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Title of paper: Preliminary Study of the Cultural Barriers which may affect Universal Access

Authors: Shena Parthab Taylor, Colette A Nicolle and Martin C Maguire

1st author: Shena Parthab Taylor

Address:

ESRI
Loughborough University
Ashby Road
Loughborough
LE11 3TU

Email: s.p.taylor@lboro.ac.uk

Phone: (07802) 203130

Institute: Ergonomics and Safety Research Institute (ESRI), Loughborough University

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Chapter X

Preliminary Study of the Cultural Barriers which may affect Universal Access

S.P. Taylor, C.A. Nicolle and M.C. Maguire

X.1 Introduction and background

Highly sophisticated technologies frequently play a role in product and service design and delivery nowadays, especially in ‘developed’ countries. The current pace of innovation, unprecedented in human history, challenges even indigenous people; technological complexity causes a loss of interest or under-utilisation of products (Clarkson 2008). Investigating whether UK’s ethnic minority consumers (EMCs) face barriers offered interesting challenges and opportunities for rewarding research.

The scale of the social issues, and business potential, is staggering. The EU received almost a quarter of a million asylum applications in 2008 alone (UNHCR 2009). Large inflows and movement of people from disparate cultures across the EU is challenging social cohesion and integration (Spencer 2003) - and creating new markets for industry. Whilst EMCs now comprise only 7% of UK’s population, their spend-forecast was £300bn by 2010 (BITC 2007), and is set to grow. Over the next decade 50% of the growth in the working-age population will comprise EMC graduates (Edinburgh Univ. 2009); c.25% of babies born in the past year were to foreign-born mothers (Hickley 2009) and, by 2029, UK’s population is predicted to rise to 70m – immigrants, or babies born to them, accounting for two-thirds of that growth (Laing and Kirkup 2009 citing ONS).

Insights into EMCs cultural influences and motivations is required (Burton 2002) to harness this huge potential, because culture influences people’s thoughts and behaviours (Jylha 2007; Rau *et al* 2008). People’s success in their everyday lives depends on their positive product and service user-interactions, which are governed by their knowledge and perceptions. Difficulties can arise when products and services are designed by people from other cultures (Schifferstein and Hekkert 2008). Dusenberry (2006) stated “one good insight can fuel a thousand ideas”, but “smart” analysis is critical. Success depends on insights being made into actionable form for designers to avoid Mitchell’s *applicability gap*, i.e. research data is frequently not used by designers (Boztepe 2007).

Inclusive design has a key role to play here for it champions the ease of use (*usability*) of products and services for the widest range of users, including user-satisfaction in a specified context of use (UsabilityNet 2006), culture and cognition (Clarkson *et al* 2003). However, maximising usability, simplicity and user-satisfaction requires knowledge of users' cognitive capabilities (Clarkson 2008). Thus, identifying and lowering barriers for EMC sub-groups (e.g. religions, elderly people, different generations, those lacking English, recent arrivals, etc.) could improve social integration and help government and business more successfully reach the widest range of users. This multi-faceted, on-going research requires an understanding of both stakeholders, EMCs and product and service providers, in the spirit of inclusive design.

X.2 Aims and objectives

The aim of this study is to identify whether or not EMCs in the UK currently face barriers in the take-up of products or services and, if so, the nature of the barriers. EMC's preferences and the influence of religion, inter-generational factors and acculturation (the process of integration of a smaller group into a larger one) are of particular interest. The implications for inclusive design are being considered holistically, from design to user-experience.

X.3 Approach

Culturally-oriented, design literature focuses largely on HCI, designers, the design process or ethnographic studies (in home countries). Other literature addresses social or marketing issues. Little was revealed about which product or service in the UK required investigating, perhaps because it is a broad question, or had not been previously asked, or acculturation is playing a role. Thus, an exploratory study with EMCs was decided upon. Fig.X.1 illustrates this multifaceted research

