

Advancing Human-Centered Design Practices Among Designers in Bangladesh: Updated Insights 2024

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Abstract

This qualitative case study explores the work processes and challenges faced by designers in Bangladesh regarding the adoption of human-centered design (HCD) methodologies. Interviews with 50 participants from various industries revealed that while Bangladeshi designers possess strong visual design skills, they often lack an understanding of HCD methodologies and face challenges such as time management, payment issues, and limited access to resources. The study underscores the need for a collaborative environment among clients, designers, and management, as well as enhanced education and resources to support HCD adoption. These insights highlight critical areas for improving design education, communication, and collaboration in Bangladesh.

Keywords: human-centered design, HCD adoption, Bangladeshi designers, design process challenges, design education, qualitative research, user-centered design, design industry in Bangladesh, professional development, agile design methodologies, client-designer collaboration, visual design skills, design motivation, design practice improvement, work processes in design.

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Introduction

Design is a dynamic process aimed at creating solutions to meet human needs and desires, continually adapting to societal changes. Human-centered design (HCD) has gained significant traction as a methodology that focuses on developing solutions centered around end-users' needs and contexts. HCD methods are essential for ensuring efficient and effective human-system performance, embedding HCD principles within a social-systems engineering model (Sanquist et al., 2010). This approach prioritizes users, considering their needs, wants, and limitations in the design process (Norman, 2013).

Despite its growing popularity, the application of HCD in the design industry faces several challenges. For instance, in the realm of advanced technologies such as artificial intelligence and machine learning, a dynamic HCD approach is necessary to accommodate different units of analysis and streamline designs (Ho et al., 2019). Additionally, HCD has demonstrated potential in strategic innovation but has had limited impact, highlighting the need for augmentation with design innovation methods (van der Bijl-Brouwer & Dorst, 2017). There is also a critical need for greater gender awareness within HCD practices, particularly in fostering sun protection behavior among young men (Morris et al., 2019).

Rationale for the Update

The original 2023 study provided valuable insights into the work processes and motivations of designers in Bangladesh (bin Ahsan et al., 2023). Following this, a revised version was published on SSRN in 2023 to incorporate initial feedback and refinements. This 2024 update further refines the analysis and integrates new literature findings to offer a more comprehensive understanding of the factors influencing designers and their adoption of human-centered design methodologies. The updated analysis highlights emerging trends, persistent challenges, and opportunities for improvement, enriching the findings and ensuring the study's relevance in a rapidly evolving field.

Background

Human-centered design (HCD) prioritizes users, focusing on understanding and addressing their needs and limitations in the design process (Norman, 2013). This approach has gained substantial interest in product design, service design, and interface design, reflecting its broad applicability and importance. For example, in the healthcare sector, HCD approaches support the development of innovative, effective, and person-centered solutions (Göttgens & Oertelt-Prigione, 2021).

The role of design in product and service development is crucial, significantly impacting user satisfaction. It is important to couple user satisfaction with product design, identifying critical design features that predict user satisfaction (Han & Hong, 2003). Designers contribute to service development by working with users' stories and making their experiences actionable (Edman, 2014).

The adoption of HCD varies across different countries and cultures. In developing regions, designers prioritize early-stage user research to understand diverse needs and design contexts (Fuge & Agogino, 2015). In more developed regions like the United States, the early involvement of HCD practitioners in the product life cycle has increased, with a shift towards qualitative evaluation methods (Venturi et al., 2006). Expanding the system boundaries of HCD to include social, environmental, and economic impacts enhances its utility in design practice (Gall et al., 2021).

Education and training play a significant role in the understanding and implementation of HCD. HCD approaches contribute to innovations in engineering design, emphasizing the importance of developing effective design skills during undergraduate education (Melton et al., 2010). The importance of multidisciplinary collaboration in HCD education is emphasized by the benefits of learning-by-doing across disciplines and effective teamwork between various fields, enhancing students' understanding and application of HCD principles (Glomann, 2015).

In Bangladesh, the design industry is in the early stages of adopting HCD methodologies. Despite a growing number of design practitioners, there is a lack of comprehensive understanding and widespread use of HCD. This study aims to provide insights into the factors influencing the work processes of Bangladeshi design practitioners and their motivation to adopt HCD, ultimately contributing to the growth and development of the design industry in Bangladesh.

