

## Country Differences In Technology Experience: The Effect Of Teletext On Itv Adoption In The United Kingdom

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### Abstract

This study found that participant's previous teletext experience and previous iTV experience influenced their openness towards using interactive television in planning independent long-haul holidays. The study surveyed participants for their previous interactive media experience (internet, iTV and teletext) before viewing a linear or interactive television destination promotion. Two ad models (impulse and telescopic) were tested from two program formats (travel program segment and ad break in a lifestyle program). These were aired on a video-on-demand network in London (UK) with 164 people out of a total of 375 participating all the way to the final steps of the study. Participants were most experienced with the Internet (mean 6.29 on 1-7scale) and 50% had had experience with an interactive television provider other than the VOD network. 70% had experience with teletext. Overall, participants felt positively towards interactive television as an information source for holiday planning. Those with teletext experience or iTV experience were more open to iTV than those without such experience. Furthermore, actual interaction with the treatment seemed to moderate the previous experience – iTV attractiveness link. This demonstrated that although previous technology experiences can transfer to new media, the actual experience of using the new media is also a powerful factor.

Keywords: advertising, interactive television, teletext, experience, knowledge transfer, adoption of innovations, country differences

### Introduction

Interactive television (iTV) is a growing medium and is making headway in the world of tourism, particularly in parts of Europe. Already numerous interactive travel campaigns have successfully aired on SKY in the UK, with travel providers and destinations realizing its benefits. However, little is known about factors that contribute to travellers adopting iTV into their holiday planning process. Since technologies evolve from those before them, one of the most natural factors to explore first is a traveller's previous use of influencing technologies. In this case, interactive media specific to the originating market, the United Kingdom (UK), was explored and included the Internet, teletext and interactive television. In exploring possible influencing factors of traveller adoption of such a new information technology, one can gain an enhanced understanding of the potential uses of iTV.

### Previous Research

Interactive television is an interactive medium in a long line of interactive media, each progressively giving viewers a new experience, a new understanding, a new awareness and more choice and control over their environment (Straubhaar and Lin, 1989). iTV has been influenced by many technologies including the remote control and videocassette recorder, home shopping, teletext, and the Internet, to name a few (Swedlow, 2000). The remote control and VCR have taught the viewer to be more active and selective (Swedlow, 2000);

teletext has accustomed viewers to use their television for information as well as entertainment (Middleton, 2001; Ryan, 2000); while the Internet has established a benchmark for interactivity and choice of information (Freeman, 2000).

While each new technology experience has educated consumers in the interactive media concept, consumers have also contributed into the next technology's development by often deciding how they may adopt the technology into their lives, rather than the technology dictating its place in their lifestyles (Rogers, 1995). Thus as consumers become experts in the older interactive media they are laying the foundations for their understanding of new interactive media.

The theory of knowledge transfer (Singley and Anderson, 1989) conceptualizes this transmission and suggests that experts find transference to completely new situations easiest (Docampo-Rama, 2001; Gregan-Paxton and Roedder John, 1997). This implies that individuals with a lot of experience with interactive media will be more accepting and comfortable with the use of iTV than those that have had very little interactive media experience. Moreover, expectations are also transferred and thus a new technology is expected to at least meet its predecessor benchmarks if it cannot live up to the promotional hype. However, these increased expectations on new technologies may explain why "increased benefits may not be so noticed or appreciated" by the end consumer (Perse and Ferguson, 1997, p. 327). It has also been suggested that use of previous media such as teletext, digital television and the Internet will affect the perceptions of iTV (Brodin, Barwise, and Canhoto, 2002). Thus, if the iTV technology is to improve the television experience via interactivity, it is not only previous knowledge that needs to be considered but also the expectations from a consumer's previous experience with television and interactive media technologies.

