Turning the Usability Fraternity into a Thriving Industry

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INTRODUCTION

Many business and IT executives today think that usability is an important aspect of *software applications* that are used in enterprises (Orenstein, 1999). However, the term *usability* represents different things to different people. And, to most people, usability does not sound like an aspect that could really impact enterprise performance and bottom-line.

Literature suggests that the usability fraternity has failed to make an impact so far. For example, Bias and Mayhew (1994) ask "… given that the Human Factors Society (now the Human Factors and Ergonomics Society) is a quarter of a century old, why is it taking so long for usability engineering to achieve its place alongside the other accepted disciplines?"

Later, this article looks at some reasons why, and what to do about it.

BACKGROUND

There are thousands of advertising agencies in the world and many of them have a large staff and huge revenues. Advertising is a recognized industry. Is usability a recognized industry? How many *usability firms* are there? How many usability firms have over 100 people or 10 million dollar revenues? How many are listed in the stock market?

One U.S.-based organization says that though their usability engineering group strength of 18 specialists is small, this number is still larger than what many independent usability groups have. That gives us an idea of the average size of usability firms.

What are some of the problems that are stopping this field from growing big? Here are some: Practitioners are not picking up the right skills. Practitioners are not doing the right "usability" things. Prac-

titioners are not impacting the business world. And practitioners are not promoting the right things. Of course, there are exceptions, but they are few. The following sections look at each problem in detail.

DEVELOP GOOD CREDENTIALS

Many usability practitioners are believed to not have the right kind of training. Shneiderman, Tremaine, Card, Norman, and Waldrop (2002) say that CHI (computer-human interaction) fails because its practitioners are badly trained. And Mauro (n.d.) says: "This important new science (*usability engineering*) has in many instances been dramatically misrepresented by pseudo-practitioners, who claim to have such expertise but often do not. As a result, many corporations and government agencies that retained such experts often found the experience unsatisfying and the promises of creating significantly more usable products and services illusive."

What is the *education* or *skill-set* that usability practitioners bring to their profession? Well, some bring expertise limited to the *human* side of users. Some others bring visual design or graphic tools expertise. Sure, those skills are required, but they are not enough. Practitioners need to be well-trained in technology and business. These are often the missing skills.

Being technology-literate is important for practitioners. Technology-literate would mean having a degree in computer science or software engineering. Technology-literate practitioners will know if their design can be implemented using the chosen application development software. They will know the technical impact of the design solutions they come up with (say, on system performance). When they speak the language of developers, they will also be trusted by those professionals, who will implement the design solutions.

Being business-literate is important for practitioners. Business-literate would mean knowing how enterprises in various industries (banking, insurance, retail, etc.) perform their business functions. Also, since business-literate practitioners understand the business reasons why an enterprise invests in an application, they will know the impact of *user-performance* (or usability) on the enterprise rather than on the users alone.

FOCUS ON DESIGN, NOT TESTING

Literature—from the earliest to the most recent—has always recommended conducting usability tests, unfortunately with little or no emphasis on design. Authors have included well-known usability gurus. No wonder, most usability practitioners appear to be focused on testing. Testing, of course, is a useful technique to discover certain types of design problems. However, the point is that a test-fix-test-fix kind of approach is not going to result in a *highly usable user interface*. This argument could be best appreciated by imagining the approach of *usability-testing* a building that was not designed correctly in the first place. Shneiderman et al. (2002) call this orientation to evaluation "The first human factors limitation."

Shneiderman et al. (2002) say, "… we do not contribute anything of substance: we are critics, able to say what is wrong, unable to move the product line forward." He goes on to say that usability practitioners must become *designers*. Yes, practitioners should apply strong design skills using a strong design-driven process (Henry, 2003) that preferably has testing as one of the evaluation methods.

MAKE HIGH-IMPACT CONTRIBUTIONS

Here are a few reasons why *low-impact user interfaces* are rampant.

