords from each journal. Many students would just cut and paste material without absorbing what the journals contain. So far, there is nothing unusual or noteworthy about the assignment.

To get students to think more deeply about what they read and demonstrate their creativity, I require them to provide a summary of the article they read in the form of a short poem in iambic pentameter, a limerick, or a haiku. When this assignment is announced in class, there is a collective groan. Nonetheless, students complete the assignment as required and find it to be an interesting and enjoyable challenge. Most important, it is apparent from what they have written and their comments, both in class and outside of class, that they have thought more deeply about what they read.

Following are a sample of the better submissions from students (with their permission) from the winter 2008 semester. Only a few of the students were able to capture the essence of what was done and the conclusions in so few words. The most popular format was a modified haiku, probably because that form is short and has the fewest structural constraints.

Submissions From IOE 436, Winter 2008

Balakrishnan, R., & McGuffin, M. J. (2005). Fitt's law and expanding targets: Experimental studies and designs for user interfaces. *ACM Transactions on Computer-Human Interaction*, *12*(4), 388–422.

Haiku by Michael Grondin
User scrolls mouse through:
Widget expands to right size
User can click on.

Berkel, T. R., & Hourcade, J. P. (2007). Simple pen interaction performance of younger and older adults using handheld computers. *Interacting with Computers, 20*(1), 1–18.

Haiku by David Marvicsin
Handhelds and geezers
They are not bad with the pen
Except for tapping

Fleuriot, C., & March, W. (2006). Girls, technology and privacy: "Is my mother listening?" In *CHI Proceedings* (pp. 107–110). New York: Association for Computing Machinery.

Haiku by Heetal Patel
Girls seek privacy
Texts and IMs are not good
Mobile phones are gold

Macaulay, M. (2004). The speed of mouse-click as a measure of anxiety during

human-computer interaction. *Behaviour & Information Technology, 23*(6), 427–433.

Haiku by Robert Edgar
Mouse-click anxiety testing
Link of stress and computer
No apparent link

Sumit, M., Wekrhove, P., & Worring, M. (2006). Navigation on handheld displays: Dynamic versus peephole navigation. *ACM Transactions on Computer-Human Interaction, 13*(4), 448–457.

Limerick by Ibrahim Shamsi
The three professors from Amsterdam
Couldn't read the text and said DAMN
They tried their best
And so conducted a test
And concluded "just move the screen, man"

Tan, D. S., Gergle, D., Scupelli, P., & Pausch, R. (2006). Physically large displays improve performance on spatial tasks. *ACM Transactions on Computer-Human Interaction*, *13*, 71–99.

Haiku by Nicole Roels
Small screen or large screen
Try this and that; size changing
Choose a big display

My impression is the poetry achieved its purpose. To whit:

So I can say in conclusion,
Firmly and without delusion,
Poetic means,
As strange as it seems,
Helps with conceptual fusion.

Paul Green is a research professor in the Human Factors Division at the University of Michigan Transportation Research Institute and an adjunct associate professor of industrial and operations engineering. He conducts research on driver workload and teaches the human-computer interaction and automotive human factors classes. He also teaches the human factors engineering short course, a course for those in industry, now in its 50th year. Paul is president of the Human Factors and Ergonomics Society. *He thanks Monica Milla, the UMTRI editor, for review of this article and drafting the concluding poem.*