IFLA IT Section Newsletter

Title: Design of the Academic Library Website with Persuasive Technologies: Holistic User Experience

Yoo Young Lee

Digital User Experience Librarian
Liaison Librarian to the School of Health and Rehabilitation Sciences
Indiana University Purdue University Indianapolis, U.S.A
yooylee@iupui.edu

Introduction to Persuasive Technologies

The persuasive technologies were introduced by Fogg (2002) and defined as any interactive systems designed to change people's attitudes, behaviors or both. He discovers that people considered computing systems as living beings or social actors so that they tended to respond to these systems and they were influenced by the systems as well. Based on his discovery, he comes up with the idea that the systems could be used to motivate and persuade people.

According to Fogg (2002), there are five primary types of social cues that make computing systems more persuasive: physical attractiveness, psychological cues, language, social dynamics, and social roles. He argues that the computing systems are more persuasive 1) when they – interface or technology – are aesthetically attractive, 2) when they are similar to target users in terms of personality, preferences, or other attributes, 3) when their texts or messages are written with praise, 4) when users feel that they are helpful or do a favor and 5) when users perceive them as an expert who can lead, make suggestions, and provide helpful information.

Why Persuasive Technologies Matter to the Academic Library Websites

The computing systems that Fogg (2002) uses in his article can be any things with technologies from refrigerator with computer screen (Internet of Things) to academic library website. Therefore, the persuasive technologies can be applied to design of academic library website as to not only improve user experience but also change students' attitudes or behaviors when it comes to academic research.

Many academic libraries have conducted usability testing to improve their website. As a result, the library websites have been easy to use and have tried to provide a Google-like search box. The University Library at Indiana University Purdue University Indianapolis (IUPUI) also conducted various usability tests during the spring semester (January – April 2014) to identify why and how users used the library website. From Google Analytics, the most visited pages were resources-related like Databases A-Z and

1

digital collections. From online survey, users revealed that they used the library website for either their research or assignments. Moreover, they perceived the current library website positively like accessible, useful, easy to use and etc. Overall, the current library website at IUPUI is okay and satisfying although its design should be improved.

However, high satisfaction doesn't guarantee whether users use the library website. These days, there are many other places like Google where users can start their research or assignments, so the library website is not the only one anymore which provides resources. Therefore, it is no longer enough just to enhance accessibility, findability or usability so that users can easily find specific resources or content that they look for. Rather, user engagement becomes a key element when it comes to design of the website in order to create a holistic user experience. As Schaffer (2009) argues, usability is no longer the key differentiator.

Persuasive Design: PET (Persuasion, Emotion and Trust) Design

One approach to create a holistic user experience is PET design, which stands for persuasion, emotion, and trust. This is a social psychological methodology developed by Human Factors International – a company specializing in user-centered design – to ensure user experiences more engaging, compelling, and effective. Persuasion functions as triggers to a desired action. Emotion is about making sure that users have desired emotional responses during the process while trust is to build credibility or royalty.

Principles of Persuasion

There are many persuasion techniques, but this paper covers some of them which could be applied to the academic library website.

Authority: As Fogg (2002) already insists, the website is more persuasive when it is designed based on its authority. Users would be likely to obey if they perceive the website has authority.

Consistency: Users prefer to maintain consistency between what the website says and does. In other words, it doesn't matter to ask a subsequent request to complete certain tasks as long as it's consistent with the first initiation.

Contrast: Users easily notice when certain things stand out from others. This can be applied to design like color or layout when to highlight important things.

Framing: Users are influenced by how information is presented. For example, users are more easily to understand difficult or important concepts when they are presented in a story.

Repetition: If something is repeated, users perceive that it is important.

Similarity: Fogg (2002) proves that the website is more likely to be persuasive when users feel that it is similar regarding personality, preferences, or other attributes.

Social proof: If users are not sure about certain things, they tend to rely on what other people do. For example, students are more likely to use certain resources if their classmates use those resources for their assignments.

Principles of Emotion

There are many emotion techniques, but this paper covers some of them.

Visceral processing: Users tend to react to visual cues or feedback. Fogg (2002) argues that it is more pervasive when texts or messages are written with praise. Therefore, if there are delight elements, these allow users to feel rewarded by even doing routine tasks.

Aesthetic usability: Fogg (2002) discovers that it is more persuasive when it is aesthetically attractive. Fogg (2009) also argues that attractive designs are considered to be easy to use so that users are willing to use.

Goal setting: Users are more likely to achieve a goal when they believe that it is achievable. Fogg (2009) shares best practices for creating new digital experiences that influence users. The very first step is to choose a simple behavior or goal to target. Otherwise it may easily fail.

Knowledge of results: Users are willing to complete their tasks if there are steps shown and these steps indicate where they are in the process.

Principles of Trust

There are many principles of trust, but this paper presents some of them.

Design quality: Users instantly evaluate credibility of the website based on what they see like design.

Current content: In order to build credibility, content should be regularly updated. If content is inaccurate or links are broken, trust is easily damaged.

Peer advice: Users rely on their peers and colleagues. For example, one of the IUPUI usability tests discovered that users heard the library website more from their peers than from librarians.

Conclusion

The persuasive technologies have been effective where users would be willing to do a target behavior, but it is difficult for them to start or continue (Hamari,

Koivisto, & Pakkanen, 2014). These persuasive technologies are worth to be considered to improve a holistic digital user experience as users value the library website for their research or assignments, yet they still start from other websites like Google. Unfortunately, there are not yet many evidences whether these persuasive technologies are effective or not in the context of the academic library website. Only one study (Sorensen, Zhang, & Berge, n.d.) conducted by graduate students in computer sciences at University of Oslo for developing a new science library web app used the persuasive technology. Therefore, the next step will be to test whether these persuasive technologies are actually useful and effective to improve a user experience and change user's behavior toward academic research.

References

Fogg, B. J. (2002). Persuasive technology: Using computers to change what we think and do. *Ubiquity, 2002(December),* 5.

Fogg, B. J. (2009). *Creating persuasive technologies: An eight-step design process.* Paper presented at Persuasive, Claremont, California, 26-29 April.

Hamari, J., Koivisto, J., & Pakkanen, T. (2014). Do persuasive technologies persuade? A review of empirical studies. *Persuasive Technology* (pp. 118-136).

Schaffer, E. (2009, January 26). Beyond usability: Designing web sites for persuasion, emotion, and trust. *UX matters.* Retrieved from http://www.uxmatters.com/mt/archives/2009/01/beyond-usability-designing-web-sites-for-persuasion-emotion-and-trust.php

Sorensen, F., Zhang, Y., & Berge, G. S. (n.d.) The new science library web app. Retrieved March 7, 2014, from http://www.uio.no/studier/emner/matnat/ifi/INF2260/h11/prosjekter/Within%20RB%20with%20your%20phone.pdf