

Ready or not? That is the Question for Consumer Technology Acceptance

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Abstract

In this paper, we try to explore the factors that might accelerate consumer technology adoption behaviour by asking “What is it that makes technology readily embraced?” The research is to explore factors influencing technology adoption together with technology readiness, and the role of alternative technology. Two prominent constructs, Alternative Technology (AT) and Ready for Use (RU), are presented for further study.

Introduction

As evidenced by Naisbitt and Philips (2001), “The two biggest markets in the \$8 trillion-a-year economy of the United States are, 1) consumer technology and, 2) escape from consumer technology”. The apparently contradictory market forces identified by Naisbitt and Philips, highlight the fact that despite the awareness of a loss of independence from adopting consumer technology, an increasing sense of general insecurity felt by consumers has resulted in a situation where the idea of not using technology seems to be almost impossible. As a result, the recent literature attempts to shed a brighter light on consumer technology adoption.

Most technology acceptance research focuses on issues using precedents established by the Technology Acceptance Model (TAM) (Davis, 1989). Recently, Parasuraman (2000) proposed technology readiness, closely associated with consumer personal traits as influencing technology use. As Naisbitt et al. (2001) said “we love technology when it works”. We agree with Parasuraman that technology readiness can influence consumers’ adoption behaviour. However, considering consumer technology lifecycles, e.g. mobile phone lifecycles (Kallio & Kekäläinen, 2004), are much shorter today, one consumer technology product is likely to be replaced by the other before it is fully diffused. A shorter diffusion curve is expected where the boundary between early and late adopters is overlapped. As a result, we present the research questions, “What factors will result in faster acceptance when consumers have high technology readiness?”

Literature Review

Parasuraman (2000) adapted a pyramid model addressing the consumers' role in the relationship between company and consumer and suggested that there is little attention paid in discussing the company's role in the relationship between company and consumer in regards to technology use. He proposed Technology Readiness (TR) (Parasuraman, 2000) which has been developed to measure people's general beliefs about technology use. "Technology Readiness (TR) refers to people's propensity to embrace and use new technologies for accomplishing goals in home life and at work." (Parasuraman, 2000, p. 308) The construct of TR has four sub-dimensions, including optimism, innovativeness, discomfort and insecurity. In subsequent research, Lin, Shih, Sher, & Wang (2005) explained that optimism and innovativeness are motivators, and discomfort and insecurity are inhibitors. They asserted positive and negative beliefs about technology may coexist. People can be arrayed along a technology beliefs continuum, anchored by strongly positive at one end and strongly negative at the other (Parasuraman, 2000). Lin et. al (2005) conducted a study incorporating TAM and TR. In their study, perceived usefulness (PU) and perceived ease of use (PEOU) were the mediators between TR and use intention. TR was theorised to be a causal antecedent of both key constructs of TAM, which subsequently affected consumers' intentions to use e-services. It has also been proposed that consumers' TR has positive impacts on their online service quality perceptions and online behaviours (Zeithaml, Parasuraman, & Malhotra, 2002). However, we are not aware of any literature which addresses factors which influence technology acceptance in the presence of high technology readiness.

Methodology

The primary aim of this study was to explore factors that can influence acceptance when consumers have high technology readiness. A qualitative method technique (Calder, 1977) was adopted to examine the research questions and to collect data in the form of focus groups. Mobile phone/service users were chosen as consumers of interest for this study. Twenty-three participants made up six mini-focus groups (Fern, 2001) with sizes ranging from three to five participants. The focus groups were conducted with the expectation of identifying constructs for measurement to be employed to operationalise a further quantitative study. Participants were all recruited within two large Australian cities. A purposeful convenience and snowballing sampling technique (Berg, 1981; Salganik & Heckathorn, 2004) was adopted to select mobile phone/service users with experience at using multifunctional mobile phones or 3G services. All participants were competent at using technology at work and/or at home to ensure that all phenomenological groups were internally homogeneous (Calder, 1977; Whipple,

1994). After records were transcribed, the data was analysed to generate the results. An analysis of the transcripts was undertaken to identify themes.

Results and Discussions

Finding 1 Quality/Alternative Technology

Concepts: Quality, technology character, simplicity

Nowadays, consumers have more choices between alternative technologies. Technology such as laptops and desktops, 3G and wireless broadband, mobile phones and VoIP, LCD and Plasma TVs.

I might even have a home phone to connect to my mobile phone. I do have a home phone, and for sure it can substitute my land line.

I use landline far more than I use mobile. Much cheaper.

Some participants mentioned that “simple functions as opposed to complex ones” influence their choices.