Methodology

Research Design

A qualitative case study approach was employed to gain an in-depth understanding of the factors that influence the work process of design practitioners in Bangladesh and their motivation to adopt the human-centered design methodology.

Research Questions

The central question of this study is, "What are the factors that influence the work process of design practitioners and how can they be motivated to adopt a human-centered design process?" To answer this question, five sub-questions were developed to guide the study:

- a) What drives designers to pursue their profession?
- b) What is the typical work process followed by design practitioners?
- c) What factors influence the design work process chosen by practitioners?
- d) What challenges do designers face in their work process?
- e) What is the level of understanding and awareness of human-centered design among practitioners and how did they acquire this knowledge?

Participants

The sample consisted of 50 design practitioners with work experience ranging from 1 to 21 years from various industries such as IT, telecommunications, advertising, training institutes, and freelance designers. Participants were recruited through snowball sampling and purposive sampling techniques to ensure a diverse sample. To ensure the credibility of the study findings, students enrolled in our institution, Userhub, were not included in the sample to avoid any potential bias, as Userhub teaches human-centered design as part of its curriculum.

Data Collection

Data was collected through semi-structured interviews conducted online via Zoom. The average length of the interviews was 20-30 minutes. The interview sessions were recorded with the participants' consent, and the recorded data was transcribed for analysis. Demographic data were collected before the interview using Google Forms.

Instruments

A semi-structured interview protocol was developed to collect data from the participants. The protocol consisted of six semi-structured questions aimed at gathering information on the participants' early careers, knowledge of the design process, work process, work environment, and challenges they face in their work process. The questions were designed to be open-ended, allowing participants to provide detailed and in-depth responses. The interview protocol was piloted with a small sample of participants to ensure its effectiveness and clarity, and necessary revisions were made based on their feedback.

Data Analysis

The transcribed data were analyzed using a qualitative content analysis approach with the aid of QDA software, specifically QDA Miner and ATLAS.ti. The data were coded, categorized, and then reviewed and discussed among the research team to identify patterns and emerging themes. To ensure the findings' reliability, six researchers analyzed the data independently, and their findings were compared and contrasted.

Ethical Considerations

The study was conducted in accordance with the ethical guidelines of the American Psychological Association (2017). Informed consent was obtained from all participants, and their anonymity and confidentiality were maintained throughout the study.

Findings

The findings of this study provide a comprehensive overview of the design industry in Bangladesh, highlighting various aspects such as career paths, design knowledge, work processes, industry-specific insights, and the challenges faced by designers.

Career Paths and Design Knowledge

Most designers began their careers as graphic designers, with some programmers and front-end developers transitioning into the design industry. Their interest in drawing, financial stability, and social standing were primary motivators. Many designers started with basic design tasks, gradually advancing to more complex projects as they gained experience and skills.

Designers' understanding of design methods varied. Most viewed the design process as steps involving ideation and revision. Some focused on improving color, font size, composition, and layout, while others saw design as a problem-solving exercise. Few designers considered research and iteration, including user research and persona creation, as integral parts of the design process. Designers often lacked formal education in human-centered design (HCD) methodologies, learning instead through self-study and on-the-job experience.

Work Processes

In their work processes, most designers start their projects by analyzing competitors, drawing inspiration from similar products in the market. This approach is prevalent across industries, except for e-commerce and financial services. Designers are primarily client-centered, tailoring their work to meet client requirements.

Freelancers often gather requirements through direct client interviews, while full-time designers manage requirements from their superiors. Designers typically brainstorm, ideate, develop prototypes, create visual styles, and present multiple drafts to clients for feedback. Some full-time designers test prototypes with internal teams and users, though this practice is less common in certain industries.

Few designers use agile methods, which enhance team performance and synchronization. This practice is more common in the telecom and service platform industries. In many fields, engineers lead the design process, directing and drafting specifications for designers to follow. Some designers, especially in advertising agencies, work with pre-defined templates, limiting their customization freedom.

