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EXAMINING THE BEHAVIORAL INTENTIONS OF OLDER ADULTS AS VIRTUAL TOURISTS IN THE CONTEXT OF A SECOND LIFE DESTINATION

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ABSTRACT

Tourism opportunities are being promoted heavily on the web, yet one of the largest and most lucrative markets, older adults are least likely to use the internet. In an effort to explore barriers to and potential acceptance of technology for tourism experiences, this study followed closely ten older adults through a learning process with technology. Qualitative methodology was used to explore in-depth the experience of these older adults being exposed to online virtual world technology for the first time and exploring the process by which technology acceptance takes place. The findings indicate that online virtual world such as Second Life (SL) experiences have a high ease of use, and high perception of usefulness. However, with more immersed experiences, problems do rise due to inauthentic nature of SL. Overall the technology is not hard to learn for older adults, according to the study participants, and they did have a positive experience with the interactive nature of the virtual travel experience. They also saw benefits related to increased access to places that are difficult to reach physically for them. The Tourism industry may benefit from use of SL type technology as a tool to engage potential tourists. This study points to future research to prepare the tourism industry to take full advantage of this new cutting edge interactive technology in order to both market and maximize the tourist experience and increase satisfaction levels.

DEDICATION

I tell you the truth, whatever you did for one of the

least of these brothers of mine, you did for me.

Matthew 25:40

This is for my family and friends that fed me, clothed me, hugged me and prayed for me. You taught me that while trying to do well the value of doing some good along the way. For without doing good then doing well will never be enough. 5-6-7-8

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"For I know the plans I have for you," declares the Lord, "plans to prosper you and not to harm you, plans to give you hope and a future."

Jeremiah 29:11

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CHAPTER ONE

INTRODUCTION

Seeking a travel destination in a virtual world such as Second Life may provide more than just available information for making a travel decision by adding a vicarious experience for tourists. Discerning tourists' specifically older adults prefer to seek information, which enable the participants to experience a destination rather than obtaining simple objective facts (Cho, Wang, & Fesesnmaier, 2002). The emergence of the Internet and virtual reality systems enable tourists to choose what they want to experience as virtual active participants in order to better assess the destination (Cho, Wang, & Fessenmaier, 2002). Virtual online worlds such as Second Life exist as a natural extension of the Internet potentially increasing the richness of virtual experiences and social interactions (Park, Nah, DeWester, & Eschenbrenner, 2008). A dearth of research exists regarding online virtual worlds and the experiences that affect the tourist decision-making processes.

Problem Statement

Investment in new technology carries high resource cost in both money and time. Older adults are the most lucrative sought after target market segment in tourism. There is a lack of information available about the process of older adults accepting and using online virtual world technology. Furthermore, the tourism industry does not have an in-depth understanding of how new technology like Second Life can be beneficial. The

tourism industry needs an understanding of how Second Life could potentially impact the tourism market.

Purpose Statement

The purpose of this study is to explore the acceptance and use of the online virtual world of Second Life by older adults in order to gain in depth knowledge of the process and how this knowledge can be used for future virtual world design to support tourism. This research seeks to gain an in-depth understanding of the behavioral intention of older adults as virtual tourists in the context of a Second Life tourist destination.

Research Questions

1. What is the process of acceptance and ease of use of the online virtual world of Second Life by older adults?
2. What is the process by which people become immersed in new technology, specifically Second Life, in the context of travel experiences?
3. How does acceptance and immersion affect the future design of Second Life destinations for tourism?

Importance of Study to Travel and Tourism Research

The importance of this study is multifold. Research regarding tourism and IT implies a need for modifying our focus from the supply side to the demand side because changes in consumers' travel information search and purchasing behaviors drive changes in the tourism industry (Bjrok & Guss, 1999). Advances in technology continue to

change our world as we know it on a daily basis. How online virtual worlds such as Second Life will affect travel and tourism is currently an unknown. First, this study represents a preliminary first step in the search for knowledge. Through the use of qualitative methods this study allows travel and tourism research to gain rich insights into how online virtual world technology such as Second Life will impact the industry of travel and tourism. Second, this study will reveal potential variables to be used for future research. Finally, this study will provide in-depth knowledge about the behavioral intentions of healthy older adults as virtual tourist within the context of a Second Life destination.

