

Ever-Evolving Technology and User Experience

The pace of technological change is being driven by society at an alarming rate. As technology usage grows and becomes more integrated into society, the ability for people to have access to user-friendly technology becomes increasingly more important. Ray Kurzweil, the principal developer of the first omni-font optical character recognition, said that “technology goes beyond mere tool making; it is a process of creating ever more powerful technology using the tools from the previous round of innovation” (Kurzweil). This means that because technology is being used a tool and is constantly being innovated, user experience – the overall experience of how a person uses a product – will become increasingly more important and higher quality user interfaces will be expected. User experience design drives new and better technology, but only if society is ready for the paradigm shift.

Even prior to the technological boom in the 1990s, user experience guided the creation of newer, faster, and more convenient technology. The problems found by users of the current products inspired the next generation of technology. “The telegram was a godsend until the proliferation of telephones. Fax technology is less vital for many office functions now that we have email. A 1200 baud modem that seemed more than ample but a few years ago, these days, relegated to the junk heap or museum” (Baron 198). Each of these technologies were invented for the public because they created convenience for the user and became obsolete due to the paradigm shift brought by the new technology. However, new technology is not always accepted or used right away. Years after 1867, when the prototype of the typewriter was invented, many people were still writing by hand because it was faster and easier. People also worked closely together so society had no use for the typewriter, which meant its evolution was stalled. It wasn’t until decades later during The Second Industrial Revolution when businesses expanded, and

people were more spread out, that the typewriter was needed for internal communication (Baron 200-201). Society had finally accepted the paradigm shift and the typewriter was able to become more advanced and user-friendly. This shift affected user experience because the more advanced typewriter became smoother and faster, allowing people to have a better experience using it. Evolving technology, like the way the typewriter evolved, is being improved by a user's experience.

Not only is user experience helping technology evolve, it is changing the way people think and produce information because of the new technology it inspires. According to Thomas Kuhn, an American physicist, historian and philosopher of science and author of *The Structure of Scientific Revolutions*, a paradigm must be "better than its competitors" to be accepted and as it grows in popularity, older views and models fade out of use and become ignored (Kuhn 18-19). This is how society creates a paradigm shift. Effects of the typewriter's growing popularity were that people became prolix because the typewriter allowed them to generate more words and more creative because of the typewriter's flow, but it also caused people also became more worried about privacy. As the typewriter became more used by the public and more people learned to type, these fears faded and people started enjoying the benefits more and more. People were less worried about privacy and had grown use to the creative flow of the typewriter. This shift in thought allowed the transition from typewriter to keyboard to be more seamless than transition from handwriting to typewriting. A more seamless transition allows for better innovation and more testing for user experience which leads to better technology.

Today we are currently on the brink of another change in thought process that will cause a paradigm shift. According to Nicholas Carr, the author of *The Shallows*, in his first chapter – "What the Internet is Doing to Our Brains" – he describes conversations with his friends about

why he believes his usage of the internet is causing him to focus less, especially when reading. His friends “say they’re suffering from the same afflictions. The more they use the web, the more they have to fight to stay focused on long pieces of writing” (Carr 7). People are currently gathering and learning information at an extremely more rapid rate than in the past, but this is leading to content being much shorter and more eye-catching. Developers, designers, and inventors have noticed this paradigm shift in processing information and started to implement it in their websites, articles, and other forms of communication. Web pages are designed with lots of visuals and less text. Articles are tuning into listicles with large headings and phrases rather than sentences. This redesign in how information is presented is because the user will have a better experience with the product. A positive user experience is an important part of a product and benefits both the user and the product.

User experience designers and technical communicators need to be aware of shifts in thinking and advancements in technology to benefit the product they are promoting and the users they are representing. As the link between the users and a company, they “work to ensure the usability of products in all phases of the user-centered design process. Often the technical communicator [and user experience designer act] as the voice of the user, advocating design features that ensure user’ needs are met and that the user experience gives the product a competitive advantage relative to others in the market” (Johnson-Eilola and Selber 51-52). The importance of a positive user experience, created by user experience designers and technical communicator, implies that a company cares if a user enjoys their product, which leads to loyalty to a product. The feedback from user experience analysis also creates an atmosphere that allows for the innovation and improvement of technology.

In order for technical communicators and user experience designers to create a positive user experience for their products and stay ahead of the paradigm shifts in information presentation and technology, they should empathize with their users understand and accept paradigm shifts.

Empathy is an important part of creating a positive user experience. While user experience analysis leads to better technology, the want and drive to make the user's experience better must also be there. "Not only must technical communicators lead the research effort to learn about users, they must also represent the knowledge gained about users – their goals, their needs, their preferences – in the design process as well." (Johnson-Eilola and Selber 54). To truly empathize with users, technical communicators and user experience designer must learn about all the factors that affect their users and research how the users perceive and interact with the product. Empathy without research can lead to false assumptions about the user and their interaction with technology, leading to improper corrections in technology and a step away from technological advancement. User experience research will aid the decisions in the user centered design process and help the designer keep an empathetic, open mind about the user.

Being able to have an open mindset is also an important part in seeing and accepting a paradigm shift. "The paradigm shift rate (i.e., the overall rate of technical progress) is currently doubling (approximately) every decade...so the twenty-first century will see about a thousand times greater technological change than its predecessor" (Kurzweil). Technical communicators and user experience designers must see and accept the paradigm. Because these shifts go against the current model of technology, the amount of work put into the current way of doing things can make it difficult to a switch to the new way of technology. It can be easy to pretend changes in the user experience won't happen or the new way of designing is worse than a current way. But

because user experience designers and technical communicators are the advocates for the users, they must be adaptable and switch to the new way of doing things or the advancement of technology will slow or stop altogether.

Currently, understanding user experience design is an important part of making useful and useable technology. Like how the evolution of the typewriter changed how people thought, modern technology, like the internet, is changing how people think and use technology. As people grow to expect a more positive user experience design in their communication products, user experience design will evolve “to make usefulness itself a minimal requirement and lead to a yet higher bar: compellingness.” (Johnson-Eilola and Selber 55). The shift from a useful experience to a compelling experience will be the new paradigm shift in user experience design. Society is ready for this paradigm shift and new and better technology will be created because of it.

Sources

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