

A Comparison of Trust Towards Online Commercial Sites
Between Digital Natives & Digital Immigrants

By

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Declaration

This Dissertation is entirely my own work, and has not been previously submitted to this or any other third level institution.

Word Count: 11,005

Signature _____

Date _____

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With thank to

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To my Parents and Sister whos hands off approach I imagine to

mean to be a strong form or passive encouragement

From the Course;

My Old Friends: Eily, Karen, Sarah & Sinead

And My New One: Kathryn, Mary, Avril.

You guys make me laugh alot.

To my other friends

Lisa, Dee, Kelly, Mary, Elva, Karl,

Noelle, Paula, Jodie, Esther and Jack

who listen to me waxing on about Cyberstuff all the time.

You make me laugh too and remind me to come back to

the real world once and a while

Dedication

I dedicate this thesis to many fiends I have made online since joining this course.

A concept that seemed alien to me beforehand.

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Abstract

Previous research had indicated that Trust plays a role in the decision and intention to make purchases online. It is also proposed that younger people who have grown up using technology known as Digital Natives use computer technologies differently than older generations known as Digital Immigrants who have learned to use such technologies in later life. The primary aim of this study is to determine if there are differences in levels of trust when shopping online between the two groups. Taking into account factors such as Technostress and Propensity to Trust, no significant differences were observed in level of trust between the two groups however gender differences and differences in frequency of shopping were observed between the two groups.

1. INTRODUCTION

1. Introduction

The internet has becoming a dominant for in modern life and has brought about a many revolutions in how the world connects and interacts. One such revolution which has continued to go form strength is that of online shopping. Online shopping offers consumers a greater choice of products, more competitive prices and greater availability of products from a world wide market unrestricted by physical shopping restraints such as would be found in t real world store. The ability to shop on line has led a consumer shift and into the creation on a huge global megalopolis of commerce in a virtual marketspace (Miyazaki & Firnandez, 2006)

Popularity of online e-commerce has become evident with the increasing numbers of consumers swapping real life consumerism for the convenience of online shopping. Globally it is estimated that 85% of all internet users have made an internet purchase (AcNielsen.com, 2008). This figure shows a sharp increase of 40% over the previous two year period. In 2007, The Central Statistics Office indicates that 65% of all house hold in Ireland now has at least one computer in the home of which 87% have accessed to the internet. Furthermore a recent survey (AcNielsen.com, 2008) indicates that 94% of Irish internet users have made an online purchase with products such as books, clothing, entertainment products such as DVD's and videogames and airline tickets being the most popular types of purchase.

With more ordinary consumers and not just the technologically savvy having online access consumers now have more freedom to shop at a time that is more convenient. 24 hour access to the global online market allows shoppers to compare products and make better informed choices about their purchasing decisions, wile never having to leave the comfort of their own homes (Palmer, Bailey and Faraj 2000).

1.2 Digital Natives and Digital Immigrants.

Digital Natives

Digital Native is term coined by Marc Prensky (2001a) tp describe young people today who have grown up in an age where they are surrounded by computer technology such as personal computers, the internet, video gaming, mobile phones,

mp3 players and other digital tools. The use of these tools at an early age has led to a paradigm shift in the way young people think, learn and process information. The use of information technology by younger people have altered they metal processing abilities radically so much so that traditional systems of learning and information processing are no longer compatible with their way of thinking. Prensky states that the shift between this new type of thinking and all the traditional types of thinking is not just incremental but represents a large discontinuity taking place which means that the way in which these Digital Natives interact with the world is far differently than that of older generations that have come before them.

This comes as little surprise when it is estimated that by the time a young person reaches college age that they have been surrounded their entire lives by and using technologies such as personal computers, video games, mobile phones (to carry tasks such as texting, mobile Internet usage, voice calls and video calls), video camera, MP3 music players, PDAs and the Internet to interact with social networking sites, online commercial stores, auction sites and online virtual worlds environments. On average it is estimated that these college graduates have spent less than 5000 hours of their lives reading. They have spent double that, an estimated 10,000 hours of their lives playing video games and furthermore an estimated 20,000 hours of their lives watching television and have viewed over 500,000 commercials (Prensky 2001b). Digital media and digital interactions are seen as a normal integral part of their daily lives with an estimated 3000 messages reaching people through digital media every single day (Scherf & Wang, 2005). Research has indicated that it is estimated that 10,000 hours is the required amount of time for a person to practice at the activity whether it be playing a musical instrument, riding a horse, or playing a sport to become an expert in that field of practice (Gladwell, 2008). From this it can be determined that Digital Natives are experts in the use of digital technologies

Prensky believes that these digital natives think and process information differently from the predecessors. "Different kinds of experience lead to different brain structures," and that is likely that young people's "brains may have physically changed from those of older generations as a result of their experiences growing up (Prensky 2001a). Although physical brain alteration has yet to be proven, changes in thinking patterns have certainly been observed. Prensky states that young people

today have become “native speakers” of a type of digital languages surrounding their use of information technology, gaming technology and the use of the Internet and its applications.

Digital Immigrants

In contrast to these natives anyone who uses digital technology but who did not grow up surrounded by such technology referred to as Digital Immigrants. Prensky(2001a) defines Digital Immigrants as those from older generations who have not grown up in a digital world but who have learned to use these technologies and integrate them into their lives while in their adulthood. They must learn to retrain and adapt to their environments and use these technologies. They must learn to speak the “digital language”. As with learning all new languages, Prensky states that the learner is always left with an “accent” of their original language. As has been observed, learning a new skill such as a language in later life, learned knowledge gained is used and stored in a different part of the brain than would be used in the case that the information was learned at a much earlier developmental stage and so Digital Natives and Digital Immigrants brains work with and process information technologies in different ways.

In comparison to Digital Natives, Digital Immigrant accents can be seen in many ways. Digital Immigrants will turn to the Internet, as a source of information secondly rather than a primary source of information having already consulted other methods such as books for information as a primary source. Digital Native will use the Internet as a primary source before turning to books or other traditional media as a secondary source. Unlike Natives, who expect a piece of technology to automatically fit in with the mental models, and to be able to teach the user how to use itself without referring to manuals, Digital Immigrants will always refer to the user manual, when using a new piece of technology to figure out how it works. Other examples include, printing of e-mails so that they may read them, printing documents in order to edit them, calling people to ask if they have received their e-mails or bringing people to the same physical location as themselves to show them a website on their own computer rather than just sending them the link to website address.

The differences in behaviour and uses of technologies between these two groups can cause problems whereby systems designed by or for one group do not fit into the models of the other groups. Digital natives like to receive information very quickly. They are capable of dividing their attention and multitasking as well as being accustomed to hyper-stimulation. They prefer for graphical representation to come before text. They prefer from random access that information rather than structured. They enjoy instant gratification rather than waiting to information, they expect it almost instantly (Prensky, 2001b). Digital natives have retrained the brains methods of memory formation, perception and rule application and created better abilities to read visual images create mental maps and deploy attention resources. They prefer gaming style learning rather than serious hard work styles. They have a "Just do it!" attitude meaning everything must be done immediately.

Conversely digital immigrants have trouble understanding the mental processing abilities of digital natives. Digital immigrants cannot understand do not believe that a person can work, learn and carry out the task of simultaneously looking at TV, or listening to music for they themselves as immigrants have not learned or grown up that way and are unable to divide the mental processes in such a fashion. They cannot attend both stimuli equally at the same time as well as the digital native counterparts seem to do. They do not believe that everything can be fun and work at a slower speed when using technology and learning than Digital Natives do and so the two groups view technology, interpret technology, act to and use technology in different ways from one or other.

Although some recent publications state, though not concretely that pure digital natives are those born in the year 1980 onwards when modern technologies fist began to become common place (Palfrey & Gassers, 2008), Prenskys original work does not indicate such a strict guideline. For this purpose of this study, Digital Native will be defined as those born in the year 1970 onwards who would have still have been in their childhood years when technology was being introduced and implemented in the early 1980s and who would be comfortable and competent in learning it use this digital language.

1.3 Trust online

Trust is a concept that has many dimensions and has been studied within many different disciplines including sociology, marketing, economics and social psychology (Doney & Cannon, 1997). The Oxford English Dictionary defines trust as “A firm belief in the reliability of truth, ability, or strength of a person or thing”(1996). McKnight, Choudhury, and Kacmar (2002) propose several elements of trust, including disposition to trust, institution-based trust, trusting beliefs, and trusting intentions all play a role in defining overall online trust. Trust can also be seen as the willingness of a trustor or buyer to become vulnerable to the trustee or seller(Chen & Dhillion, 2003; Grazioli & Jarvenpaa 2000) and must be relied upon relieve and reduce situations of un certainty (Graubner & Kraetner, 2002)

Consumer based trust online can be something hard to achieve due to the lack of traditional method of trust building such as face to face contact with a sales man or availability of oral communication between the online buyer and online seller. High levels of distrust form bad experiences shopping online are the primary reasons preventing more consumers making online purchases (Swinyard & Smith, 2003, Hoffman, 1999; Culnan, & Armstrong 1999; Bellanger, Hiller& Smith, 2002). Concerns regarding security online of which trust is a prerequisite also often pose barriers to successful online shopping (Matthews & Katzman, 2006). Lack of trust is frequently reported as the main reason that people are unwilling to consider online transactions (Lee & Turban, 2001, Koufaris & Hampton-Sosa, 2002).