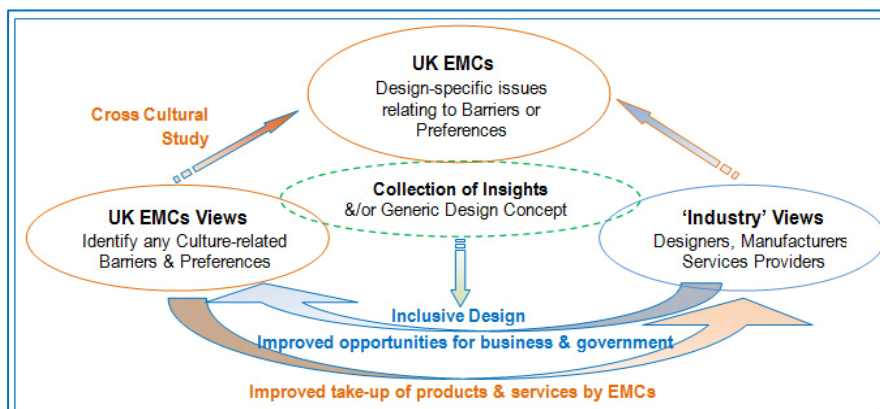


Fig.X.1 Multi-faceted research

concept. The literature topics explored culture, how it relates to products and services and how these are designed and promoted.

X.4 Culture, ethnicity and acculturalisation

Not enough is understood about how variations across EMC subgroups affect user-behaviour - the influence of religion, inter-generational factors and acculturation of younger generations. The significance of acculturalisation lies in whether EMCs should (or wish to) be approached differently to indigenous people (Burton 2002). The lack of data suggests missed opportunities for industry (Emslie *et al* 2007).

Culture is defined as the distinctive ideas, customs, social behaviour, products or way of life of a people (OED 2009) and country definitions are rejected as too broad (Jylha 2007; Boztepe 2007). *Ethnic* and *ethnic minority* are defined as the distinctive ways of living of people of common cultural, racial, religious or linguistic characteristics within a larger system (OED 1989; Princeton Univ. 2009).

Culture is an everyday, social activity, which is constantly influenced, modified and affected by context. It is used to produce different lifestyles, to emulate or to mark and maintain social differences. *Cultural consumption*, the combination of the consuming of products and provision of these, *produces* culture (Storey 1999). Different cultures influence thoughts and behaviours differently (Jylha 2007) and produce different motivations and consumption (Kinra 1983). People's identities, which exist within cultural representation, are also subject to change and people often have multiple, sometimes contradictory, identities (Barker 2000).

Additionally, in this information age, the new ways of communicating provided by ICT (information and communication technologies) are interrupting patriarchalism's orderly sequence of transmitting cultural codes down the generations. This is impacting on individuals and society, transforming beliefs, creating segmentation (Castells 2000) - and possibly accelerating acculturalisation.

Recent research suggests that EMC's choices are now based on individual preferences, be they 2nd generation, cosmopolitan, UK Punjabis keen to integrate, who are choosing elements from different cultures (Sekhon and Szmigin 2005), or Canadian 'visible' minorities considering whether to live in ethnically homogenous communities (Balakrishnan *et al* 2005).

Insights into these issues could prove valuable to business and government, but the methodology for gathering this data might prove even more helpful.

X.5 Key models in product and service design

Consumers (who need products and services) and Providers (who satisfy these needs) are 'two sides to the same coin'; an *articulated social* - different groups who come together for a common purpose (Barker 2000). The provision of products and/or services lies at the heart of all organisations - and their success depends on how well they meet consumers' needs.

Products are defined as a *bundle of attributes*, and although *services* have

additional intangibles, they should be treated like products as both need designing, costing and promoting. Designing attributes to be attractive to consumers, together with the marketing elements, comprises a concept called *the Total Product* (Fig.X.2). It represents everything consumers receive, from satisfying an essential need (*core benefit*) to intangibles - brand, image, status etc. (Masterson and Pickton 2004). Crilly *et al* (2008) suggest products ‘mediate’ in a process of communication between designers and consumers. Meanings and interpretations may differ between them and how responses vary across cultures and generations merits consideration.

