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# Institutionalizing HCI in Industry: Challenges, Opportunities from Bangladesh Perspective

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**Abstract**

GDP of Bangladesh is growing at a rate of 6/7%. With 160 million+ population, especially heavy on the youth segment, this country has immense potential.

Although, our programmers are winning in various programming contests, UI designers and other digital labors earning foreign remittances for the country, various alumni of local educational institutions are contributing in HCI field [4] [11] [12] through their work around the globe, yet we couldn't establish our footprint in HCI, IT or ICTD field like our neighbors have done successfully [1]. We haven't been able to build our own BanglaCHI community all these years. And we fear to start losing the market, as the world has progressed to focus more on human need/aspects, usability and accessibility issues, which is an unknown territory for the students/professionals of Bangladesh, as no organizations or educational institutions offer any education on these issues.

This is a proposal seeking collaboration from HCI educators, researchers and practitioners, to support us to progress further in building BanglaCHI (HCI Network), which we started about a year ago.

**Author Keywords**

BanglaCHI; HCI4D; Community Building; Industry Academia Collaboration. HCI Education.

## **ACM Classification Keywords**

H.5.m. Information interfaces and presentation:  
Miscellaneous

## **About Us**

We came from different background but with similar vision to build the BanglaCHI community.

The first author, Moin, is leading a small team of HCI/UX professionals at Grameenphone, which is the largest mobile phone operator in Bangladesh, with a focus on User Experience (UX) research and Product/Service Design. In 2017, we started Dhaka ACM SIGCHI Chapter and I am the Chair of this chapter at present.

Dr. Nova Ahmed is an Associate Professor at North South University. She completed her PhD at Georgia Institute of Technology and came back to Bangladesh to serve her country. She has her research interest deeply rooted in systems, how people interact with systems and anything in between where computing can support humanity.

Ataur Rahman, is currently working as a UX Consultant for a FinTech company based in Amsterdam. He has an MSc and Professional Doctorate in Human-Computer Interaction. His areas of interests are Information Seeking, ICT4D, and Designing for Emotion etc. His current work involves advising large financial institutes to become more user-centered. Born and raised in Bangladesh, he is passionate about building a sustainable design community in Bangladesh.

## **Introduction**

Bangladesh has an emerging community in technology field and has a continuing demand on Human Centered Design and Development requirements. However, we have faced several challenges as well as opportunities of a newly emerging field from a developing country

perspective. We present a picture of our current initiatives.

Bangladesh has quite a few public universities and private universities, none of which offers any HCI or Design related academic program. There are probably 800+ small and medium sized software companies exist [2], but emphasis is placed on the functionality/UI/Visuals of things at the expense of the human factor/usability.

Even though the market demand of HCI/UX is growing, however there is a big gap of resources in the market. Grameenphone is probably the first organization, which employed HCI professionals and a dedicated team to utilize HCI/Usability expertise to improve its product/service offerings and now in favor of transforming the organization as a design driven organization based on last 2 years business performance [15] and contribution of HCI/UX experts in designing it's products/services, which is loved by its customers.

There have been research efforts initiated by other emerging researchers in the field of HCI [4] [11] [12]. However, most of the researchers are based outside the country living abroad. This creates a unique opportunity to bring in innovative ideas and attract younger pool to explore the field.

## **Current Challenges**

### *Lack of awareness*

Awareness about the potential of HCI among stakeholders in large corporates, students and academicians is crucial but next to none in Bangladesh. Probably, the most challenging task an HCI enthusiast/professionals face in a corporate setup is to convince key decision makers to consider User research and Design as a strategic tool. Only a couple of

companies have understood the power human centered design and the implication of investing on design.

#### *Lack of education*

In Bangladesh, like many other developing economies [3,5], the biggest obstacle is to get proper education in HCI. Till date there is no format education present in the country [9]. Only way for people to gain knowledge is through self-study through online materials.