These concerns over security and privacy lead to perceived higher levels of risk with users feeling loss of control and power while being unable to monitor or insure the sending of secure personal data over the internet. Many do not trust or understand online security measures and fear identity theft and so are reluctant to divulge their financial details (Mercuri, 2005). Furthermore violations of thrust or misuse of data can have a negative influence on potential internet shoppers causing great reluctance to once again shop online (Perea y Monsuwé, Dellaert, & de Ruyter, K. 2004; Swinyard & Smith, 2003). Perceived risk has become synonymous with shopping online. This is the consumers perceived weighing of potential negative or adverse costs which may occur while shopping online and also their judgments of the likelihood of such negative consequences occurring should they decide to make an

online purchase (Dowling & Staelin, 1994). The extent to which an online business can build trust with its target market had been shown to be highly dependant on the online consumer's willingness to purchase online having weighed up all of these pros and cons of doing so (Mercuri, 2005).

In an online shopping environments the most widely used definition of trust in the online vendor can be defined as: 'the willingness of a consumer to be one vulnerable to the actions of an online store based on the expectation that the online store will perform a particular action important to the consumer irrespective of their ability to monitor and control the online store' (Mayer, Davis, & Schoorman, 1995). The higher the level of trust a consumer places in a company the lower the level of perceived risk. As a result negative consequences may alter consumers' behaviour towards online shopping as a whole (Jarvenpaa et al., 2000). Factors influencing levels of perceived risk and trust while sopping online include the perceived size of the online store and the perceived reputation of the online store. The larger and more well known an online store is the greater the levels of trust the consumer will attribute to it. The reputation of an online store is also closely linked to experience with that store (Jarvenpaa, Tractinsky & Vitale, 2000).

Mercuri (2005) indicates that many internet consumers are less likely to follow through with an online transaction if they feel that their personal information will not be help by a trustworthy party and that their personal security or integrity will be hampered, damaged or demeaned in some way. Trust has also been show to be closely associated with a set of values and beliefs such as integrity, reliability, predictability and benevolence (Ba & Palau, 2002; Gefen, Karahanna, & Straub, 2003) which all come into consideration when making purchases online. On sites such as online auction sites, lack of these attributes of trustworthiness can lead to problems when; having placed an order, the consumer later is unwilling to divulge personal information to the seller and is therefore is also unwilling to follow through with the payment of the items they have agreed to purchase. Efforts to overcome such problems have been made. Online auction site Ebay has recently changed its buyer/seller rating system to not allow sellers to leave negative ratings on buyers overall profiles and thus preventing tit-for-tat ratings whereby a seller will give a buyer a negative rating in return for a negative rating the buyer may have made (Ebay,

2008). This allows users who are buying on to pull out of an agreed sale before the final payment is made without having facing any subsequent negative consequences from their action. This encourages consumers to shop online.

Further measures can be taken to encourage a consumer to shop online. Displaying well written and sufficiently prominently places security notices and security icons in webpage's of online retailers have been show to encourage online consumers to make purchases on such pages (Palmer, Bailey and Faraj 2000; Siau, & Shen, 2003). These trust and security logos as well as privacy and security statements allow the user to gain a greater sense of trust when shopping online as issues that are of concern to them are being clearly address by the online vendor.

When examining differences between online and offline consumer behaviour, two major factors can be considered in distinction between the two. Firstly the consumer must interact with technology in order to facilitate the purchase of services and goods which they wish to buy online. In this case the physical shop environment is replaced by that of the online website. Secondly a much higher level of trust is needed in an online store shopping environment than would be needed shopping in a real-world physical shop. Trust plays a very important role and must be placed in the online vendor to overcome uncertainty felt in an unknown environment. The vendor is unknown and unseen, the goods and quality of the goods or service are also unknown and unverifiable at the time of purchase and the reliability of the vendors intention to carry out the tasks they are being trusted to do is unknown (Tan & Thoen, 2001).

Researchers have developed instruments to measure the trust that an online shopper must go through in order to carry out online purchases such as TAM model(Cheung & Lee, 2000) and the Internet consumer trust model (Jarvenpaa & Tractinsky, 1999). Some empirical evidence suggests that trust in an online store has directive negative effect on the perceived risks that are associated with making purchases over the Internet. Perception of risk can be taken as the online consumers Evaluation of the Impact of adverse consequences Associated with online shopping and also the probability of these negative consequences occurring in a given online commercial environment. Greater levels of trust in an online store will lead to decreased perception of negative consequences of shopping in that environment

As previously stated Trust in an online shopping environment can be fostered and developed by a number of factors. Larger online stores and the greater the positive reputation of the online store; the greater the level of trust in the online store and lowering levels of perceived risk in dealing with the online store becomes (Dyer & Chen 2003). If the user is familiar with the functions and actions which can be carried out in the online store that they will become more trusting of what future actions they can expect from that store when buying online. For this reason it is very important that all online commercial websites are designed to fit users mental models and that all online stores follow the same patterns of operation. This particular study (Jaarvenpaa et al. 2000) also showed that cross-cultural validation and there were little or no cultural differences in the reported outcomes of the study indicating that these findings are widely generalisable within cultures who shop online.

Tan and Thoen (2000) argue that trust towards actual company does not necessarily have to be a pre-requisite of intention to buy online and a lack of trust can be offset by the placement of control system and measures to prevent negative consequences for the online consumer. Once again an excellent example of this would be systems implemented by the eBay auction site. Ebay carries out its transactions through a secured PayPal system. This ensures that the online consumers are protected against online fraud and that their money up to a certain value is guaranteed to be returned if the goods are not delivered. This offers user's peace of mind while using the site against unscrupulous vendor's who's fraudulent intention may be to receive payment for products they advertise but which they do not intend to carry through and delivered to the online customer. In this case the user does not have to trust the online vendor, as the Ebay site itself is open to misuse by fraudulent individuals. The user can insure themselves against falling victim to cyber crime by placing their trust in the PayPal system and consequently will be willing to use the site.

Studies concerning the experience with an online stores and regarding the actual structure of company's website and the trust and the company itself has shown that a positive experience with an online store will provide customers with enjoyment and perceived control which leads to greater trust in a company at the user's perception of the website ease-of-use (Koufaris & Hampton-Sosa, 2002). The study also indicates fostering better relationship between an online consumer and an online vendor's site

will lead to greater levels of customer retention as well as greatly increased consumer intention to buy from that store.

To recap, previously online consumers have been found to display the levels of distrust for online commercial sites which has often been cited as one of the main protruding factors preventing consumers from buying online (Swinyard & Smith, 2003; Hoffman, 1999; Culnan, & Armstrong 1999) . Unlike in real-world stores with a physical place of business, trust building face-to-face interaction and oral communication between the online vendor and the online consumer is not possible. This may make it difficult to establish trust between the two parties. While an offline retail environment the salesperson is often the major influence on the consumer's level of trust (Doney & Cannon, 1997), in the online commercial environment the online venues website must serve to promote trust between themselves and the online consumer (Lohse & Spiller, 1998).

Attempts have been made to study measures which could be taken to facilitate and trust between online consumers and the online vendor. It has been indicated these of trust third parties can greatly increase trust them online site as well as the reputation And received trust of an online site (Palmer, Bailey and Faraj, 2000; Resnick, Zeckhauser, Friedman, and Kuwabara, 2000). This along with other factors shoppers' propensity to trust and perceived integrity of an online store, can influence online shoppers intention to buy from online stores.

Finally it has been shown that online consumer sites which have a real world counterpart are perceived by users to be more trustworthy than those which operate solely in an online environment only. Online shoppers feel a greater sense of trust towards these sites as there is a real world outlet that they can go to should they have any problems with their online goods or services (Flavian, Guinaliv, & Torres, 2006). This is loosely referred to as the bricks-and-mortar affect whereby trust is enhanced, placed in and embodied by physical observable presence of the company being represented by their own online commercial site.

1.4 Techno Stress.

Technostress is the inability or aversion to new technology. (Sami & Panngannaiah, 2006). Humans are required to interact with computers on a daily basis until the avoidance of technology is no longer possible if a person is to interact normally within their everyday environments. (Rosen and Weil, 1997) Technology has taken over and is present in all areas of modern life. In the home users interact with technology the form of televisions, telephones, programmable TV devices such as DVD and VCR players/recorders, microwaves and personal computers. In a work environment users can be expected to interact with many different types of technologies such as computer workstations, electronic cash registers, Internet-based systems and many other types of technology. In the real world environment users can expect to interact with technology such as automated teller machines, public transport ticket kiosks and automated cashier machines are becoming commonplace in many large supermarkets.