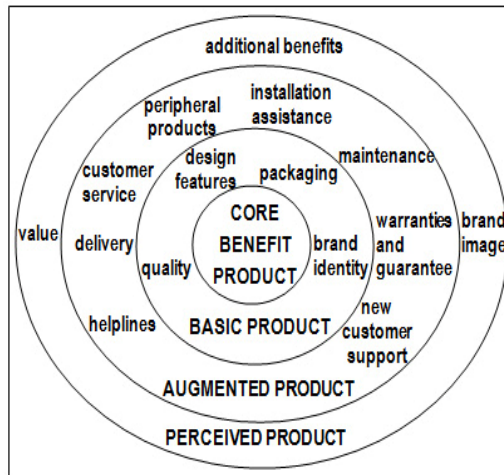


Fig.X.2 *The Total Product* (Masterson and Pickton 2004)

Organisations constantly seek insights into consumer motivation in an effort to differentiate themselves from others in the market. They often use Maslow’s famous 5-level pyramid, the ‘Hierarchy of Needs’ model (Fig.X.3), to map consumer experiences which are then used to drive *the Total Product* (Rait 2008).

Maslow’s model provides insights applicable across cultures; survival forms the base with the levels becoming less critical until, *self-actualisation* at the peak. It is cited as a *brand assessment tool* - the more levels that resonate with a product or service, the greater is its success with consumers (Thorson 2006).

Quality and usability are critical for good consumer experiences. The *Quality in Use* 4-part standard (Fig.X.4) governing HCI design (UsabilityNet 2006) highlights the range of characteristics for successful design; arguably cultural factors should also be considered. However, when evaluating user satisfaction,

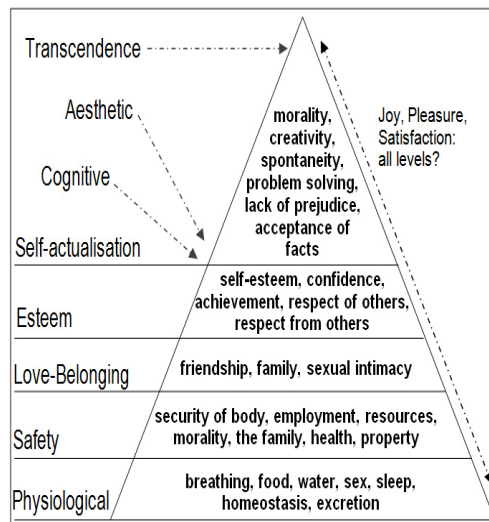


Fig.X.3 Maslow’s *Hierarchy of Needs* model (Thorson 2006) showing 3 new layers

efficacy and usability, the *context* (circumstances) of use is also critical (Elton et al 2008).

Cultural differences matter significantly in user experiences for what matters to one culture may not to another (Carroll 2009). Moreover, sociocultural insights inspire design, creating meaningful user experiences (Strickfaden *et al* 2006). Rau et al (2008) state that accommodating cultural differences (presentation, cognition, etc.) in design is important because, whilst cultures are modified, differences in *thinking* remain. They suggest cultural studies have not yet succeeded in making environments more usable for different cultures but caution against mistakenly ascribing *contextual* differences to *culture* (Ibid). Others may consider culture is also contextual (impacted on by social location). Google's recent upgrade providing a range of language scripts on internet searches, evidences that global businesses are aware of cultural-design issues. Finally, Jordan (2004) reminds us design is also about pleasure - giving something good or removing something bad. Shared enjoyment, *jouissance*, holds a community together (Dean 2006).

These cultural theories and models provided the foundation for the methodology.

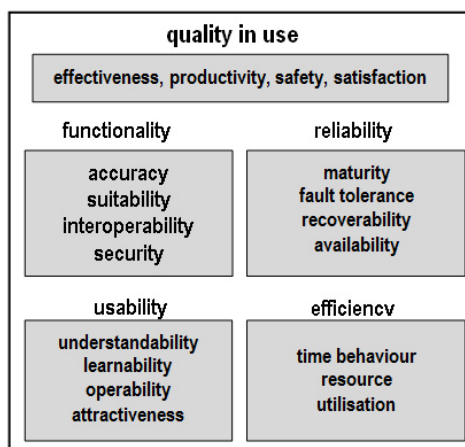


Fig.X.4 ISO/IEC 9126-1 Software Eng. Product Quality-Part 1 (2000) (UsabilityNet 2006)

X.6 Methodology

The EMCs selected for this study include people living in the UK, originating from the Indian sub-continent (Pakistan, India, Bangladesh, Nepal, Sri Lanka), who share a common cultural heritage. Challenges for the methodology included: answering a broad question; addressing culture, generations and religion; flexibility to include families, single or widowed persons; simplicity to encourage those lacking English or literacy skills; translation and, finally, identifying design-related issues for further research. In addition, a co-related study with industry aims to identify issues or missed opportunities with EMC users.