- Most usability practitioners often fight only for screen-level improvements to user interfaces. Such improvements do not make a significant impact on the performance or bottom-line of the enterprise using the application. On the other hand, an improvement in the structure of the application's navigation is likely to make a significant improvement in the user's performance thereby impacting things like *enterprise workforce productivity* (Henry, 2003).

- One candidate the author evaluated for recruitment into his usability group had an MS degree in Human Factors and three years of *HCI* experience. As always, the candidate was given a test to evaluate his skills. The candidate's design recommendation sheet was filled with terms such as memory load, mental load, conceptual load, syntactic learning load, and cognitive load. Such a narrow focus on the *human* side of users too does not help make a significant impact on the enterprise.

- There is another advice (and therefore practice) that leads to low-impact contribution. Usability practitioners have been inspired into believing that even a small usability improvement is better than no improvement at all. That might sound like good advice. But, following this advice only results in mediocre practitioners, mediocre applications, and therefore a poor image for the whole usability fraternity.

If usability practitioners only deliver low-impact contributions, how will enterprises take them seriously? Practitioners need to rethink the current thinking and practices in usability.

PROMOTE HIGH-IMPACT CONTRIBUTIONS

Most of the time, the usability fraternity just talks about the small improvements that it creates. These "small improvements" are things that do not significantly impact the enterprise. These are things that are not perceived as significant by the enterprise.

Instead, practitioners should start talking about big things (of course, assuming they have achieved big things). For example, if they redesigned an application user interface to significantly reduce expenses on user-training, they should talk about it and preferably in dollar terms.

Usability practitioners know that users get *confused*, *frustrated*, *dissatisfied*, and so forth while interacting with poorly designed user interfaces.

However, those are not the terms that typically get the attention of business folks. So, practitioners should understand and articulate the business impact of such user reactions.

Practitioners, however, should not use a pretentious word to describe what they do. One company the author worked with had a user interface "Architect," who pulled out her screen visual layout template – when in fact the author was talking about user interaction architecture!

Also, if a practicing team has the capability to design *high-impact user interfaces*, it should not try to cost-justify its efforts. Instead, it should talk about *Return on Investment (ROI)*. The phrase cost-justification might not sound different from ROI, but it is. Sure, methods like cost-benefit analysis, *cost-justification*, and ROI projection all attempt to predict the financial and other business consequences of an action. However, when terms like cost-justification are mentioned, attention is directed to cost. On the other hand, when a term like ROI is mentioned, attention is directed to returns or gains. Merholz and Hirsch (2003) say, "The key strategy is to get enterprises to recognize that user experience is not simply a cost of doing business, but an investment – that with appropriate expenditure, you can expect a financial return."

FUTURE TRENDS

Usability practitioners will benefit from reports that are based on *research projects* regularly conducted on how well and how frequently they touch enterprise bottom-line. That would help the practitioners know how well the field is doing from the enterprise perspective so they could focus on areas that matter most to the enterprise.

CONCLUSION

It is sad that usability, which has the potential to bring a big business value, has so far not made an impact on (and therefore is not taken seriously by) enterprises that invest in IT. Therefore it has remained a small and struggling field for many decades. The blame is on the usability practitioners. The good news, however, is that with the right skills and the right approach, usability practitioners will not only keep their jobs at difficult economic times, but actually grow the field into a thriving industry.

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KEY TERMS

Application: Computer software meant for a specific use such as payroll processing.

Business and IT Executives: Senior people at a business organization, such as the chief information officer (CIO), chief technology officer (CTO), and chief executive officer (CEO).

Business Process: A series of related activities performed by staff in a business organization to achieve a specific output (for example: loan processing).

Enterprise: A business organization.

Enterprise Performance and Bottom-Line: Data critical for business success, such as employee productivity, customer satisfaction, and revenues.

Usability Practitioner: A person who designs and evaluates software user interfaces.

Usability Fraternity: A group of people that designs and evaluates software user interfaces.