

**Restructuring CS 3205: Human Computer Interactions**

**Analyzing the Importance of Culture in the UX Design Process: The Responsibility of UX Designers and How a Designer's Consideration of Culture Affects Design Reception**

**A Thesis Prospectus**

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**By**

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**On my honor as a University student, I have neither given nor received unauthorized aid on this assignment as defined by the Honor Guidelines for Thesis-Related Assignments.**

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## Introduction

When thinking about the development cycle of an application, many tend to focus only on the software development that takes place and iterates over time. However, there is another cycle that takes place between the conception of an idea and the software implementation of it, and that is the user experience (UX) design cycle.

User experience can be formally defined as “a person’s perceptions and responses that result from the use or anticipated use of a product, system, or service” (International Organization for Standardization, 2019). While a person’s perceptions and responses cannot be controlled, designers *can* control how a given system behaves and looks, essentially creating design features that would lead to a positive user interaction. It is because of this fact that UX design is user-centric, and therefore heavily relies on the designers understanding and empathizing with the users in the user’s context.

Geert Hofstede, a social psychologist renowned for his work in culture and how it affects workplace values, defines culture as “the collective programming of the mind that distinguishes the members of one group or category of people from others” (Our Models, 2022). By this definition, you would be able to see why the consideration of culture when working with users would be important in the UX cycle would be important, but when working on domestic products it’s usually something that many tend to overlook. That is why for my STS topic I will be analyzing the importance of the consideration of culture in UX design, namely when the user is empathizing with users, but also the implicit bias that is held by the designer, and the implications of its absence during the design process.

The technical topic I present will be a restructuring of a current class in the Computer Science department at UVA, CS3205: Human Computer Interactions. This class focuses on introducing the UX design process through a hands-on semester-long project, with my knowledge from being a TA for it for a year I'll be able to propose adequate and informed changes to the curriculum.

### **Technical Topic: The Restructuring of CS 3205: Human Computer Interactions**

Human Computer Interactions is the most prominent design course in the computer science department at UVA, and I was able to take it in Summer of 2020, becoming a teaching assistant (TA) for it in Spring of 2021. This taught me the basics of UX design and gave me the chance to add the semester-long project into my very first portfolio, landing me many internship interviews. While I personally enjoyed taking the class, many others have had differing opinions. Currently, Human Computer Interactions (HCI) stands at a 1.7 star rating on a scale from 1 to 5 on CourseForum, a student-run class/professor review website for the University of Virginia. Recently, these reviews have been taking their toll on the class as enrollment has been half of the maximum class capacity both for the Fall semester of 2022 and the Spring semester of 2023, which is why I think it is important to formulate a way to alleviate some of the issues that previous students had with the class in hopes to increase class enrollment for future semesters.

After reviewing the CourseForum ratings, it can be concluded that the three things that bother students the most about the class are the unclear assignment pages for project phases, the seemingly unnecessary extra workload on top of the semester long project, and their initial confusion on what the class will be about and what they will be expected to do with them. These problems will be counteracted with proposed solutions like reframing convoluted assignment

pages, adjusting the amount/type of extra workload for the class as a whole, and a revamping of the current syllabus. Afterwards, these solutions could be proposed to the current professor of the course and perhaps adopted in the upcoming semester.

### **STS Topic: The Importance of Examining Culture During the UX Design Process**

The field of technology has been expanding at an unprecedented pace, and with its growth, more questions of the responsibilities that it should hold come into question. As engineers, we must ask ourselves what our technology is capable of and the ways that someone might use it. In the world of UX design the questions come with resistance, as the main goal of the design process is to make a product that will create the most positive user interaction- usually included is the ease of use of the product. The question of responsibility might get in the way of that in some cases. For example, “in 2015, Nextdoor, a neighborhood-based social network, was reported to have facilitated racial profiling when users began posting to the application’s Crime and Safety section reports of ‘suspicious’ persons on the basis of radicalized appearance as opposed to any actual suspicious behavior” (Sano-Franchini, 2017). In this case, even though it would be shifting the emphasis of the design from the user’s pleasure or the applications ease of use to “a concern with attending to the sociopolitical impacts of technologies”, it was the designer’s responsibility to take culture into consideration and make a change to the application. What could happen if situations like these don’t get put under control by design changes? Sano-Franchini dives deeper on the subject in her work.