The term Technostress was first used in 1984 and can be defined as: “a modern disease of agitation caused by an inability to cope with the new computer technology in a healthy manner it manifests itself in two distinct and related ways in the struggle to accept computer technology and in the more specialised form of over identification with computer technology” (Brod, 1984). Techno stress is synonymous with other closely associated terms and covers areas such as technophobia, cyberphobia, computer anxiety negative computer attitudes and computer of a (Heudiburg, 1996).

There are varying degrees of Techno stress. Symptoms which are generally associated with Technostress such as reluctant to use technology, ambivalence towards technology in fear of the use of computers may cause anxiety. Manifestation of these symptoms include headaches, irritability, heart palpitations, sweaty hands and resistance to using and learning new technology, rejection of technology and techno-anxiety felt by those who feel external pressure to use and except new computer technology by others such as their peers and employer as well as general cultural trends towards the use of technologies such as social networking sites (Brod, 1984)

Technostress and technophobia are not always readily identifiable. Cognitive Technophobia Technostress occurs when a person appears outwardly to be happy and and content and in control of their technological interactions however inwardly feel apprehension and turmoil towards the technology which they are using (Wiel & Rosen, 2001). At its lowest level users may feel uncomfortable in using technology and overcome this in order to carry out required tasks when using technology but who keep their interactions as minimal as possible.

A recent study has shown that older adults show differing levels of Technostress when compared to younger people .(Hogan, 2009). 150 older people and 291 younger people were tested using the PTSI scale (Weil & Rosen, 2001). The study revealed that the older adult's results scored significantly higher level of Technostress and technophobia when compared to the score of their younger counterparts. This higher level of stress causes older adults to be less open to the use of technology in their everyday lives.

1.5 Research question

The primary aim and research question of this research will be

Will there be a varying degree of trust in online stores between Digital Natives and Digital Immigrant's?

The secondary research question of this research will be:

Will Technostress affect levels of trust in online commercial sites?

1.6 Hypothesis

H1: Digital natives will be more trusting in online consumer based sites than Digital Immigrants

Digital natives and digital immigrants Use technology and behave differently towards technology (Prensky 2001a, 2001b). Digital natives turn to technology and the Internet as a primary source of information and would be considered more comfortable in making purchases online rather than finding them in the real world. Digital immigrants however would turn to the Internet to make purchases only after they have looked for goods or services in a traditional way such as an offline real-world store. It is expected that digital natives will be found to be more trusting towards online commercial sites and a digital immigrant counterparts.

H2: Males will be more trusting in online consumer based sites than females.

Gender studies carried out indicate that there are differences in the way in which males and females interact and use the Internet. (Slyke, Comunale & Belanger, 2002; Garbarino & Strahilevitz, 2004). It is expected that males will show a higher Levels of perception of trust when using on-line commercial sites.

H3: Higher levels of techno-stress will have a negative effect on levels of trust.

Higher levels of techno stress have been shown to have a negative affect on openness towards using technologies such as computers and the Internet and leading to aversion of the use of such technologies. (Sami & Panngannaiah, 2006). It is expected that the results of the study will show that levels of Technostress will have an adversely negative effect towards propensity to trust

H4: Digital Immigrants will report higher levels of Technostress than Digital Natives.

Research has shown that older people who would all be classified as digital immigrants have a more negative view and apprehension towards using technology (Hogan, 2009). This apprehension can be measured and identified as a form of Techno stress. It is expected from the study that digital immigrants will report higher levels of Techno stress towards unlike commercial sites and a digital native counterparts.

H5: Sites with real world counterparts will be perceived as more secure and trust worthy than sites with no real world counterpart.

Research indicates that sites with real-world counterparts will be deemed more trustworthy than those who operate purely an online capacity (Flavian, Guinaliv, & Torres, 2006). Users of the site is may feel they have more opportunity and ease of access to recourse in the event of dissatisfaction or negative consequences of shopping online. It is expected the role that sites with a real world offline bricks and mortar counterpart accessible to the public will elicit higher trust response rates.

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2. METHOD

2. Method

2.1 Participants

-Quantitative Participants

Participants were gathered from an ad hoc sample of online internet consumers. All participants were active internet users who shop online. In total 105 participants took part in the quantitative online survey section of the study. The participants were divided into two categories, Digital Natives and Digital Immigrants. 50.5% (n=53) of The participants were classified as Digital Immigrants and 49.5%(n=52) were classified as Digital Natives. Over all 48.6% (n=51) of participants were Male and 51.4%(n=54) were female. All participants in the study were age 18 years or older and informed consent was given for their participation in the study. Participants were gathered by sending out emails containing information about the study which contained a web address link which they could click on to be directed to the study (See Appendix F) . Participants were also placed on blog posts also with the same information and the link to also guide participants to the correct webpage to conduct the study. As an incentive for their participation, Participants are offered the chance to enter into a free draw to win an online shopping voucher.

-Qualitative Participants

A secondary method of data gathering took place in the form focus groups. Two focus groups were carried out. One group contained and represented Digital Natives while the other contained and represented Digital Immigrants. Each group consisted of four participants. The sample for both focus groups were gathered by inviting IADT students to take part in the study whole would meet the criteria of being classified as Digital Natives or Digital Immigrants.

2.2 Materials

-Quantitative

The questionnaire was compiled on and run through survey monkey (www.surveymonkey.com)

A quantitative online survey (see appendix A) to ascertain participant's online shopping experience as well as levels of internet experience and demographics such as age and gender.

A trust propensity scale (see Appendix B) was used to determine the participants overall propensity to trust levels. This questionnaire had been adapted from one used in a similar study (Kaufaris & Hampton-Sosa, 2002)

The Personal Technostress Inventory (PTSI)(See Appendix C) was used to assess users levels of techno stress at the beginning of the experiment. For the purposes of reliability the latest PTSI has administered and adjusted to 519 people over the space of one year. The inventory measures 7 types of Technostress which are Learning, boundary, communication, time, family, workplace and societal. The PTSI also has a Cronbach's alpha of .82 which indicates that it has internal consistency.

A 7 point Likert rating scale ranging from Strongly Agree to Strongly Disagree was used to determine levels of trust for each of the sample online commercial sites (See Appendix D)

-Qualitative

A series of semi-structured open ended questions were use to gain data in focus groups (See Appendix E)

2.3 Procedure

-Quantitative Data Gathering:

Having clicked on the link participants are directed to the first page of the online survey. On the first page of the study, the main aims of the study explained an advertisement has asked for their informed consent and assured of anonymity of any and all data collected. The participants read this information and then agreed to give their informed consent by the clicking on the yes option box and then clicking next to proceed to the next page. (Those who choose not to participate are directed to the final page and do not take part in the online experiment.) On the following page participants are asked to supply some demographic information briefly and then clicks next to be directed to the following page. The participants were then presented with the PTSI questionnaire which they fill before clicking onto the next to be directed to the propensity to trust questionnaire. Following completion of this questionnaire the participants were then directed to the site rating part of the questionnaire. The participants were asked to rate six commercial websites in total. The participants were given short tasks to carry out the sites to be rated in order to become familiar with the sites if having not already a particular site. The sites were divided into three categories with two websites in each category. The categories were CD sellers, booksellers and online banks. Each of the categories contained one website which operates online only and has no real-world counterpart, and one website which did have a real-world bricks and mortar outlets accessible to the public.

Following this rating stage, the participants are directed to the final page of the questionnaire where they are debriefed, thanked to their participation and informed that they are free to withdraw their consent at this time or at a later stage. The participants are also given the opportunity to give their e-mail addresses if they want to receive details of the findings of the study and also if they want to enter into the incentive draw

Qualitative Data Gathering:

Participants in the focus groups were informed of the aim of the study and asked to ensure anonymity of any views expressed during the focus group session before being then asked to give their informed consent for their participation in the study. Following this The Participants were given the opportunity to introduce themselves briefly to break the ice within the group. The next up was to begin the guided discussion of questions to gather the participant's responses. The sessions were recorded using a Dictaphone Recording device as well as a secondary research taking notes of the points being made. The focus group sessions lasted approximately 25-30 minutes each. The participants were thanked for their participation and reminded that all information and views expressed by others within the focus group should be kept anonymous as they would expect their own data to be.

2.4 Ethics

There are no major ethical constraints or considerations to be made on this project. No deception takes place in the course of the experimental or focus groups and all participants are fully aware of the intended aim of the research from the outset of participation. No sensitive identifiable information is gathered on participants and fully informed consent is obtained at the beginning of participation. The main aims of the study are also reiterated at the end of the study where it is reinforced that the participant retains the right to withdraw their information from the study at anytime. This project was given ethical approval by the IADT Ethics Committee.