### **The Design of the Study**

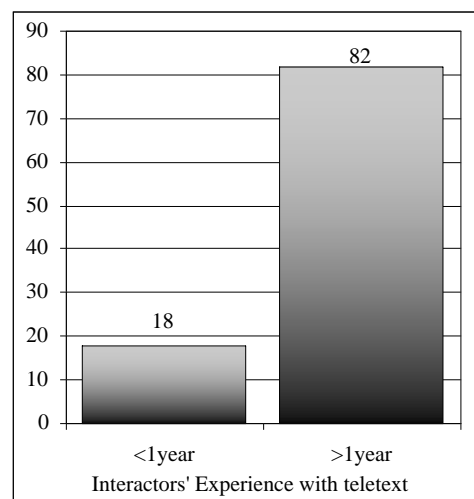
The research was administered via a video-on-demand network in Greater London (UK) in February 2003, using opt-in network subscribers with past international holiday experience. Participants were allocated to one of three groups: – linear/control, impulse model and telescopic model – and required to complete a two-part questionnaire and watch a program in their home. The first part of the questionnaire took measures of the length of time that participants had had access to each of three interactive media, interactive TV, the Internet, and teletext; how experienced they felt they were with each of these media; and to what extent each medium was used for selected purposes. Length of *access* was gauged using intervals of less than 1 month, 1 to 6 months, 6 to 12 months, or more than 1 year. *Perceived experience* was measured on a 1 to 7 semantic differential scale with 1 being "inexperienced" and 7 being "very experienced." The extent of use for each *purpose* was also measured on a 1 to 7 scale with 1 being "rarely" and 7 being "very often." The purposes varied across media depending upon their capabilities. All three interactive media included the purposes of "browsing for goods/services," "buying goods/services," "browsing for travel products" and "buying travel products." Interactive TV purposes also included "watching programming" and "requesting brochures/information." Teletext also included "getting news and other of-interest-information" and "entertainment." The Internet also included "getting news and other of-interest-information" and "entertainment/email/chat." Participants were also asked in part one of the questionnaire about their expected use of selected media in the future for either information or booking purposes, and in part two of the questionnaire their evaluations of iTV

as an attractive information source. *Expectations of future use* of teletext, the Internet and iTV for either information or booking purposes were measured via the categories of “information only,” “booking only” and “both information and booking.” Participants’ *evaluations of iTV* as an attractive information source for holiday planning was gauged via a 1 to 7 scale with 1 being “unattractive” and 7 being “very attractive.”

The two ad models tested were based upon current travel and tourism industry practices (Clarke, 2003; Gershon, 2003; Nieboer, 2003; Pye, 2003). In each case, participants watched a 30minute program, with the ad embedded in a commercial break during a lifestyle show or during a destination segment in a popular travel program. The two control groups had no interactivity but were provided with destination contact information. In addition to this information, the treatment groups had either the opportunity to request a brochure about the destination (impulse model) or to watch a destination video (telescopic model) from their program.

## Results

Overall there were 164 valid responses from 375 registrations from the pool of 3,500 subscribers. Participants were mainly male (63%), aged between 31-44 (51%) and experienced, international travellers. Although participants felt more comfortable with the Internet (6.29) than teletext (5.02) or iTV media (4.85), there were significant correlations between the attractiveness of iTV as a source of information about holidays and previous experience with teletext ( $r = .17, p < .05$ ) and iTV ( $r = .12, p < .05$ ), but the correlation with Internet experience was not significant. As teletext and iTV experience increased so too did participants’ evaluation of the attractiveness of interactive television. Teletext experience also increased the likelihood that a participant would interact with an iTV ad. Figure 1 shows that the vast majority (82%) of the participants who interacted with the experimental iTV ads were those participants who had above average experience with teletext (a year or more;  $\chi^2_2 = 8.28, p = .02$ ).