With the expanding reach of web-based products, technology companies have been able to expand their reach into the billions of users, with Facebook and Youtube harnessing over 2.5 billion MAUs (monthly average users), and Instagram following with 1.5 billion. As global

audiences start being reached, that is, audiences that are not from the originating country of the company, can it really be said that what worked in terms of design in the origin country will also work in the countries it is expanding to? What steps would a designer of said company have to take into consideration, and is the consideration of culture when understanding the user a high priority? Of course the main objective is still to empathize with the user and understand their needs and wants. Typically, the best way to do so is through maintaining direct and continuous contact with the users. However, if the new users are overseas then indirect contact, contact mainly through feedback on user experience surveys and questionnaires, must come into play. This arrives with its own set of problems, however, as designers can contribute to “assumptions of cultural appropriateness, value or ethical behavior” (Gray & Boiling, 2017) when doing so, meaning that a design outcome can be affected by the designer’s own culture or implicit bias (Li & Holtta-Otto, 2020). Therefore, it could be argued that a designer is not only responsible for knowing about the user's culture but also about the effects of their own culture on their work. Li and Holtta-Otto, dive deeper into the impact that a designer’s own culture has on their understanding of the user, and what this means for the design outcome.

The UX design space is a growing one, which means that figuring out questions like the ones asked above will go a long way the sooner they get answered. In times where the world is becoming a more accepting place it’s also important to reflect on the effects our individual selves have on our products, while taking into account the end users backgrounds, and my goal is to give some reasons why.

## **Methods/Frameworks and Key Texts**

The main method of research that will be done for this paper will be literature review. The main reason being that there has already been extensive research done on the topic of culture surrounding the UX design process. There is a possibility of doing an ethical review when it comes to situations like those mentioned in the Sano-Franchini reading, and extensively looking at how the situation was handled.

Below are some foundational texts that I plan on using for this paper:

*The influence of designers' cultural differences on the empathic accuracy of user understanding.*  
Jie Li & Katja Holtta-Otto (2020).

This piece is focusing more on the effect the designer's culture has on the accuracy of empathizing with their users. It covers topics such as implicit bias and the effects that it has on the design outcome of a product. Of course it's important to consider culture when working through a project, but it's also important to look inwardly and see if your own is having any effect on the data that you are gathering from users. This is exactly why it's an important topic to include in my research paper.

*What Can Asian Eyelids Teach Us About User Experience Design? A Culturally Reflexive Framework for UX/UI Design.* Jennifer Sano-Franchini (2017).

This piece doesn't hesitate to delve into serious topics, such as racism, that can both affect and be affected by a system's design. Sano-Franchini argues that race is just "one among five interconnected tropes deployed by users across textual, visual, and aural modalities" that users may utilize to make decisions within a given system. This piece will be showcasing the

responsibility that a UX designer has throughout the design cycle to interpret how certain functions can potentially bring harmful cultural aspects into play.

*The influences of culture on user experience.* Tales Rebequi Costa Borges de Souza & João Luiz Bernardes Jr.

This piece is a systematic review of the multitude of papers written on the effect of culture in UX design. I will be using this paper mostly as a reference when looking at others, since it provides both background on the issue, setting baselines for what these kinds of papers are measuring, and exploring their results. I think it will be a good idea to keep it in the back of my head as I read individual studies on the effect of culture in UX design of different areas. The introduction of Hofstede's cultural definition is also first mentioned here.

*Cross-cultural user experience design helping product designers to consider cultural differences.* Florian Lachner, Constantin von Saucken, Florian Mueller, & Udo Lindemann

This piece delves deeper into the subject of the consideration of different cultures when working on the UX design of a project. It utilizes Hofstede's definition of culture to review and compare established cultural dimensions. This ties back to Costa's work, since one of their conclusions was that Hofstede's definition was the most widely accepted when examining this topic. I plan on making Hofstede's definition a foundation in my argument and perhaps in any ethical reviews that I do. I think this paper will be important to my research since it's one that answers the question I'll be asking most directly.

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