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3. RESULTS

3. Results

This section contains data houses are at response is collected. The section is divided into two parts to represent both qualitative and quantitative data.

3.1 Part A: Quantitative Analysis

This data was analysed using SPSS 17. Two types of statistical analysis were carried out on the data (i) Unrelated t-test (ii) Pearson correlation as well as Explorative and Descriptive Statistical Analysis.

H1: Digital natives will be more trusting in online consumer based sites than Digital Immigrants

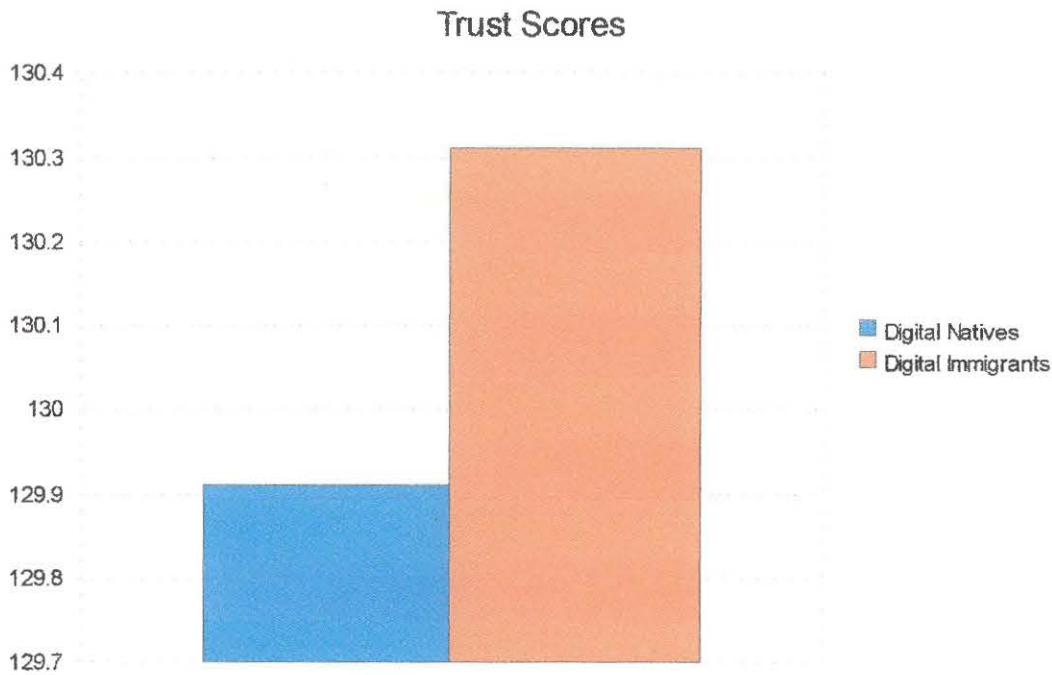


Figure 1. Technostress Levels

An ANOVA test revealed techno stress levels of Digital Natives (mean=129.1) and for Digital Immigrants (mean =130.31).

H2: Males will be more trusting in online consumer based sites than females.

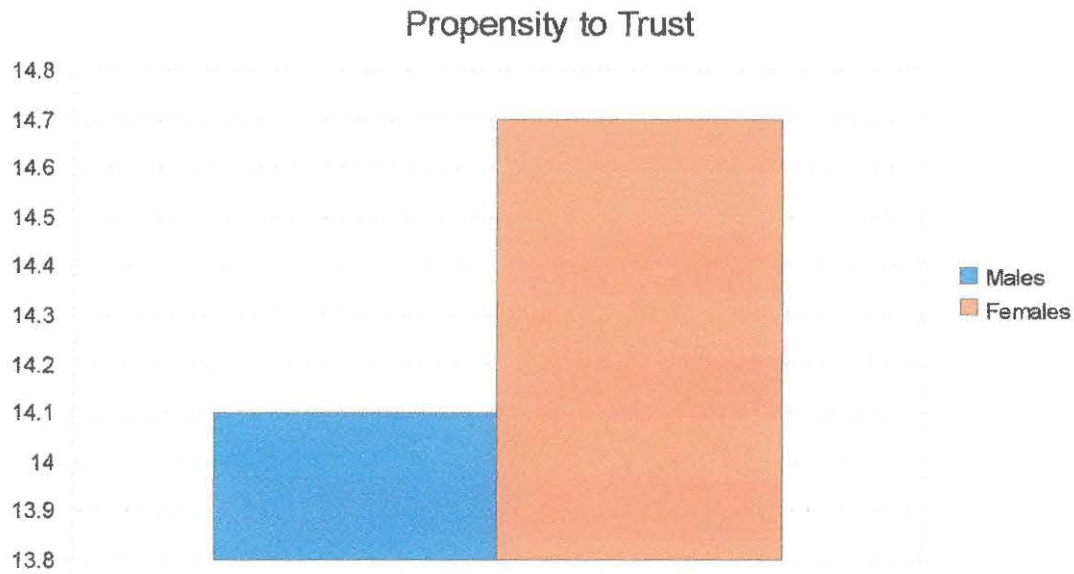


Figure 2. Propensity to Trust Scores

ANOVA results on Females (mean= 14.7) and Males (mean=14.1) on propensity to Trust scores

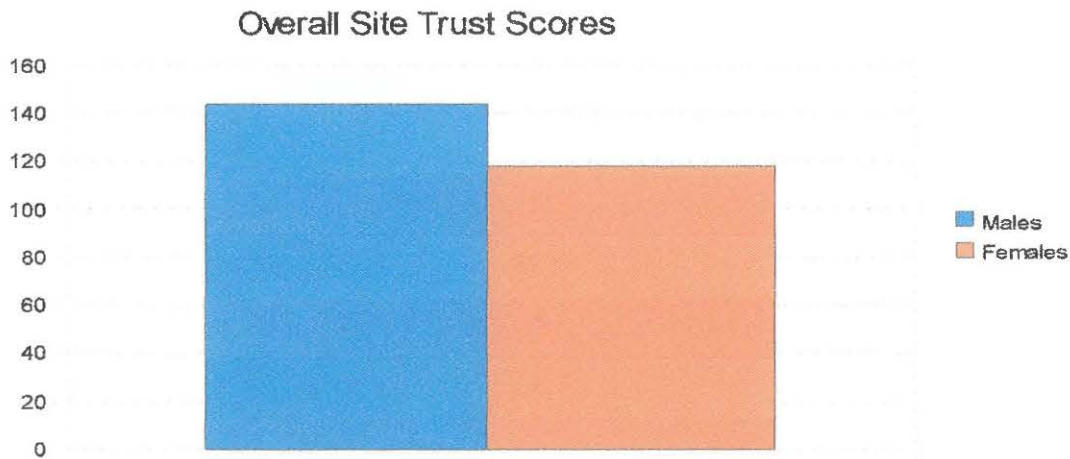


Figure 3. Overall Site Trust Scores

ANOVA results on Males (mean=143.36) and Females (mean =118.15) overall trust scores.

H3: Higher levels of techno-stress will have a negative effect on levels of trust.

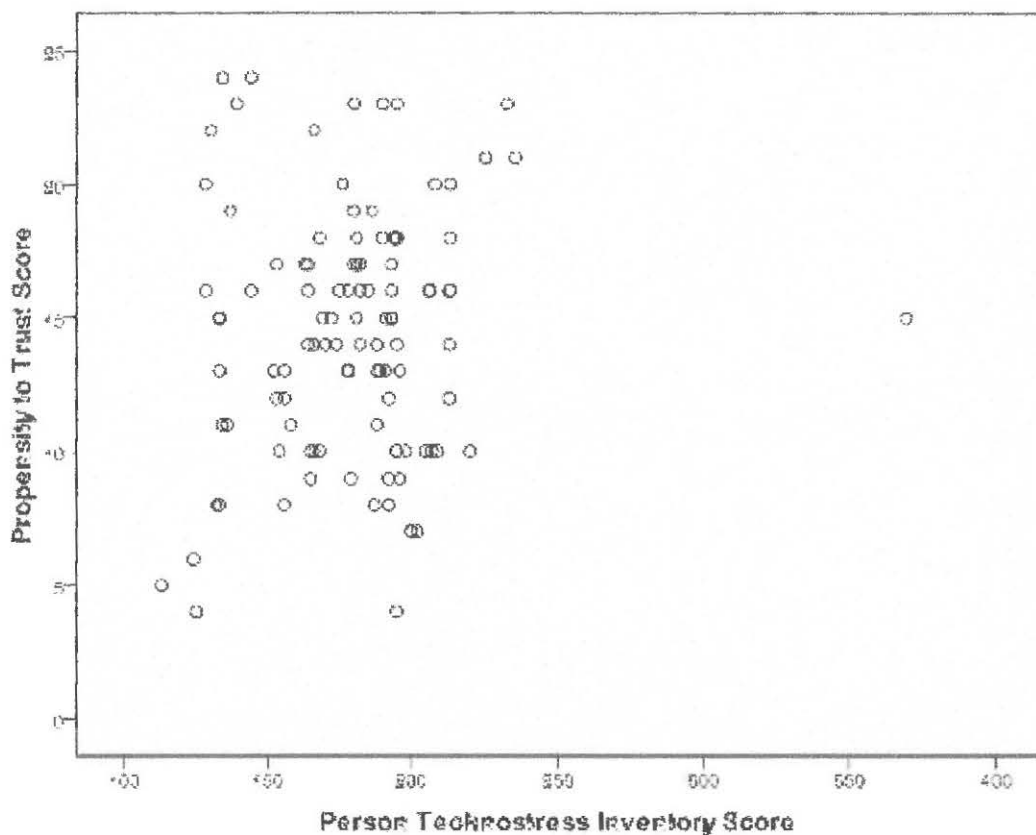


Figure 4. PTSI Scores

Explorative statistic results of Effects of Technostress on Levels of Trust ($r = .099$
 $N=105$, $p < .005$, one-tailed)

H4: Digital Immigrants will report higher levels of Technostress than Digital Natives.