I had a multifunctional phone before, it is also a Nokia, but I got rid of it, because I just only need a phone to call and SMS.

The reason consumers have no intent to adopt the technology is because the quality is less than alternative, available technologies can already offer.

Before I took picture. Just 1.5 mega pixels. It is not that clear. Once I bought a new camera and I stopped use the camera (on my phone). ... Also video recording. Don't use it now. Not at all. The memory card is not enough. ... not enough to take video , just 15 seconds.

Finding 2 Not Ready/Ready for Use

Concepts: Not ready, unwanted, expensive, not safe, reliable, scepticism, poor quality, harmful, trust, not durable

Participants complained about premature products that are released to consumers and about information not being effectively disseminated to consumers. Participants often mentioned scepticism and doubt. This common belief that new technology is not ready for consumers

prohibits their intention of using new technology. A few participants described their ideas about ready and not ready mobile technology. Nevertheless, they all urge that companies should take responsibility to make ready products before they come to the consumer market.

It is just to judge how much it worth to justify that convenience. It is not just cost good price, also convenience, benefit. Then the product is ready.

They complained about the quality and unrealistic functions on mobile phones that add no value for them to the product or functions.

I bet nowadays, mobile phones are less durable, look at those functions, if I drop it, it will definitely break. Not like my old phone, just a bulky big piece of plastic You don't expect they (mobile phones) last. The new function comes all the time, if you wait, then you have to wait forever, you just buy it when you feel that you want that one.

Another participant mentioned,

I have my iPod, GPS, I don't need so many functions in my phone, and they make it slow. So I had a multifunctional phone before ... but I got rid of it, ... I would consider buying a mobile phone with GPS service, if it is as good as my GPS.

This indicates that as soon as they feel the technology is ready comparing to an alternative technology, consumers will be keen to use it.

Outcomes to Research Questions

Two important findings the new themes of Ready for Use and Alternative Technology have been identified having received little or no attention in the literature. According to the findings, “Alternative Technology” has a negative impact on adoption of new consumer technology. “Ready for Use” have positive influences on adoption of new consumer technology.

Alternative Technology

The findings support the need to find out the reason why consumers do not intend to adopt yet another new consumer technology, or prefer one new consumer technology over another. The findings show that consumers can be keener on using one technology but at the same time be reluctant to use another alternative technology. It supports Parasuraman's (2000) belief that “people can be arrayed along a hypothetical technology beliefs continuum anchored by strongly

positive at one end and strongly negative at the other.” The results also suggest that when consumers are ready for technology, their innovativeness needs will be triggered when there is a new technology. However, an existing alternative technology may in turn stop consumers using a new technology.

This leads to us to the proposition one: Alternative Technology will slow down the technology acceptance of end users of any one specific technology.

Ready for Use

The findings suggested that “Ready for Use ” can moderate “technology readiness” in regards to boosting consumers’ technology acceptance. “Ready for use” is broadly associated with concepts such as “Compatibility”, “Value”, “Risk”, and “Alternative Technology”. It suggests a ready product should pay attention to the value desired from a consumer, and reduce risks that consequently make a consumer worried and sceptical. According to the results, all participants were concerned that to accept redundant functions or premature products in the market might raise risks on financial and performance loss. One participant said, “Technology improves so quickly.”, and he worried how people could survive (without technology). He will need a “ready for use” product to ease this concern.

This leads to us to the proposition two: Ready for Use will faster the technology acceptance to end users.

Contribution and Limitations

A prominent construct “Ready for Use” was found and appears to play a moderating role in the relationship between TR and consumers’ technology adoption behaviour. Another new construct “Alternative Technology” also provides an insight into technology adoption as we found its role can be placed as an external trigger together with the internal trigger “technology readiness”, applicable to situations where consumers have a choice to use new technology. Furthermore, “Ready for Use” is suggested to be important for marketing practitioners in understanding the importance of providing quality technologies for consumers and accordingly to utilise and enhance their marketing efforts.

This study took place in two major cities in Australia, but consumer behaviour varies from country to country, due to environmental influences such as cultural effects and the availability of various technologies. Secondly, mobile phone users were chosen because of a good fit to the purpose of the study. However, new technologies are varied. Further study on different technologies is needed to enhance the robustness of the theory.

Directions to Future Study

A future study to clarify the relationship between Technology Readiness, Alternative Technology and “Ready for Use” is suggested. Further qualitative studies are also needed to explore both extrinsic constructs, “Ready for Use”, and “Alternative Technology”, for definitions and to construct a full conceptual model. The identified conceptual model should be used in future quantitative research projects to estimate the validity and reliability of the theories.

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