Work Environment

Both freelancers and full-time designers from the advertising and IT industries reported working in a fun and welcoming environment. While some designers find remote work challenging, others believe it saves time, particularly in the telecommunications industry.

Designers, especially in the IT industry, feel under-recognized and believe that the team should receive credit for their work. Additionally, some designers in advertising agencies feel they do not receive proper respect. Some designers engage in problem-solving practices weekly, which helps them grow in the field of UX.

Challenges Faced by Designers

Most full-time designers often face strict deadlines and overlapping projects, leading to high work pressure and sometimes requiring work on weekends. Many freelancers face payment issues, including limited budgets, non-payment, unfavorable conversion rates, and reliance on third-party payment systems. They also struggle with slow internet speeds, frequent disconnections, and high costs of necessary high-configuration laptops/PCs.

Most designers believe their management is unfamiliar with the design process, making it difficult to follow proper procedures. This is compounded by incomplete client requirements, leading to communication breakdowns. Clients often do not provide complete requirements and insist on following other brands, making it challenging for designers to create innovative solutions.

Full-time and part-time designers face occupational discrimination, with designers often considered less valuable than programmers or developers. This also affects salary and workplace dynamics. A small number of designers lack knowledge about providing feedback professionally. Contractors also find numerous meetings in remote jobs problematic, leaving insufficient time to work.

Freelancers' confidence suffers due to a lack of user research and the potential for low ratings when clients do not provide necessary information. Many freelancers struggle to find clients, partly due to inadequate portfolios and access to quality educational resources. It is challenging to find the right users for usability testing, a time-intensive process that could benefit from specialized recruitment organizations.

These findings provide a comprehensive overview of the current state of the design industry in Bangladesh, highlighting both strengths and areas for improvement. The insights gathered will inform the discussion and recommendations for enhancing design practices and education in the region.

Discussion

The findings of this study provide valuable insights into the design industry in Bangladesh, highlighting both strengths and challenges. These insights, when linked and compared with existing literature, help in understanding the current state of the industry and suggest pathways for improvement.

The career paths of Bangladeshi designers typically begin with graphic design, with many transitioning from programming or front-end development roles. This transition is driven by interests in drawing, financial stability, and social standing (Edman, 2014) (Edman, 2014). Many designers started with basic design tasks, gradually advancing to more complex projects as they gained experience and skills.

Designers' understanding of design methods varied significantly. While many focused on visual aspects like color, font size, and composition, few engaged deeply with human-centered design (HCD) methodologies, such as user research and persona creation. This gap in formal education and training in HCD underscores the importance of integrating comprehensive HCD training into design curricula, enabling designers to adopt a more user-centric approach (Melton et al., 2010).

Work Processes

The prevalent practice of competitor research as a starting point for design projects indicates a focus on market trends rather than original, user-centered solutions. This approach can lead to designs that lack innovation and fail to meet specific user needs. Incorporating early-stage user research can help address this issue and create more effective solutions (Fuge & Agogino, 2015).

Designers typically follow a client-centered approach, gathering requirements through direct interviews or from superiors. However, the iterative process of prototyping and feedback is less common, especially in industries outside of telecom and service platforms where agile methods are more prevalent. Encouraging the adoption of agile methodologies across more industries could improve the efficiency and quality of design outcomes (Hehn et al., 2020).

Work Environment

The work environment for designers in Bangladesh varies, with both freelancers and full-time designers in advertising and IT industries reporting positive, fun, and welcoming workplaces. However, mixed opinions on remote work reflect broader global trends where remote work can save time but also present challenges (Sanquist et al., 2010).

Recognition and respect remain significant issues, particularly in the IT industry, where designers feel under-recognized. Enhancing recognition and providing proper respect for designers can improve job satisfaction and retention (Maier et al., 2021). Additionally, some designers engage in problem-solving practices weekly, which helps them grow in the field of UX.

Challenges Faced by Designers

Strict deadlines and overlapping projects are common challenges, leading to high work pressure and sometimes requiring weekend work. Designers also feel that management often lacks an understanding of the design process, complicating project execution. This issue is compounded by incomplete client requirements, leading to communication breakdowns. Better time management and clearer communication can alleviate some of these pressures (Shafiee et al., 2019).