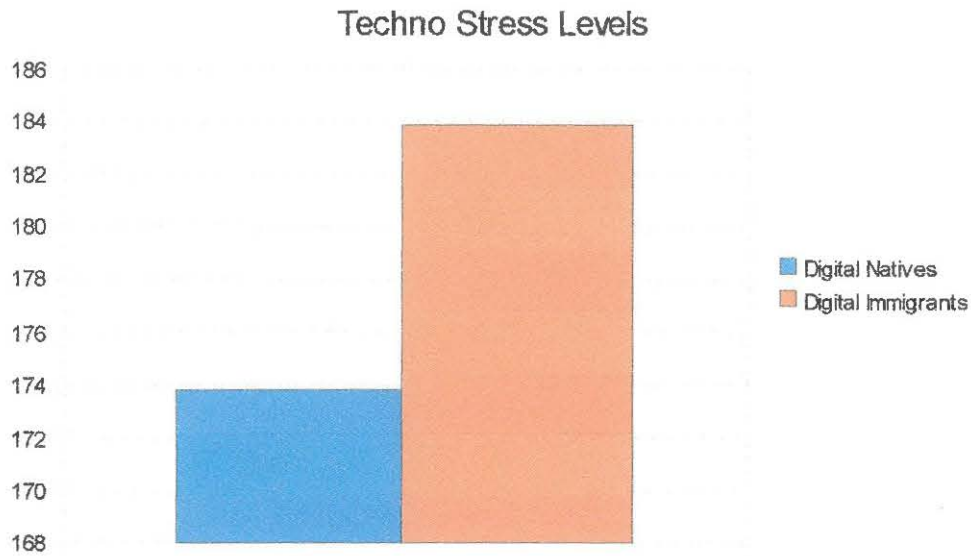


Figure 5. Technostress Levels

ANOVA results of Digital Immigrants (mean=183.55) and Digital Immigrants (mean=173.87) Technostress Levels.

H5: Sites with real world counterparts will be perceived as more secure and trust worthy than sites with no real world counterpart.

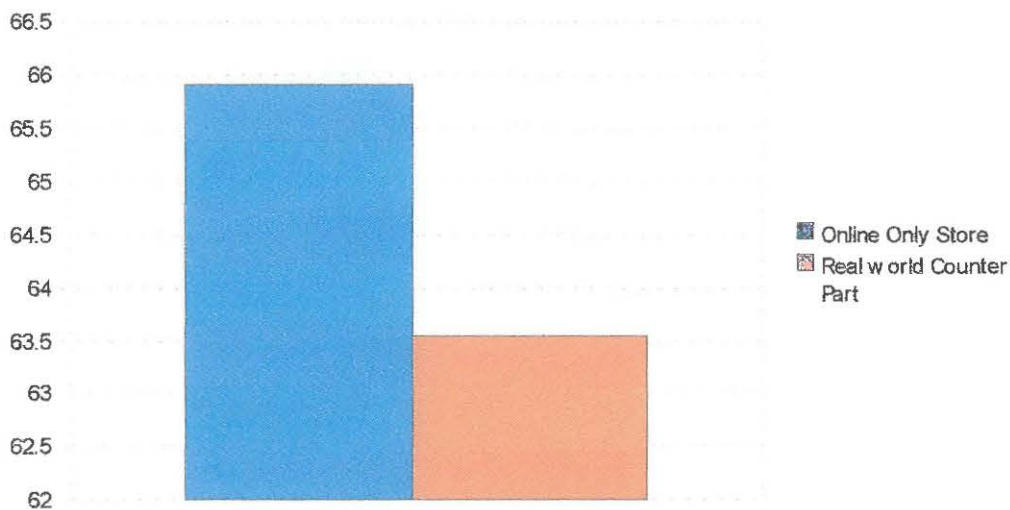


Figure 6. Store comparison trust scores

ANOVA results of Online Only Sites (mean=65.92) and Online Commercial Sites who also had real world counterparts (mean=63.55).

3.2 Part B: Qualitative Analysis

The focus groups were conducted in order to gain some in-depth information concerning the use of attitudes towards commercial sites amongst younger Digital Natives and older Digital Immigrant groups. Two 30 minute focus groups were carried out representing each group and online consumer to try and ascertain their views and opinions on the matter of shopping online. The results of the two focus groups are as follow

These findings would help to create a better understanding of how digital natives and digital immigrants may differ in their experience and perceptions of shopping while online

Raw data

Focus group 1: Digital Immigrants

Table 1. *Digital Immigrants*

Group Participants	Number
Males	2
Females	2

Q1. How often do you shop online?

While all participants in this group did shop online, the degree of frequency with which they shopped online varied between all members of the group. Each of the members of the focus group reported different answers as to how often they shopped online which can be viewed in the table on the following page :

Table 2. *Immigrants Shopping Frequency*

Participant	Response Given
M1	Once per week
M2	Five or six times per year
F1	At least once per month
F2	At least twice from

Q2. What type of commercial site you visit most often?

There was a consensus that types of online commercial sites that this group was listening, all you has agreed that some sites such as travel sites were only accessible online and so they had to access and through the Internet.

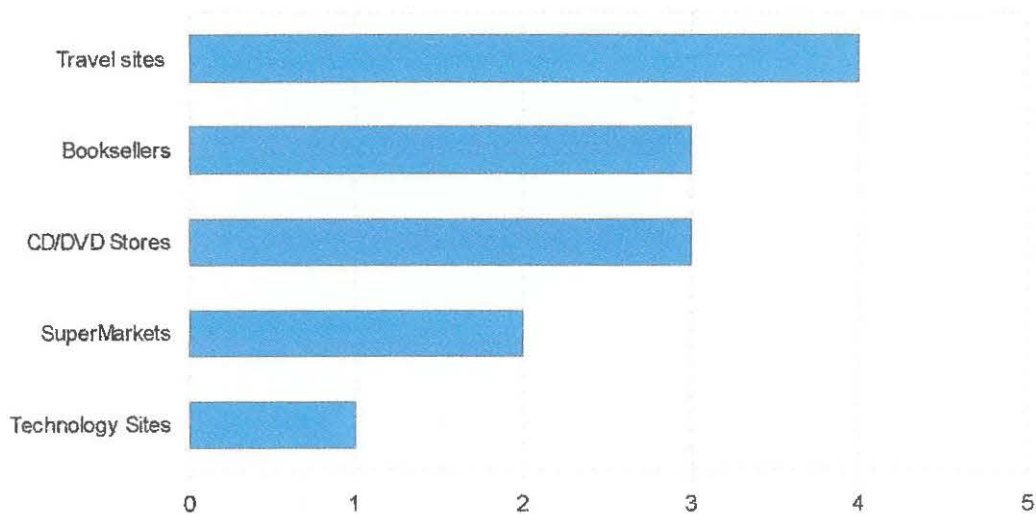


Figure 7. Digital Immigrants Frequently visited Stores.

Typical comments made reporting the most commonly used sites were:

Flights and airline websites such as Ryanair, Aer Lingus, Malev airlines, Falcon.

Book, music, and DVD online stores such as Amazon, Easons

Q3. Do you consider trustworthiness the big factor when choosing to shop online? (Explain)

While one participant in the focus group reported not being very weary when shopping online, other members of the group reported some degree of wariness but it was agreed that care should be taken while shopping online and that many have become complacent due to the popularity and now commonplace occurrence of shopping in an online environment.

Typical comments made in response to this question included:

"I am not that weary as I go back to the same sites as currently, or perhaps they should be."

"I'm sometimes nervous when shopping online, trust is paramount when giving others your financial details over the Internet."

"I am aware of the reputation of larger sites, but would not generally carry on a transaction with the smaller less known site."

Q4. What are the advantages of shopping online?

