More Than a Checklist: Redesigning a UI/UX Curriculum to Emphasize Accessibility

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ABSTRACT

Despite widespread recognition of its value and importance, accessibility tends to be interpreted as a niche topic by students in many User Interfaces and User Experience (UI/UX) courses. In response, we advocate for explicitly positioning accessibility as a fundamental building block in UI/UX education. We present one implementation of this via early inclusion of accessibility and inclusivity principles, supplemented by strategic reinforcement across course modules. Early student reception of this intervention has been positive.

Previous course flow   **Updated course flow**

Figure 1: The change in course flow from before (left) to after (right) our changes. Our changes included explicitly highlighting accessibility and inclusion as core values of the course, and in tandem moving discussions on these topics to the beginning of the course.
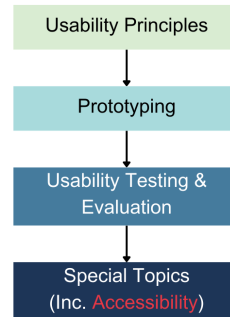
1 INTRODUCTION

Despite near unanimous agreement about the value and importance of accessible software [3, 4, 8, 10], User Interfaces and User Experience (UI/UX) curricula tend to treat accessibility and inclusivity as an afterthought. Indeed, publicly available online syllabi from several major universities, including our own, wait to explicitly address inclusive design until the very end of the course, if at all, (e.g., [2, 5–7, 9]). By placing these discussions at the end of the schedule, we are implicitly training budding UX professionals that accessibility and inclusivity principles are inherently separate from the fundamentals of design.
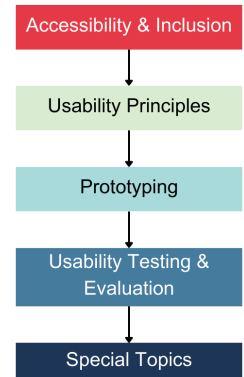
2 STARTING WITH CORE VALUES

UI/UX courses at our university aim to introduce students to the principles of user experience design, including methods for designing and prototyping interfaces, and user interface evaluation. These UI/UX curricula have historically started with introductory topics such as affordances, mental models, and prototyping. In doing so we implicitly introduce these concepts as "building blocks" upon which UI/UX and design principles are built. The core values of inclusivity and accessibility are implicitly intertwined with these other building blocks. In previous versions of this course, these values are promoted through required compliance with WCAG AA

accessibility guidelines [1] in several assignments throughout the semester.

However, explicit discussions about accessibility and inclusive design do not take place until the very end of the course. This reinforces student conceptions of these topics as "niche", and incidental to UI/UX as a field, as evidenced by discussions with students. By the end of the course, we note that students view these guidelines as constraints upon their designs rather than fundamental principles of design.

To address this gap in understandings, we made the core values of accessibility and inclusive design explicit. We took this further by positioning these topics in front of other building blocks as the first addressed in the course through both lecture and in-class discussion. In doing so, future student approaches to design were colored by exposure to this new central building block.

3 CONTEXTUALIZING ACCESSIBILITY AND INCLUSIVITY

The introduction of accessibility and inclusivity early in our re-designed course allowed us to contextualize these values in each of the following modules. This reiteration followed established strategies we have historically found useful when reinforcing other key design building blocks.

For example, the first assignment of the *original* course asked students to perform a contextual inquiry of a selected interface and then build a set of personas based on the gathered information. In doing so, students were reminded to consider usability principles (e.g., efficiency, mental vs. conceptual models) while observing and analyzing interactions. The redesigned assignment reminded students to consider diverse participants while gathering information, including participants with accessibility needs. This was strengthened by the inclusion of exercises designed to encourage critical examination of student-created personas [1].

4 STUDENT RESPONSE

In bringing accessibility and inclusive design forward as explicit core values, observation of in-class activities showed students engaging actively with these topics alongside other usability principles. Informal interviews during the semester and mid-semester and end-of-semester student feedback showed that students actively strove to understand how designing for accessibility impacted different steps of the design process.

During critiques, students proactively brought up and addressed accessibility concerns without prompting. Students still noted issues with other principles such as clarity of visual metaphor, memorability, and efficiency. However, students also pointed out potential accessibility improvements, referencing concepts such as visual contrast and font readability without prompting from instructors. In final course projects, students also readily discussed accessibility and inclusion-based design choices with little prompting.

Overall, students seemed to value the centering of accessibility as a building block. Student end-of-semester feedback included appreciation for the "focus on accessibility and inclusive design". With some students mentioning a desire for "more on accessibility. [I] still am trying to learn how to make these considerations an integral part of my design process".

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1. Example questions include *Are there any aspects of your personas that may represent inherent biases?* and *What parts of the persona-building process could change to alleviate some of these biases?*