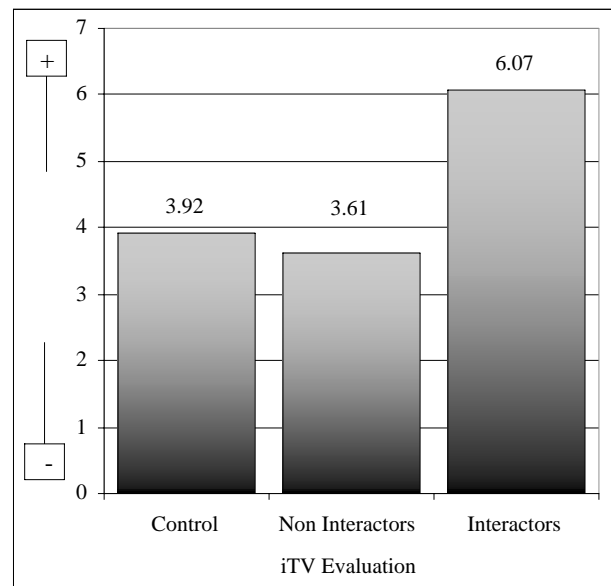
**Figure 1: Percentage of participants with High (1 year or more) versus Low (less than 1 year) Experience with Teletext who interacted or did not interact with iTV ads.**

Having access to iTV made no difference as to how participants viewed it as a viable information source ( $r = .04, n.s.$ ). This was due to participants often subscribing to iTV services for reasons other than active interaction (programming and broadband internet), and thus not experiencing its interactive services.

In both teletext and iTV cases further investigation was carried out along actual interaction lines - whether participants chose to interact, chose not to interact or viewed the linear control treatment. Participants’ openness towards iTV was relatively high on the 1-7 scale with an overall mean of 4.49, but this overall mean obscures the differences between the three groups (Figure 2). Participants who interacted with their treatments seemed to evaluate iTV as a

more attractive holiday planning source (6.07) than those who received the control treatment (3.92) or chose not to interact (3.61).

The correlation analysis suggested that interaction during the experiment moderated the relationship somewhat for the access and perceived experience measures. If a participant interacted with the experiment, no correlation was found between iTV attractiveness and access measures (teletext:  $r = -.01$ , iTV:  $r = -.11$ , both *n.s.*) or perceived experience (p.exp) measures (teletext:  $r = .06$ , iTV:  $r = .08$ , both *n.s.*). That is, if a participant interacted with their treatment this influenced the attractiveness score for interactive television, reducing the impact of past teletext or iTV experience on the score. This was also true for situations where participants had the opportunity to interact but chose not to do so (teletext access:  $r = .11$ , iTV access:  $r = -.04$ , teletext p.exp.:  $r = .13$ , iTV p.exp:  $r = -.10$ , all *n.s.*). However, for those participants that had no opportunity to interact (control), correlation was still found for both previous iTV experience (access:  $r = .17$ , p.exp:  $r = .17$ , both  $p < .10$ ) as well as teletext experience (access:  $r = .17$ ,  $p < .10$ ; p.exp:  $r = .20$ ,  $p < .05$ ). While these correlations are relatively weak (explaining less than 10% of variance) they do suggest areas of further investigation in this still evolving media market. A possible explanation is that the opportunity to interact may have had a moderating role in how attractive interactive television would be in holiday planning. This implies that the ability to interact is in itself a valuable feature of interactive television, with the extended content being of even further value. Even more importantly this reinforces the notion that as user expectations of interactivity are cumulative, it is important that each experience is satisfying.



**Figure 2: Comparison of group means (1-7 scale), for the Control (linear) group versus interactors and non-interactors with the iTV ads, for evaluations of the attractiveness of iTV as a source of information for holiday planning.**

## Discussion

This study's findings must be understood in the specific context of the UK market. There, media experience indicates that an individual's teletext experience and expertise with iTV provides them with the skills and understanding to be open to using this new information technology to gather information for their holiday. While there is an obvious connection with previous iTV experience, the lack of a connection with the Internet and the clear association with teletext is significant. This shows that not only have travellers begun to already define the role of iTV to be from the television environment perspective, but they also understand it through this technology's discourse. Thus, it is important for marketers to employ and develop television-based rather than Internet-based conventions when communicating through this new channel.

Furthermore, it is important to recognize that the influence of teletext is a major factor in interactive television's rapid growth in the United Kingdom and not in other markets such as the United States of America or mainland Europe, which do not have such a rich history with teletext. Another point of consideration is that it is not only previous interactive media experience but also the current experience that an individual has with iTV that colours how they will or will not incorporate it into their future processes.

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