All participants agreed that shopping online was an advantage to them as a consumer who did not believe they should not engage in online shopping is tough from and that the Internet opens up greater opportunity to get better value from money spent on things that would otherwise be difficult to track down.

Typical comments in response to this question were:

"The Internet offers access to a much wider global marketplace."

"Shopping online offers the anonymity for items I wish to purchase without being hassled by an over-budding salesperson. I also do not have to feel pressured or controlled into buying something online."

“Online shopping offers Convenience and 24 hour access to shopping”

“Access to greater range of goods”

“I can easily compare product prices while online”

“I have more freedom to research products which I may wish to compare purchase when online which I can do in my own leisure time”

Q5. What are the disadvantages of shopping online?

Despite the many advantages of shopping online the participants also agreed that the several disadvantages when shopping online which must also be taken into consideration when deciding to shop online. There are certain products which can easily be sold online but equally there are other products which cannot be accurately judged online as they would be in the real world.

Typical comments made in response to this question include:

“I cannot see the size of the texture of things I want to buy”

“I find it difficult not being able to feel something for example clothing”

“I often wonder about the time delay and how long the product will take to reach me.”

“It might just be quicker to go to a real-world store to pick up the thing I need other than waiting for the postage.”

“And the hassle of shopping online is the annoyance of having to pick up a parcel does not fit in the letter box. The will be redirected to a sorting office all hold it for only a couple of days which puts pressure on you to make time to pick up the parcel.”

Q6. Have you had any bad experiences and shopping online?

Members of the group reported having had any personal experience and shopping online however they were aware of that experiences which have happened to other people they know which may make them less open to using certain services and websites online.

Typical comments made in response to this question include:

"I know that sometimes Sellers on sites such as eBay do not send out the good which is worrying"

"If ordering things at peak times such as Christmas normal delivery times don't seem to apply come off I have ordered things which have taken a long time to be delivered."

"I had a problem with them online company who had outsourced the customer care to a foreign company which was very unhelpful. I would not use recommend them to anyone."

Q7. Over all do you feel happy and secure to shop online?

Other comments made at the end of the session indicate that users of this group feel that they are less likely to get recourse while shopping online and are apprehensive of buying online comments made include:

"I am less likely to be rude online as I don't think anybody will respond."

"Larger online sites that so many orders a day that they will not care about me of my order is incorrect or I have a problem"

*Focus group 2: Digital Natives*Table 3. *Digital Natives*

Group Participants	Number
Males	2
Females	2

Q1. How often do you shop online?

Participants in the digital native reported much greater frequency in their online shopping habits as displayed in the box below

Table 4. *Natives Shopping Frequency*

Participant	Response Given
M1	Several Times a Month
M2	Every week
F1	All the time
F2	A couple of time a week

Q2. What type of commercial site do you visit most often?

Digital natives reported greater and overall frequency and the type of website visit

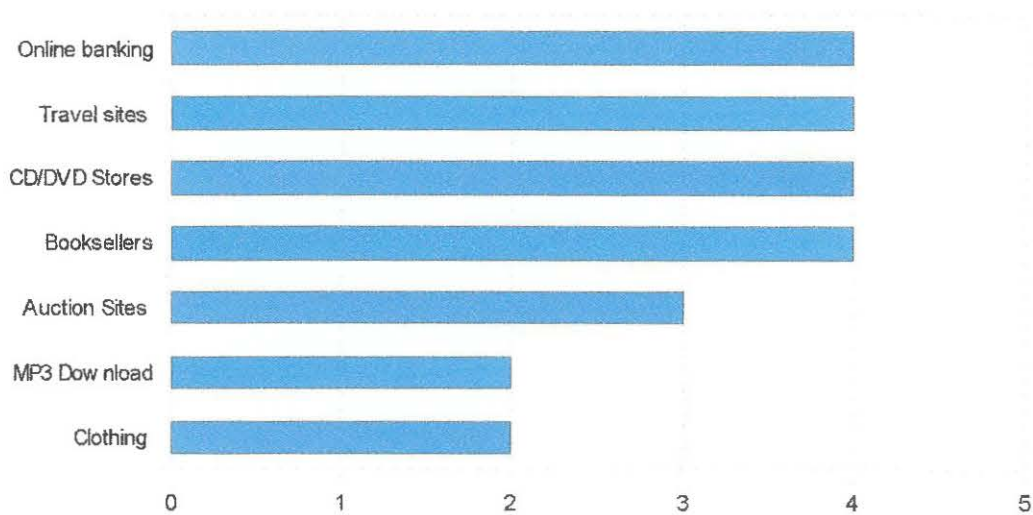


Figure 8. Digital Natives Frequently visited Stores.

The most commonly reported used sites were:

-Flights and airline websites such as Ryanair, Aer Lingus, Malev airlines, Falcon.

-Book, music, and DVD online stores such as Amazon, play.com , Easons

-Auction sites such as eBay

-Clothing sites such as asos.com

Q3. Do you consider trustworthiness the big factor when choosing to shop online? (Explain)

All Participants in this group seemed less wary of the potential dangers of shopping online and viewed the practice as commonplace. While they were aware of security issues and things that can possibly go wrong while shopping online, they felt that on the whole that shopping online was a fairly safe experienced and would trust larger online stores to follow through with their orders. They did not consider trustworthiness of the sites themselves to be a high factor but were more worried about other hacking into the sites to steal their financial details

Typical comments made in response to this question included:

“There will always be people out there trying to scam the system but most websites work very hard in trying to ensure the safety of their customers so they will return to use their website again.”

“There are a few horror stories about shopping online but I’m generally trust shopping online.”

“Most banks guarantee their credit cards against fraud so in the event that something does go wrong is usually a backup system in place.”

“I wouldn't give my credit card details to some unknown company that has no guaranteed backed method of payment like Paypal.”

“Based on previous experience with a site or sites recommended by a friend, I'd be quite willing to shop online”

Q4. What are the advantages of shopping online?

Participants in the Digital Native group believed there were many advantages to shopping online were shopping in the real world. They regarded shopping online to be part of the normal consumer behaviour and found that the concept of not being able to shop online was quite strange to them.

Typical comments in response to this question were:

“There is a much bigger selection online”

“You can find things online which you would never find the real world.”

“You come across things which you would never find true sites like Amazon on to recommend products similar to the ones you are viewing which you have already purchased.”

“It is cheaper; you can buy a lot of things online which would cost more to buy in a real-world shop, and there's a better selection on more obscure items like Music CD which you wouldn't find in the music stores in Ireland.”

“You're not limited to the things you can find your own country as used to be, the marketplace is now global.”

“You can shop at any time you feel like doing so.”

“You can compare things and read reviews of the people have written on products to help you make your mind up.”

Q5. What are the disadvantages of shopping online?

This group reported little disadvantages to shopping online, however were willing to accept that there would be some flaws in the concept. There were no major drawbacks which they said would prevent them from shopping online other than it becoming too easy to overspend was shopping online.

Typical comments in response to this question were:

"Sometimes takes a while for things to arrive especially if you buy from a foreign website and go on to pay a lot of money from the postage"

"It can be frustrating, waiting for things to arrive, especially if you order them for a present or something"

"Getting follow on e-mails after you purchase something from a website tried to sell you another one of their products"

"Temptation! I always spend too much because it's so easy, and I've made the purchase. In a real-world store I might not be so quick to do so."

Q6. Have you had any bad experiences and shopping online?

Participants in this group did report having more negative experiences went shopping online where this would does not deter them from continuing to shop online but merely made him wary of using some websites

Typical comments in response to this question were:

"I bought things online which have never arrived and I didn't get my money back."

"I have had some things arrive damaged in the post."

"I bought cloths and things online which I didn't really like when I tried them on when they were the wrong side so I guess they wasted their money."

Over all the participants in the second focus group indicate to be much happier and more trusting in their dealings with online commercial sites and indicated their willingness to continue to shop online on a regular basis and viewed it as a normal part of their consumer behaviour as much as shopping off-line in the real world would be.

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4. DISCUSSION

4. Discussion

4.1 Analysis of Data

H1: Digital natives will be more trusting in online consumer based sites than Digital Immigrants

This hypothesis was not supported by statistical analysis. Digital Natives (mean=129.1) scored slightly lower on trust levels than Digital Immigrants (mean=130.31). The mean difference between the two groups was .393 with a 95% confidence interval for the estimated population mean difference of between -11.368 and 10.582. The effect size was large ($d=3.78$). An independent t-test showed that the difference between the two conditions was not significant ($t = .71$, $df= 97$, $p= .009$, one tailed) From this it is indicated that little or no difference in the between the two groups in term of trust.

Qualitative analysis reveals that the digital native focus group was less weary when shopping online and regarded it as part of their normal shopping routine. The continued and greater frequency at which digital natives shop online may indicate that digital natives are more willing to trust vendors and shopping online. Although quantitative analysis does not support the hypothesis, qualitative analysis does someone move towards support the hypothesis?

