

**THE DIFFERENCE IN UX DESIGN FOR INTERNAL VS. EXTERNAL SOFTWARE
TOOLS**

THE IMPACT OF DIVERSITY IN UX DESIGN

An Undergraduate Thesis Portfolio
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By

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SOCIOTECHNICAL SYNTHESIS

When it comes to the creation and development, design is what truly shapes the human experience. The technical research report delves into this idea by defining and analyzing the similarities and differences between designing for internal versus external tools. By understanding the difference in the user experience design of these different groups, we can show the importance of incorporating diverse user needs into design. The STS research paper expands upon this fact by focusing on diverse groups broadly and highlighting the actual implications that this lack of diversity causes. The two reports stand to exemplify the importance of diversity, in all its meanings, in user experience design through the technical analysis of these specific tools used in the software development field and the effects on the actual groups using the technology on a daily basis.

In the software development industry, the technology that is being developed can be placed into two categories, internal and external. Internal being the technology used by the developers to aid in their everyday work. External being the technology that is created with a client or external user in mind. At Google, Inc., where I interned and worked on both types of products the past two summers, I had the chance to see this difference in action and saw the distinct contrast when it came to the designing. In other words, the differences based on the varying or diverse user needs of the products and the steps that need to be taken to account for this.

When developing the two products, the user experience design process differed most prominently when it came to perspective. The results of completing the projects and developing both tools showed that when it came to internal tools there is a layer of self-reflection on the engineers' needs and their environment, something that is not as easy as expected. As for external tools, there is a switch in perspective and focus that requires the engineer to look through the

eyes of the user. For user experience design, especially for front-end development, it is shown that both tools need to be prioritized equally.

The STS research paper poses the immediate question, what is the true impact of having diversity in user experience design? From this question, the thesis statement states that without the presence and consideration of diversity within user experience design, the field and technology will suffer the consequences. In proving this statement, the research paper examines the current lack of representation in tech, defining what diversity means in the context of user experience design, and case studies showing the negative impact on the technology without diversity in mind. To aid in understanding of this ideal, the paper utilizes the Social Construction of Technology (SCOT) framework developed by Wiebe Bijker and Trevor Pinch in 1984, to further develop the interaction that must occur between the user experience developer and user groups.

Within the software development industry today, there is little representation of those from marginalized groups, especially with the recent mass layoffs due to the recession. This not only bars these groups from attaining success in the field but has a major impact on the actual technology designed. When it comes to representation and diversity, this is something that can mean a multitude of things and for user experience design, its important all of these perspectives are included in order to make the most inclusive technology. Studies show that without having the diversity present in the design process as well as a never-ending communication between the developer and users, the user experience is negatively impacted. In the future, there must diversity in user experience design and that starts with redefining what user experience design includes and who we are having designing the products.

Whether it be a website, machine, or software, it is important that it is done so in a way that is accessible and inclusive to its users. To do this, engineers must do their part in considering all users by considering their edge case users. By accomplishing this we will see a brighter future of technology today.

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