

Institution: UNIVERSITY of WEST LONDON
Unit of Assessment: 11 COMPUTER SCIENCE and INFORMATICS
Title of case study: Institutionalising HCI in Asia: an impact focusing on India and China
<p>1. Summary of the impact</p> <p>This impact case study is discussed in terms of six years of research collaboration with relevant bodies in India and China through EU-funded projects encouraging the development of a usability culture in academic and industrial sectors. Impact in this case can be seen at three levels:</p> <ul style="list-style-type: none"> • Appropriation of HCI concepts and methods to suit the local country/culture; • forming of consortia around the reshaped discipline that can actively promote HCI in industry and academia and establish links with national organizations; • the roll-out of effective usability practice in industry.
<p>2. Underpinning research</p> <p>The impact case study is underpinned by research and projects carried out by the Sociotechnical Centre for Internationalisation and User Experience (SCIUX), formerly known as Centre for Internationalisation and Usability. The work is aimed at supporting the design and development of systems that meet all the needs of end users globally. Two research activities underpinned the impact:</p> <ol style="list-style-type: none"> 1. A body of experiments and studies aimed at providing tools, techniques and methods that can be used by technology developers and designers in addressing cultural problems in the process and product of interactive systems design (e.g., Smith et al. 2004, Dunckley and Jheita, 2004, Abdelnour-Nocera and Hall, 2004). The insights from this body of research present an audit of local user interface attractors to inform the design process (Smith et al. 2004, Dunckley and Jheita, 2004); the concept of cultural fingerprints to contrast websites with the cultural needs of local users (Smith et al. 2004); the problems associated with local validity of user centred design (UCD) methods and cross-cultural development and design teams (Abdelnour-Nocera and Hall, 2004, Smith et al. 2004). These last two sets of insights on local validity of UCD methods and cross-cultural aspects of development and design teams emphasised the need to engage with countries where HCI was not well developed but have a growing IT industry. 2. Motivated by the above, SCIUX accessed the EU Asia IT&C programme to support usability research in both India and China. SCIUX was the lead partner in the Sino European Systems Usability Network (SESUN) and the Indo European Systems Usability Partnership (IESUP), helping to develop active and sustainable links between Asia and Europe. This included collaborating on India's first international HCI conference and co-chairing a major conference in Beijing. Through the initial stages of IESUP (2002-2004) in India (Smith et al. 2005) and SESUN (2005-2007) in China (Smith et al. 2007) the centre found that the institutionalisation of HCI requires three elements: the reconceptualization / redefinition of HCI in the local country or culture, secondly; the embedding of HCI concerns and its importance in local and national organizations, and the rollout of usability training and best practice into industry. In practice these elements occur in parallel, but the critical issue is to ensure sufficient feedback between the elements (Smith, 2011). <p>Prof Andy Smith was the main driver of our research in culture and HCI and the PI throughout the life of both EU projects; unfortunately Andy passed away in 2011. Prof Lynne Dunckley was not directly involved in IESUP and SESUN but contributed to the research on culture and HCI in SCIUX, which enabled the centre to lead these EU projects. She passed away in late 2008. Dr</p>

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Abdelnour-Nocera joined SCIUX in 2004 and currently leads the research group. Christina Li was the research assistant during the SESUN project and remains involved with the centre.

3. References to the research

- **Abdelnour Nocera, J. L.** and Hall, P. (2004). Global software, local voices. In F. Sudweeks and C. Ess (editors), Cultural attitudes towards communication and technology 2004, pages 29–42. Karlstad, Sweden.
- **Dunckley, L.**, & Jheita, K. (2004). Formative Evaluation of International User Interfaces Based on Sorting Techniques. *Designing for Global Markets*, 6, 91-102.
- **Smith A.** (2011). Issues in adapting evaluation methods for global usability, in I. Douglas and Z Liu, (Eds.), *Global usability, Human–Computer Interaction Series*, Springer, ISBN: 978-0-85729-303.
- **Smith, A., Dunckley, L.**, French, T., Minocha, S. and Chang, Y. (2004) A process model for developing usable cross-cultural websites. *Journal Interacting with Computers*. 16 (1): 63-91 doi:10.1016/j.intcom.2003.11.005
- **Smith, A.**, Gulliksen, J., Bannon, L.: Building Usability in India: Reflections from the Indo European Systems Usability Partnership. In: McEwan, T., Gulliksen, J., Benyon, D. (eds.) *People and Computers XIX - The Bigger Picture: Proceedings of HCI 2005*, Springer, Heidelberg (2005)
- **Smith, A.** Joshi, A. Liu, Z. Bannon, L. Gulliksen. J. and **Li, C.**: Institutionalising HCI in Asia, in *Human-Computer Interaction – INTERACT 2007*, LNCS, Volume 4663/2009, Springer, pp 85-9 (2007)

4. Details of the impact

The centre's research in cross cultural HCI and its co-operation projects and tours in India and China have had a direct effect on highlighting the value of user-centred design as a subject to be taught in universities and practiced in the local IT industry and public sectors.