Bangladeshi nationals who already got HCI education, they received their education in abroad and they built their career outside of the country. Hence, there is not a sustainable way of creating HCI professionals in the industry and as well as HCI researchers in academia.

#### *Lack of resources*

The scarce resource is perhaps the biggest one in overcoming this problem. In attempt of building a design community in Bangladesh, we are facing some challenges as there are only handful of people have the formal education and guide us how to introduce philosophies and practices that inform HCI education in order to support a broad community of students, academics, and industry practitioners. Here lack of resources entails lack of access to knowledge, education and funds to administer HCI research.

### **Opportunities: Exploring the field of HCI**

#### *Emerging Market*

The current volume of software industry in Bangladesh is estimated around US \$250 million and it is growing every year [2]. The government of Bangladesh has a set a goal of digitizing all public services by 2021 known as "Digital Bangladesh" initiatives has already

progressed significantly [6]. As a part of this initiative several IT parks are being built around the country to promote this emerging sector that could potentially be the strongest area for Bangladesh to develop further [15].

#### *Success at industry*

Grameenphone Ltd. had formed its usability team during 2012/13, but was limited to designing product or services journeys and some small usability tweaking in its various products. However, in 2016 it has gone through massive transformation and hired some new resources, with proper background in Interaction design and User Experience design. Also, entire organization prioritized on user research work while developing or redesigning its product and services, resulting customer satisfaction, reflected in their various research reports like Brand Equity reports and of course in their financial performances[15]. The solutions that were developed based on user research work and usability best practices were not only an app, which requires high end devices – luxury to many mobile users in Bangladesh. Instead, by understanding the local context, the researchers and designers solved the basic mobile needs through various USSD and IVR based solution and redefining sms based customer communication [15] resulting millions of users to use those solution on a daily basis. 42% customers adopted self-service journey and self-service hits increased by 85% with corresponding call center call volume reduction of 51%.

The company currently is focusing on mobile health services, mobile payment services, Child online safety, e-Commerce, mobile entertainment, privacy and security, IoT services etc. in Bangladesh, however, requires more resources [14] to come up with something sustainable and brings positive impact in society.

### *Opportunities*

The proposal is to collaborate, as HCI researchers, Practitioners and educators around the globe, to teach HCI in different Bangladeshi universities and innovation hubs. There are several Bangladeshis (and researchers or practitioners living outside Bangladesh) who have had excellent training in HCI, whose skills can be useful in raising the next generation of Bangladeshi designers and innovators, who thoroughly understand the challenges and opportunities around technology use for development in Bangladesh. The goal is to transform mentalities of young Bangladeshi technologists, and those aspiring to develop ICT solutions in Bangla, to enable a towards a shift from the “getting apps out, quick” mentality, towards that of involving people and their communities in the technology development process.

The proposed collaboration would bring together the expertise and experiences of those with HCI training to improve HCI Education in Bangladesh, while working towards developing a common understanding across various organizations, of what will be called “BanglaCHI” - how to do human-related computing right in Bangla.

Our goals are: 1) awareness building about HCI, form a local body of knowledge: BanglaCHI, and providing a networking platform for HCI enthusiast/professionals 2) Offer short courses and summer/winter schools for locals [7][8]. We do all that by putting huge efforts on Industry-Academia collaboration, by having professional events and summer schools with the support of ACM SIGCHI and local organizations, and by engaging, developing services through our website ([www.banglachi.org](http://www.banglachi.org)).

The long-term vision is a network of HCI Professionals in Bangladesh, one that will work on various social issues and design solutions which not only helps

Bangladeshi economy to grow, but also contributes in global arena. The vision also includes, eventually, HCI degrees offered at local universities and HCI short courses for those who are developers or technology designers but have not gone the formal education route.

### **Conclusion**

We have presented our initiatives to establish an HCI community in Bangladesh. We hope that our initiatives would directly impact on technology usage for marginal community, community with lower educational skills and community with special requirements. We hope to explore and expand our research horizon by reaching out to a larger community.

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