An inductive, inclusive approach was adopted to help generate a hypothesis from the field, using qualitative, 'rich' data-gathering and purposive sampling. *Sub-groups* were defined as *religion* and *generation* to study differences or similarities in views and the influence of acculturation (Burton 2002). Five major religions (Christian, Sikh, Hindu, Muslim and Buddhist) were selected, ensuring a representative range. Participants were heterogeneous (religions, generations, ages,

genders) and included families and individuals unknown to each other. Family focus groups were mainly used and 1-to-1 interviews as appropriate. Fig. X.5 illustrates this three-pronged, extendable, flexible data-gathering concept.

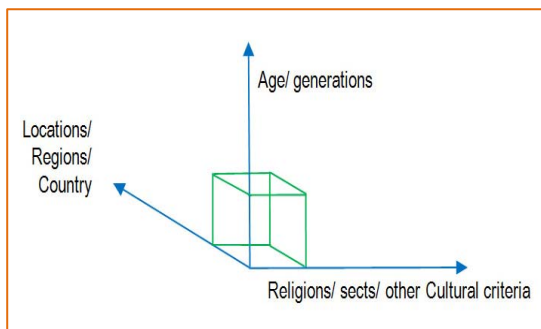


Fig X.5 EMC flexible, data-gathering concept

Simple tools were designed and organised to inform, engage, and motivate, as memory-aids, to save time and for visual interest. Product and Service Attributes were compiled from the Total Product, Quality in Use and Maslow’s models, and family translation was selected to include non-literate persons.

Questions included open, closed, and semi-structured questions, as well as some likert scales, to explore products and services and their attributes. Questions explored product and services issues within the last 3 years: any difficulties, those culturally important or missing, favourites, most useful, etc. Visual communication (colour and images) explored preferences, instructions, etc., and shopping activities explored shopping modes, payment, special occasions, religious festivals and



Fig. X.6 Product and Service categories: examples from everyday living areas

preferences. The methodology worked efficiently enabling a comparison of religions, generations and genders, and cultural or contextual issues.

Visual aids helped focus open questions and added enjoyment (*‘jouissance,’* Dean 2004), which was a guiding principle; thus ‘emoticons’ were also used. Product and service category designs were in non-leading mosaics (Fig.X.6) based on everyday-living areas: kitchen/utility, computers and peripherals, mobile media, government services, travel, etc. rather than on marketing terms (e.g. ‘white goods’). Approval was gained from the University’s Ethical Advisory Committee, participant information was provided and written consent was obtained. The

methodology was piloted and adjusted.

Individual interviews took 1½ hours whilst family focus groups depended on size, and reassurances were given of anonymity and no right or wrong answers. Sixteen participants have been interviewed thus far and this initial sample has provided a good mix of variables (Table X.1). Ages ranged from 13 to 76+ years; half were over 40. Marital status included married, single and widowed persons. UK residency ranged from 6 months to 30+ years. Both English and literacy skills ranged from none (1st generation) to fluent (10 persons, 1st and 2nd-3rd generations).

Table X.1 Initial EMC research: Participants' backgrounds (N=16)

Gender		Generation		Religion				
Female	Male	1 st	2 nd -3 rd	Christian	Sikh	Hindu	Muslim	Buddhist
9	7	8	8	3	4	5	4	pending

The 1st generation included couples, widows and a postgraduate student; the 2nd and 3rd generations were couples, a post-graduate mother, undergraduates and high school students. Occupations included housewives, production operatives, sign-language teacher, self-employed postmaster, warehouse operative, senior care assistant and students.

X.7 Emerging results

Initial results suggest that, in their own perceptions, these EMCs from the Indian sub-continent, do not express *cultural* barriers in the use, availability ('everything is available now') or interactions with products in the UK. (This does not imply, however, that issues - implicit, explicit or latent - are absent, as data collection is still in progress.) Participants appear to be rather well-adjusted, or are happy adjusting and, unanimously across religions and generations, value the quality of life in the UK very highly. Admiration and enjoyment of product designs (beauty, appearance, form and functionality) is cited unanimously. In general, they are choosing lifestyle elements (confirming Sekhon et al 2005 and representing the higher levels of Maslow's hierarchy). Services (e.g. roadways, medical staff) and providers (e.g. local council, police) were lauded for their courtesy. Thus far, no particular religious factors have been cited by participants in their views.