Aniruda Joshi (IIT Bombay) confirms IESUP gave a quick start to the then nascent field of usability and HCI in India. The project led by SCIUX funded trips by several HCI researchers (Prof Andy Smith, Prof Liam Bannon, Prof Jan Gulliksen) from the EU to India, which initiated relationships and collaborations between HCI academics in India and Europe, some of which continue today. As part of the impact, Smith initiated and chaired the first India HCI conference in 2004, which runs its fifth edition in 2013.

While there have been other HCI and usability conferences and events, India HCI has been the first double-blind peer reviewed research conference, and it continues to be well respected. Its impact on usability practice in India has stimulated the creation of local user experience consultancies, such as iGatePatni, who provide offshored services to the UK and Europe.

In 2005-2007, when usability practice began in China, there were very few enlightenment and introduction activities, with a lack of communication within the community. SESUN activities were of great help for those practitioners interested in usability practice, to be able to understand and enter the field, (reference: Director of the Sino European Usability Centre).

Each SESUN tour covered three major cities across China. Each held a 1-day seminar at each city, led by 3–4 leading usability experts from Europe. Overall they attracted over 1,000 practitioners and university students from around the country. Many people involved in usability in China nowadays actually became aware of the usability concept and got their introductory knowledge of this field from this series of events. On completion of the SESUN project Prof Andy

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Smith jointly co-chaired the China EU Summit on Human-Centred IT and Applications which was held in Beijing in May 2007, inaugurated jointly with the Chinese Ministry for Information Industry.

The impact of both IESUP and SESUN can be summarised in terms of the following points:

- Assisted people from industry and academia to practice usability/UCD for the very first time;
- inspired the first batch of Indian and Chinese companies to set up usability units in the industry and to start UCD practice in product development;
- fostered user centred research methods to be introduced in HCI technology related research activities;
- introduced interaction design and UCD knowledge into the HCI curriculum in universities;
- played an important role in infiltrating the idea of user experience and UCD into government sectors and at enterprise managerial levels;
- facilitated practitioners networking to share common interests in usability and HCI, to establish special interest groups online and offline to support each other.

In addition to the direct impact on India and China, the underpinning research discussed above and IESUP and SESUN projects allowed us to engage in more recent projects in other countries such as Kenya, where, through the EPSRC funded VeSeL project, we addressed the effects of culture in participatory design and interactive technologies for rural farmers. The RA for the SESUN project, Christina Li, went on to become a User Experience (UX) consultant and UK expert on Chinese usability issues. She founded her own company (<http://www.ii-worldwide.com>) and is now organising a UX tour of China with a number of UK based companies.

Driven by the experiences of IESUP and SESUN, David Lee completed his PhD at UWL in 2009. David worked in the field of cultural aspects of software development and quality management in offshoring contexts. His findings were presented at the Software Quality Management 2011 and India HCI 2010. He is now Head of Strategy at Vocalink.

In VeSeL we were able to help a cross disciplinary and cross-cultural team of researchers to solve a design problem using knowledge acquired by SCIUX in relation to localisation of HCI methods, elicitation of cultural differences is user research and in liaison with the University of Nairobi, to develop capacity in UCD methods. In this case, the centre's work had an impact on the daily life of two farming communities in Kenya (Kiangwachi and Kambu). Our PhD student supporting VeSeL, Souleymane Camara, successfully defended his viva in 2012 and is now working at Thomson Reuters. UK UXPA recognise Souleymane as an expert on African UX.

5. Sources to corroborate the impact

Local partners in India and China:

- Professor, IDC, IIT Bombay, Industrial Design Centre, Indian Institute of technology, Powai, Mumbai 400076.
- Professor, Director, Sino European Usability Center, School of Computer Sci. & Tech., Dalian Maritime University, Dalian, 116026 P.R.China.

Partners in Europe supporting work in Indian and China:

- Professor, Human Computer Interaction, KTH Royal Institute of Technology.
- Professor Emeritus, Interaction Design Centre, University of Limerick.

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India HCI 2004 Call for Papers <http://www.ixda.org/node/15084>

Report on the First All India HCI Conference:

- Report on the First All-India Human-Computer Interaction Conference. *interactions* 12, 5 (September 2005), 67-69. DOI=10.1145/1082369.1082417 <http://doi.acm.org/10.1145/1082369.1082417>

China EU Summit on Human-Centred Technology and Applications,
Media Center, Beijing, May 2007

Website for VeSeL Project, <http://www.lkl.ac.uk/projects/vesel/>