Overall qualitative analysis of focus groups, Digital Natives did indicate more frequent and greater use of the internet as a means of consumer behaviour when compared to Digital Immigrants; however quantitative analysis in this case did not indicate that Digital Natives were significantly more trusting when shopping online. Possible reasons for why this hypothesis was not supported could be that the sample size was chosen from regular online internet shoppers. All participants report familiarity with online shopping and as such may have overcome hesitancy to trust or are now complacent with the perceived risks when shopping online which may have been more of a concern in the earlier days of e-commerce. From the focus group member it was indicated that trust in the online store is no longer as big issue as much as the issue of security of their private details against hackers and internet fraudsters has become as indicated by one participant:

"I'm not that weary, I return to the same sites over and over again. I wouldn't be nervous when using them. I think larger sites do try and build their trust and customer base. As long as they're well secured, I wouldn't be hesitant. I think we've all moved on a bit, I think some of the questions you're asking were more pertinent a few years ago. Trust might still be relevant if you are going to new sites, but there are a certain number or larger well know sites that most people would be fairly comfortable using and reusing on a regular basis. Its second nature to shop online now."

H2: Males will be more trusting in online consumer based sites than females.

This hypothesis was supported by statistical analysis. Males (mean=143.36) scored significantly higher on trust levels than females (mean =118.15). The mean difference between the two groups was .2520 with a 95% confidence interval for the estimated population man difference of between 15.47 and 34.93. The effect size was large ($d=3.8$). An independent t-test showed that the difference between the two conditions was significant ($t = 5.142$ $df= 97$, $p= .00$, one tailed)

Qualitative analysis supports the hypothesis that males are more willing than females to shop online despite females showing a slightly higher overall propensity to trust (mean=14.7) than males (mean=14.1). As previous research (Slyke, Comunale & Belanger, 2002; Garbarino, Strahilevitz, M 2004) does suggest that males are more willing to shop online than their females, it would be impossible to draw such a conclusion from the content of the current qualitative focus group data.

This outcome was as expected from previous research showing that males are more trusting online and therefore more likely to shop online not hindered by lack of trust which has been indicated barrier to carrying out online transactions .

H3: Higher levels of techno-stress will have a negative effect on levels of trust.

This hypothesis was not supported by statistical analysis. Higher levels of Tehnostress were not seen to have a negative effect on trust levels. ($r = 0.99$, $N = 105$, $< .005$, one tailed). This result indicates that there is only a very weak or no relationship between the two scores and that not significant correlation between the two exist.

Higher levels of techno stress have been shown to have a negative affect on openness towards using technologies such as computers and the Internet and leading to aversion of the use of such technologies. (Sami & Pannannaiah, 2006). The expected result of the study did not show that levels of techno stress had an adversely negative effect towards trust or overall propensity to trust while shopping online. The higher levels of Technostress did not correlate with participant's willingness towards trusting behaviours. This may indicates a separation between the Technostress of using technology with the participant's willingness to trust online vendor. The stress of using the technology does not indicate or negate trustworthiness of online vendors themselves or the willingness to trust in the use of technology as a tool for online consumerism.

Other factors which mage have contributed to the hypothesis not being supported may that all participants were already online shoppers familiar with the use of information technologies and so had already overcome any initial techno stress that they may have felt towards shopping online or using computers as a tool to facilitate online consumerism. Familiarity with the task of shopping online would lessen their feelings of apprehension and aversion to using online consumer sites.

Qualitative analysis of both groups indicates that neither group would report any particular apprehension to shopping online or using information technology, however again this may be due to familiarity with such technologies having been chosen as a sample of online shoppers and also by there repetitive use of sites they most commonly visit which may in some way partially serve to allow them to overcome any initial Technostress they may have felt towards shopping online. The now common place act of shopping online to the participants would diminish their apprehension to do so,

H4: Digital Immigrants will report higher levels of Technostress than Digital Natives.

This hypothesis was supported by statistical analysis. Digital Immigrants (mean=183.55) scored higher on Techno Stress levels than Digital Immigrants (mean =173.87) The mean difference between the two groups was -9.984 with a 95% confidence interval for the estimated population man difference of between -22.568 and 2.6. The effect size was large ($d=5.1$) . An independent t-test showed that the difference between the two conditions was significant ($t = 1.573$ $df= 103$, $p= .119$, two tailed)

From qualitative data collected it can be seen that the digital immigrant group use online consumer sites to make purchases less frequently than their digital native counterparts. However the data gathered does not indicate whether the participants would feel higher levels of Technostress when shopping online which is a factor that could not easily be demonstrated in a focus group .Although previous research does indicate higher levels apprehension towards using technology and Technostress in older adults who would be classified as Digital Immigrants does currently exist (Hogan, 2009), No qualitative data gathered during the study supports this research.

As expected Digital Immigrants did show higher levels of Technostress when shopping online. This would support Prensky's (2001a, 2001b) ideas that Digital Natives are more comfortable with the use of technology and therefore would be less apprehensive to its use than Digital Immigrants, however as previously indicated by the outcome of Hypothesis 3 (H3) these higher levels of Technostress did not indicate a negative effect towards the levels of trust place towards online commercial sites

H5: Sites with real world counterparts will be perceived as more secure and trust worthy than sites with no real world counterpart.

In this instance the hypothesis was not supported by statistical analysis. Using the explore function of SPSS it was discovered that the online only sites (mean=65.92) scored slightly higher on overall trust levels that Online commercial sites who also had real world counterparts (mean 63.55). Further statistical analysis revealed a

different interpretation at the statistics. When divided into Digital native and Digital Immigrants groups respectively it was seen that Digital Natives score for online only sites (mean= 62.55) as less trustworthy than sites with real world counterparts (mean=67.55) with a mean difference of -6.89 with a 95% confidence interval for the estimated population mean difference of between -13.019 and 7.6.. An independent t-test showed that the difference between the two conditions was significant ($t = -2.23$ $df= 99$, $p= .28$, two tailed). This would support the hypothesis, however the opposite was observed with the Digital Immigrant participants rating the online commercial sites with no real world counterpart (mean=69.44) as significantly higher than those site who also had a real world counter part (mean=60.87). This would not support the hypothesis that shows the opposite effect. Combining the two groups as a whole for statistical analysis would appear to cancel of the strong bias that can otherwise be seen in both groups which does not indicate consistency with previous studies (Flavian, Guinaliv, & Torres, 2006).

Qualitative analysis in this case revealed little to support this hypothesis. The digital natives group make no reference to visiting sites which had a real-world counterpart and instead only mentioned sites which are online only such as Play.com, Amazon and iTunes. The digital immigrant focus group did indicate that they use a mixture of both online only commercial sites as well as websites with real-world counterparts such as Easons, Falcon and Tesco which would indicate partial trust in online site with real world counterparts however it cannot be determines if greater preference or trust towards these sites is experienced.

Over all this hypothesis is not supported as expected however was partially supported by the Digital Native Group who do rate the sites with real world counterparts are more trustworthy than those with online only presence. The Digital Immigrants do no show the same result rating the online stores as more trust worthy than those with a real world counter part. This may however have been influenced by an ongoing real world corruption scandals surrounding one of the banks used to represent site with a real world counterpart in the banking category of the sites tested, which had become hugely topical at the time of the testing period of this research project but which had not been foreseen or anticipated during the pilot study period of the project. This may have made the digital immigrants who may have had bank accounts with this bank, far

less trusting towards that particular site or the real world organisation which it represented at the time of testing which may have altered the outcome of the research considerably.

4.2 Strength and Limitation of the Current Study

The sample size in the present study was large enough to represent those of digital natives and digital immigrants evenly. The qualitative data collection also gave a lot of rich information regarding the subject of online shopping which would not be evidence from quantitative methods of information gathering. The PTSI scale used accurately indicates levels of Techno stress In online consumers however to 47 questions scale may have been too long making the time required to complete the online survey to lengthy and may have caused some participants to failed to complete the final stages of the experiment. Perhaps an abbreviation of the scale may have been more appropriate to allow the participants to complete the study and less time-consuming period and which would only look at certain aspects of Technostress which are most relevant to online consumerism

Much of the research carried out in the field is now several years old indicating that the issue of trust is no longer at the forefront of online consumer research as much as perceived risk of security breaches of sensitive or private data such as credit card details has become . Although many digital immigrants did take as participants in the study, it was much more difficult to recruit a digital immigrant sample than a digital native sample. Many of the Digital Immigrants contacted originally either did not shop online declined to take part in the study. Therefore representation of the sample gathered may not be generalisable to all Digital Immigrants and merely represents a sample of those who shop online.

