Human-Centered Approach in Design Curriculum Development

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ABSTRACT

This paper details the inclusive efforts to revise a modern design curriculum, providing a comprehensive overview of the interdisciplinary and collaborative approach taken by design educators and administrators at a major university. The primary focus is on creating a curriculum that is accessible and relevant to students from diverse academic backgrounds, including those without prior design experience. The revision process was guided by an inclusive pedagogical framework that emphasizes three key design foundations: Intent and Opportunity, Ideation, and Implementation. Each foundation incorporates specific tools, methodologies, and design approaches aimed at fostering a holistic, user-centered, and interdisciplinary learning environment. The paper discusses the motivations behind the curriculum revision, highlighting the need to address the evolving demands of the design profession and the diverse interests of the student body. It outlines the steps taken to integrate non-design students into the design program, ensuring that the content is engaging and comprehensible to all participants, regardless of their previous exposure to design concepts. The paper also explores the challenges encountered during the revision process, such as balancing the needs of design and non-design students, aligning the curriculum with industry standards, and ensuring that the program remains flexible and adaptable to future changes in the field.

Keywords: Inclusive curriculum, Design education, Collaborative design, Design method, Design thinking

INTRODUCTION

Design education has undergone significant transformations in recent years, driven by the need to adapt to the rapidly evolving landscape of the design industry and the diverse interests and backgrounds of students. Traditional design curricula, often entrenched in specific disciplines and methodologies, may fall short in addressing the interdisciplinary and collaborative nature of modern design practice. As design continues to evolve—some forms retaining their historical characteristics while others respond to new developments, tools, and technologies (Friedman, 2019)—there is a pressing need to reassess and revise educational approaches.

This paper explores the recent efforts to revise a design curriculum at a major university, focusing on how an inclusive pedagogical framework was developed and implemented.

BACKGROUND

The drive to revise the design curriculum stemmed from several key factors. Chief among these was the growing demand for interdisciplinary skills within the design industry. Today's design practices increasingly require the integration of knowledge from various fields, necessitating a curriculum that encourages broad thinking and diverse perspectives.

In addition, the rising diversity of the student body underscored the need for a more inclusive and accessible learning environment. The revised curriculum was designed to cater to students from a range of cultural and academic backgrounds, ensuring that everyone has the opportunity to succeed, regardless of their prior experience.

At the same time, it was crucial to retain a strong emphasis on design fundamentals. This focus helps to solidify core knowledge and skills, particularly for students with backgrounds in art or design. However, the institution also recognized the value of incorporating students from other academic disciplines, who bring unique perspectives and skills to the field.

INTEGRATION OF INTERDISCIPLINARY AND COLLABORATIVE LEARNING OPPORTUNITIES

The curriculum revision aimed to meet industry demands while fostering an inclusive, interdisciplinary educational environment. By balancing the preservation of core design principles with the integration of diverse academic backgrounds, the revised curriculum seeks to equip all students with the tools necessary for success in today's design landscape.

Interdisciplinary learning involves bridging the gaps between different subjects and providing students with opportunities to make connections across fields (Wang, 2024). As the program attracts more non-design majors, it fosters a rich exchange of ideas, enhancing the learning experience for everyone involved. Collaborative projects and partnerships with industry professionals are central to this revised approach, offering students practical experience and preparing them for the collaborative nature of professional design work. This approach not only enriches students' learning experiences but also influences their thinking patterns as they engage with various areas of expertise (Chen et al., 2017).

CURRICULUM DEVELOPMENT PROCESS

The curriculum revision process was carefully structured and involved several key stages:

1. **Needs Assessment:**

    -   Surveys and focus groups with students, faculty, and industry professionals were conducted to identify gaps and opportunities within the existing curriculum.
    -   Data analysis helped understand the evolving needs of the design industry and the diverse backgrounds of the student body.

2. **Curriculum Design:**

   - Course outlines, learning objectives, and assessment methods were developed for each of the three key design foundations.
   - The content was designed to be inclusive and accessible, incorporating universal design principles and varied teaching methods to cater to a wide range of academic backgrounds.