Payment and Infrastructure Issues

Freelancers face numerous payment issues, including limited budgets, non-payment, unfavorable conversion rates, and reliance on third-party payment systems. Additionally, slow internet speeds and high costs of necessary equipment further hinder their work. These challenges highlight the need for better infrastructure and fair payment practices (Venturi et al., 2006).

Client Requirements and Occupational Discrimination

Clients often do not provide complete requirements, insisting on following other brands and making it challenging for designers to innovate. Full-time and part-time designers also face occupational discrimination, being considered less valuable than programmers or developers. This discrimination affects salary and workplace dynamics, emphasizing the need for broader recognition of design's impact across industries (Gall et al., 2021). Some designers lack professional feedback skills, and contractors find numerous meetings in remote jobs problematic. The lack of confidence among freelancers due to insufficient user research also affects their work quality and client ratings. Better training in professional skills and user research methodologies is essential to address these issues (Frich et al., 2021).

Recruitment for Usability Testing

Finding the right users for usability testing is challenging, suggesting a need for specialized recruitment organizations. Effective user research is crucial in creating designs that meet user needs and expectations (Junginger, 2017).

Recommendations

Integrating HCD in Education

Design curricula should incorporate comprehensive training in HCD methodologies, including user research, prototyping, and iterative testing. Workshops, online courses, and practical projects can help bridge this knowledge gap (Melton et al., 2010). This will enable designers to adopt a more user-centric approach and improve the overall quality of design work.

Enhancing Client Collaboration

Develop guidelines and training for designers on how to effectively communicate with clients about the importance of HCD. This includes setting realistic expectations and ensuring clients understand the design process and timelines (Maier et al., 2021). Improved client education and communication can help mitigate time constraints and unrealistic expectations from management.

Resource Accessibility

Initiatives to provide affordable access to high-quality design tools and resources are essential. This could involve partnerships with software companies, subsidies, or community resource-sharing platforms. Improved infrastructure, such as better internet connectivity, is also crucial (Venturi et al., 2006).

Management Training

Educating management on the importance of HCD and the design process can improve project planning and execution. Workshops and seminars for managers in design-centric industries can facilitate better understanding and collaboration (Hehn et al., 2020).

Policy and Advocacy

Advocate for industry-wide standards and policies that support fair payment practices, adequate project timelines, and resource provision for designers. This could involve forming professional bodies or alliances to represent designers' interests (Gall et al., 2021).

Conclusion

This study highlights both strengths and challenges within the design industry in Bangladesh. The findings underscore the importance of integrating comprehensive HCD training into design education, encouraging agile methodologies, enhancing recognition and respect for designers, and addressing payment and infrastructure issues. By understanding these aspects, we can propose targeted recommendations to improve design practices and education in Bangladesh. Future research should explore broader stakeholder perspectives to further refine strategies for HCD adoption.

Limitations and Future Research

This study offers valuable insights into the design processes and challenges faced by designers in Bangladesh but has several limitations. It primarily focuses on design practitioners, excluding other key stakeholders such as clients and management. Additionally, data collection and analysis faced delays due to the COVID-19 pandemic.

Future research should consider the following:

- **Broaden Stakeholder Perspectives:** Include clients and management to provide a holistic view of the design process.
- **Cross-Cultural Comparisons:** Study HCD methodologies across different countries and cultures to understand their global applicability.
- **Alternative Data Collection:** Use ethnographic observation for deeper insights into designers' interactions with clients and stakeholders.
- **Longitudinal Studies:** Track the long-term effects of HCD adoption on design practices and outcomes.
- **Interdisciplinary Research:** Combine insights from design, psychology, business, and technology to optimize HCD practices across sectors.

By addressing these areas, future research can enhance the understanding and application of HCD methodologies in Bangladesh and beyond.

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Declaration of Interest

The authors of this study are affiliated with Userhub, an institution that teaches human-centered design as part of its curriculum. To maintain impartiality and credibility in the findings, students enrolled in Userhub were excluded from the sample. The authors declare that there are no other conflicts of interest that could potentially impact the conduct or reporting of this research.

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