4.3 Implications of the Current Study

The implications of the current study are that Digital Natives are more frequent online shoppers than their Digital Immigrant counterparts, however this does not directly make them more trusting but merely indicates that in consumer behaviour much like in their learning behaviours, Digital Natives are more like to turn more quickly to online sources to find what they are looking for rather than sticking to more traditional consumer outlets (Prencsy, 2001a, 2000b). The study also indicates that higher Technostress does not transfer onto trust and does not have an adverse negative affect on perceptions of trust in online shopping as would have been expected from previous research. The qualitative research did however indicate that trust in the security of an online site was more important than trust in the site itself as may have been previously indicated (Swinyard & Smith, 2003). As online shopping has become more commonplace users have moved on from the original hesitant fears and are happy to return to trusted websites. Online commercial sites which have a real world counterpart were partially shown to have higher levels of trust in those which were based solely online as previously indicated (Flavian, Guinaliv, & Torres, 2006).

4.4 Suggestion for Further Research

In order to address the issue of trust in security systems in unlike commercial sites rather than the sites themselves future research may focus more on the systems and other perceived reputation of the company itself. Larger sample sizes may also indicate higher reliability and generalisability study. Removing or placing the banking category from the sites tested may also eliminate any irregularities that may be being caused by current global economic conditions which may have significantly altered the outcomes of the study.

Conducting more focus groups for each group will also indicate the generalisability of the information obtained from both groups in the present study in an attempt to replicate the information gathered which was not possible due to the limited size

groups conducted. Further research into the area of gender differences in willingness to shop online.

4.5 Overall Conclusion

Overall this study seem to indicate that Online Consumers from both the Digital Native and Digital Immigrant groups are happy and willing to shop online with several advantages which they feel out weight the disadvantages as describe in the :

“You can compare things and read reviews of the people have written on products to help you make your mind up.”

“It is cheaper; you can buy a lot of things online which would cost more to buy in a real-world shop, and there’s a better selection on more obscure items like Music CD which you wouldn’t find in the music stores in Ireland.”

Trust in Online Consumer Sites themselves no longer seems to be an issue as indicated by the statistical analysis and by statements made in the focus group part of the study. More emphasis is now place on security worries and in the steps taken by sites to ensure the protection of consumer’s private information and preventing identity thieves form gaining access to their credit card details, email address and private home addresses. Comments made in the focus groups illustrate this:

“I am not that weary as I go back to the same sites are currently, or perhaps they should be

“Most banks guarantee their credit cards against fraud so in the event that something does go wrong is usually a backup system in place.”

Both Groups now view online consumerism as a normal part of modern life. Despite gender differences while shopping online and frequency with which Digital Natives and Digital Immigrants engage in online shopping it can be concluded that there is no significant difference in Levels of trust between Digital Natives and Digital Immigrants Levels of Trust Online Commercial Sites.

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6. APPENDICES

Appendix-A Demographic

Age: _____

Gender: Male () Female ()

What is your average internet usage (in hours per week)

Please tick one

<5 () 5-10 () 10-20 () 20-30 () 30-40 () 40+ ()

How often do you visit online commercial sites:

- Once a week ()
- Once per month ()
- 2-3 times per month ()
- Once every 6 months ()
- Once per year ()
- Less than once per year ()

How often do you buy from online commercial sites:

- Once a week ()
- Once per month ()
- 2-3 times per month ()
- Once every 6 months ()
- Once per year ()
- Less than once per year ()

What type of commercial site would you buy from most often? E.g bookstores, electronics store etc.?

What advantages do you feel you get from online shopping?

What disadvantages do you perceive from online shopping?

Appendix-B Trust Assessment

These are the questions that the participants will be asked to answer to assess levels of trust in sites viewed. They will be answered using a 7 point likert scale

Trust (Jarpeeva et al.2001 Donney & Cannon 1997)(as cited in Koufaris & Hampton-Sosa, 2002)

1. This company is trustworthy
2. This company has my best interest in mind
3. This company wants to be known as a company that keeps its promises and commitments
4. This company will always be honest with me
5. I believe the information provided to me by this vendor
6. This company is genuinely concerned about its customers
7. I find this site easy to use
8. I find this site very useful

This questionnaire will measure participants over all propensities to trust. They will also be measured once at the beginning of the experiment using a 7 point likert scale

Propensity to trust (Cheung and Lee 2001) (as cited in Koufaris & Hampton-Sosa, 2002)

It is easy for me to trust a person/thing

I have a high tendency to trust a person/thing

I tend to trust a person/thing despite having little knowledge of it.

Trusting someone/thing is not difficult.

Appendix-C PTSI

Personal TechnoStress Inventory

(PTSI)

© 1998, 1999 Larry D. Rosen, Ph.D. and Michelle M. Weil, Ph.D.

PTSI DIRECTIONS:

"Technology" refers to the machines or systems that are supposed to make your life easier and save your work. This questionnaire is about technology that may cause people stress. For each statement, please rate how you feel by putting an "X" in the box that reflects your response.

Personal TechnoStress Inventory Items	Never	A Little	A Fair Amount	Often	Very Often
1. I am comfortable learning new technology.					
2. Technology's beeps and buzzing sounds bother me.					
3. I get distracted by communication technologies like telephones, fax machines, cell phones and pagers.					
4. I have enough free time in my life.					
5. Family members each spend time separately in their home using their own technologies.					
6. I know how to deal with technological malfunctions or problems.					
7. It seems that when a technological					

	device needs repair, it is easier to discard and replace it rather than fix it.					
8.	I do not understand the "language" of technology (e.g., RAM, ROM, virus, gigabytes, etc.).					
9.	My timesaving devices save me time.					
10.	Having technology available at home leads me to work longer.					
11.	Solving a technological problem seems like a fun challenge.					
12.	I set clear limits on the times and ways for people to contact me.					
13.	I like to leave machine messages when I know I will not have to talk directly to the person.					
14.	I get things done in the time I have planned to complete them.					
15.	I feel that children know more about technology than adults do.					
16.	Technology interferes with my personal creativity.					
17.	I worry about the accuracy of information on the Internet.					
18.	I find complex voice-mail systems irritating and time consuming.					
19.	I find myself doing more than one task at a time.					
20.	Using technology at home after work hours interferes with my free time.					

21.	I find most technology easy to learn.				
22.	I believe I am forgetting how to do things the "old fashion" way (without using technology).				
23.	When I leave a message for someone, I worry when I'll hear back from the person.				
24.	I find myself interrupting what I am doing to attend to something else.				
25.	I believe areas of the Internet are not safe for children.				
26.	Timesaving devices end up requiring <i>more</i> time, rather than saving time.				
27.	The amount of information available about me through technology worries me.				
28.	I worry that some people are falling further behind because of their lack of knowledge about technology.				
29.	When I talk on the telephone I pay attention to the conversation and do not do anything else.				
30.	Technology changes so fast it is hard to keep up.				
31.	When technology has problems, I believe they are fixable.				
32.	I worry if I don't check my messages for awhile.				
33.	I feel overloaded by all the messages I need to answer in a day.				

34.	It is difficult for me to concentrate on work because my mind wanders to other things I need to do.				
35.	I believe that children overuse technology.				
36.	Technology invades peoples' privacy.				
37.	Technology isolates people.				
38.	I am comfortable with all the new technology that is showing up in my environment (e.g., grocery stores, restrooms, gas stations, banks, etc.).				
39.	I am an accurate time estimator.				
40.	Technology makes my job more complex.				
41.	I feel I need to respond to messages as soon as possible.				
42.	I believe that most people know more about technology than I do.				
43.	I get frustrated figuring out the best way to reach someone.				
44.	I get impatient waiting for technological devices to finish their work.				
45.	I lose track of time when using certain types of technology.				
46.	I feel as up-to-date on technology as my peers.				
47.	I am concerned about the privacy of technological communications.				

Appendix D-Focus Group Questions

Focus group guiding questions

- 1 How often does u shop online?
- 2 What commercial sites do you visit most often?
- 3 Do you consider trust a big factor when choosing where to shop online (Explain?)
- 4 what are the advantages of shopping online?
- 5 What are the disadvantages of shopping online?
- 6 What good/bad experiences have you had shopping online?

Appendix E-Invitation Letter

Hello

I am currently undertaking a thesis as part of Masters degree in Cyberpsychology in The Institute of Art, Design and Technology(IADT). If you shop online I would really love your input as an online participant in my research

Online consumerism has become prevalent in modern life. The aim of this study is to examine the levels of trust online consumers feel towards online commercial sites. The study will also examine if any difference exists in trust perception between Digital Natives (people who grew up surrounded by information technology) and Digital Immigrants (people who learned to use information technology in adulthood). Approval for this project has been granted by the IADT Ethical Committee. The survey will take approximately 15-25 minutes to complete

Participation in this study is completely voluntary. All data collected during the study will be done so anonymously and held in the strictest confidence. No data collected will be individually identifiable to participants. Participants are free to withdraw from the study at any time. Please feel free to contact the researcher at an time if you have any questions or reservations about this study

If you would like to take part in the study please click on the following link

www.tinyurl.com/trustonlineresearch

Yours Sincerely

Lee Kelly