3. **Pilot Testing:**

   - Pilot courses and projects were launched to test the new curriculum and collect feedback from participants.
   - Iterative adjustments were made based on feedback and evaluation results to refine and optimize the curriculum before full implementation.

4. **Full Implementation:**

   - The revised curriculum was rolled out across the design program.
   - Faculty training and resource development supported the new teaching methods and materials, ensuring instructors were well-prepared to deliver the updated courses effectively.

This thorough and iterative process involved input from key stakeholders, ensuring that the final curriculum met the needs of both students and the industry.

CORE FRAMEWORK

The revised curriculum is organized around an inclusive pedagogical framework, comprising four sequential phases: Foundation, Technical Proficiency, Critical Inquiry, and Integration of Knowledge. Each phase builds upon the previous one to provide a comprehensive and progressive learning experience.

Foundation: This phase establishes a solid base of essential skills and knowledge, introducing fundamental concepts and basic technical skills necessary for more advanced work. It ensures students gain a robust understanding of core principles and techniques, setting a strong foundation for further learning.

Technical Proficiency: Focused on developing specialized skills and competencies, this phase integrates various aspects of the discipline. It emphasizes the application of foundational knowledge to real-world scenarios, advancing students' technical abilities through hands-on projects and assignments, and bridging the gap between theory and practice.

Critical Inquiry: This phase supports students in undertaking independent research projects that challenge established norms. It fosters an environment of intellectual curiosity and encourages the exploration of innovative ideas and approaches, promoting creative problem-solving.

Integration of Knowledge: Encouraging students to synthesize information from multiple disciplines, this phase promotes collaborative projects that enhance teamwork and professional skills. It also broadens perspectives by

incorporating global viewpoints and diverse cultural contexts, preparing students for complex, interconnected challenges.

In summary, this structured approach aims to equip students with the skills and knowledge necessary for success in the ever-evolving field of design.

CHALLENGES AND IMPACT

The revision process faced several challenges:

- **Balancing Needs:** Ensuring the curriculum meets the needs of both design and non-design students, while providing guidance to develop both hard and soft skills (Vogler et al., 2018).
- **Aligning with Industry Standards:** Ensuring the curriculum aligns with current industry standards and prepares students for professional success.
- **Flexibility and Adaptability:** Designing a curriculum that remains flexible and adaptable to future changes in the design industry and academic landscape.

To address these challenges, the development team took a collaborative and iterative approach, incorporating feedback from a wide range of stakeholders and continuously refining the curriculum.

OUTCOMES AND IMPACT

The revised curriculum has made a significant impact:

- **Student Feedback:** Positive responses from students, particularly those from non-design backgrounds, who valued the inclusive and interdisciplinary approach.
- **Faculty Feedback:** Faculty observed increased student engagement, creativity, and collaboration, alongside enhanced relevance to real-world design challenges.
- **Professional Development:** Students reported greater confidence and readiness for professional design work, with many securing internships and job offers.
- **Program Reputation:** The innovative approach has boosted the program's reputation, attracting a diverse and talented cohort of students.

CONCLUSION

The revision of the modern design curriculum has created a more accessible, engaging, and relevant educational experience. By embracing an inclusive pedagogical framework and promoting interdisciplinary collaboration, the revised curriculum prepares students for the collaborative nature of contemporary design practice. Design education now has the opportunity to connect novices with experts, link professionals, and transform schools into centers for lifelong learning (Davis & Dubberly, 2023).

Future Directions

Building on the success of the revised curriculum, future efforts will focus on:

- **Technology Integration:** Incorporating emerging technologies and digital tools to enhance learning and prepare students for the future of design.
- **Global Perspectives:** Expanding the curriculum to include global design perspectives and opportunities for international collaboration.
- **Sustainability and Ethics:** Emphasizing sustainability and ethical considerations in design education to address 21st-century social and environmental challenges.

By continuing to innovate and adapt, the design program aims to remain at the forefront of inclusive and interdisciplinary design education, inspiring and empowering the next generation of design professionals.

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