Religion is a strong theme, a way of life with many 1st generation and some 2nd generation who pass it to the 3rd. The desire for family prosperity is also expressed in religious rituals – the gatherings also help renew community bonds and, for some women, provide a relief from joint-family pressures (a cultural issue). To varying degrees, all religions and generations celebrate UK's religious festivals (especially Christians), as well as social festivals, music, etc. The desire for family prosperity propels *material* acculturation; one manifestation, educational achievement, is also a critical domain for *attitudinal* acculturation.

A lack of English for 1st generation elderly people presents quality of life and health and safety hazards. It is equally problematic for recent arrivals or long-term

residents. Difficulties include communicating problems to doctors (interpreters may not turn up, saying they are busy), shopping in supermarkets, following instructions for medication and food preparation, travelling alone, using appliances, etc. They rely constantly on family and, if families scatter or elders become less mobile, it prompts their reliance on places of worship for companionship and food (*langar*). But holistic support, equivalent to the family, is patchy. Despite difficulties, the elderly reveal a lively interest in using technical products, especially audio-visual, which are critical for prayers and entertainment, i.e. quality of life.

Of the 2 non-literate widows (resident for 30+ years), one says it is unnecessary to learn English as she relies on her family. However, her son (quietly) expressed concern. His children are due to leave for college and he wonders how his mother will manage during the day whilst he and his wife are away working. Widow 2 accepts her lack of English is a problem and wishes to learn. She lives with her single grandson (the family having scattered). Difficulties are compounded by past injuries affecting walking and standing for long, impacting on basic activities (cooking, climbing stairs, using a bath, shopping, travelling to a physiotherapist) when her grandson is away at work or abroad. She cites negative discrimination from the Indian sub-continent interpreter who often does not attend her doctor's appointments. She praises English medical staff, but laments they do not understand one another, so the process is useless, concluding they feel they have done their best so do not trouble too much as she is old. She frequents her place of worship for company and free meals, taking away food in empty cartons for dinner.

Widow 3, resident for 6 months, is literate only in Malayalam, a script radically different to the European Latin script. Consequently, she is also entirely dependent on family for shopping, instructions on food, medication etc. and using appliances (which she admires). Her family are recent arrivals (a couple with fair to good English) and have not yet identified her lack of English as a problem for she stays for 6-month spells. The couple display enthusiasm and little difficulty in managing daily tasks as they acculturalise. The family rejects the frozen food ranges for 'fresh' (ascribed to unfamiliarity as little is available in the Indian sub-continent).

Respect is a strong theme (both social and inter-generation). A lack of courtesy from staff from the Indian sub-continent has been cited by the elderly, a recently arrived post-graduate and by several of the 2nd generation resulting in their avoiding Asian shops. Many 3rd generation avoid Asian shops as they 'don't understand' (acculturalisation is causing a loss of community language skills).

Usability problems with TVs, computers, software, mobile phones and the internet are severe for 1st generation (non-English-speaking elderly) and moderate for 2nd-tier functions even for 2nd generation parents. These inter-generation technology gaps (even a fear of computers) are widening with increasing age between 2nd and 3rd generations, due to lack of time and complexity. A mistrust of the internet is cited by 50% of the participants, possibly not too different to the broader UK population.

X.8 Conclusion and next steps

Positive user-experiences are being hampered for some sub-groups. Communication and problems in understanding for non-English skilled EMCs appear embedded and are likely to remain so if EMCs are joined by non-English skilled family or if these are widowed or isolated. It presents problems (loneliness, health and safety, low empowerment) for the individuals, challenges and costs for government services, and missed opportunities for businesses. Poor usability and a mistrust of the internet also do not bode well for businesses reliant on ICT. Language barriers may be considered a *cultural* issue by some; however, the minority learning the language of the majority may be considered a *contextual* issue by others.

An initial discussion with a service provider revealed a desire for EMC insights to engage with and promote services. This EMC study is being extended to 40 participants to capture a more representative sample. Early indications suggest the research will narrow its focus upon a service (e.g. hospital services or police) and visual communication issues with a view to enhancing the user experience for ethnic minority consumers.

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