Increasing Engagement in eHealth Interventions Using Personalization and Implementation Intentions
(Technical Report)

Analyzing the Configured Child User of the Nintendo DS
(STS Research Paper)

An Undergraduate Thesis Portfolio

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Sociotechnical Synthesis

My technical project and STS research paper explore how designers anticipate the needs of users and embed ideas about these users into a product. When a designer understands the identity of her users, she can successfully design an artifact that meets the needs of real users. Understanding and configuring accurate users is the foundation of both my technical project and STS research. In my technical project, we assumed the role of designers: envisioning the profile of future users of an eHealth application, and formulating a design that satisfied the needs of these anticipated users. My STS research paper took an opposite approach. I analyzed a successful product by mapping the values embedded in the product to the values of actual users. While these two projects approached the challenge of user configuration differently, working on them together gave me better insight on each,

My technical project produced the design for a mobile application of Mindtrails, an existing eHealth intervention, as part of an effort to reduce Mindtrails' high attrition rate. My capstone team focused on two areas in developing new features: personalizing the experience and creating a stronger link between the intervention and the user's real life. We crafted a design that incorporates these elements with new features while considering how design elements would impact users. By keeping the user profile in mind, we not only added new features, but implemented them in such a way as to appeal to target users while also addressing risk factors for drop out, thus reducing the attrition rate. Mindtrails' mission is to provide anxiety treatment

to users. By creating a more engaging design that accounts for an anxious user, we hope to deliver this treatment more effectively.

In my STS research paper, I examined the popular scholarly account of the Nintendo DS's success (its dual-screen, touchscreen design and location services) on a deeper level to understand what these novel features did for child users. By understanding how these technical specifications functioned, I was able to map the interactions supported by these features to the types of experiences children want according to expert Allison Druin. My research revealed that the DS's central features, such as its touchscreen and display screen design and its location-based features such as Pictochat, aligned closely with Druin's description of what children want in digital products. This suggests that designers understood the priorities of children as their primary users and embedded these values into the DS itself.

My STS research primed me to think about design not just in terms of aesthetics and functionality but also to consider the impact of design on users. The effect of design became very important when developing the features and user interface elements for my technical project. Conversely, participating in the challenge of first profiling and then advocating for future users made me appreciate the skill with which the research and design process had been done for the Nintendo DS. The experience of deliberately shaping the Mindtrails design to reflect a configured user made it easier to see how the Nintendo designers' understanding of child users was expressed in both features and product design choices. Working on these two projects at once was an enriching experience that allowed me to witness the product design process from two distinct dimensions.