Importance of Study to Travel and Tourism Management

Even though some studies have focused on online travelers' information search behaviors, they did not pay specific attention to older travelers (Buhalis, 2003; Weber & Roehl, 1999). This research will study how healthy older adults adopt and use information presented in online virtual worlds and specifically to plan and experience their vacations. Thus, tourism management will gain valuable insight into advertising in online virtual worlds such as Second Life. With our current tight economy, where to spend advertising dollars is very important to tourism management as the competition is high for travel dollars.

Limitations

This study uses healthy older adults so the information cannot necessarily be applied to other age groups. Although the sample is appropriate for the study because it is so small it will not allow the researcher to make precise statistical generalization to the larger population.

Chapter Summary

This chapter introduced and defined the problem leading to the purpose of this study and its importance to travel and tourism research as well as travel and tourism management. Limitations were also discussed.

CHAPTER TWO

LITERATURE REVIEW

Tourism

Tourism leads as one of the world's major industries. In the United States the tourism industry provides jobs for approximately 10 million people making this industry the second largest employer (Cook, Yale, & Marqua, 2006). In more than half the 50 states, it reigns as the largest industry. Total sales for the tourism industry in the United States now exceed $773 billion, including international and domestic travel expenditures, generating $117 billion in tax revenue (Travel Industry Association of America 2009).

The development of tourism offers an effective means of increasing economic well-being for many countries. According to the World Tourism Organization, an important indicator of the role of tourism is its generation of foreign exchange earnings. Tourism is one of the top 5 export categories for as many as 83% of countries and is a main source of foreign exchange earnings for at least 38% of countries (Thomas, 2003). Tourism has a comparative advantage over other industries due to the yield of better returns from the region's human and natural resource inputs. Community leaders believe this comparative advantage exists because of the many economic, social, and environmental benefits tourism offers.

Tourism provides a very good source of new money for an area because visitors travel to the area and "leave" their money behind as they buy goods and services during their visit creating a multiplier concept. This multiplier concept occurs when some of this

new money is then spent within the local community. Nearly all countries desire international travelers because tourism services purchased by foreign travelers are judged exports. In 2007 international travelers spent $122 billion in the United States (TIA 2009). Travel and tourism is one of the United States' largest service exports (TIA 2009).

Tourism offers other positive economic benefits such as stability. Even though recessions affect practically all industries, tourism historically exhibits relatively minor declines in revenue during recessionary times. Tourism also provides economic diversity by providing a wide variety of job possibilities. Tourism often provides economic incentives to improve infrastructure that residents as well as tourist enjoy. Since a tourism business can be started in the form of a small business, the tourism industry can be used to encourage entrepreneurial activity.

Destination images influence destination positioning and ultimately the tourist's purchasing behavior. Tourism destinations utilize promotion and marketing communication strategy to manipulate destination image (Beerli and Martín 2004, p. 667; Fridgen 1984, pp. 25–26; Gartner 1993). Narratives and visuals create meaning in the market, deploying media, information and communication technology as enablers (Magala 2001). Destinations can influence image formation indirectly through secondary place interactions with consumers, thus, "vicarious experiences" (Kim and Richardson 2003). These are facilitated by intermediaries and produced imagination in literature, arts, media and popular culture (Cohen-Hattab and Kerber 2004).

Tourism Advertising

Competition among state tourism offices has increased substantially throughout the years. According to the Travel Industry Association of America (TIA; 2004), the total budget of state tourism offices in the United States reached $685.1 million (an average of $13.7 million per state). Of this amount, $178.2 million was spent for domestic advertising and $49.7 million for international advertising (TIA 2004).

Measurement of advertising effectiveness and media channel choice has received a fair amount of attention (Batra, Myers, and Aaker 1995; McWilliams and Crompton 1997; Woodside 1990). In tourism research, evaluation of the effectiveness of travel destination advertisements focuses primarily on the extent to which it "stimulates" visits to a particular destination. A variety of approaches includes advertising tracking studies, conversion studies, and other forms of program evaluation (Burke and Gitelson 1990; Messmer and Johnson 1993; McWilliams and Crompton 1997; Woodside 1996).

Conversion studies, in particular, provide a popular approach widely used by state, regional, and local tourism organizations in the United States to assess the effectiveness of tourism advertising (Burke and Gitelson 1990; McWilliams and Crompton 1997; Messmer and Johnson 1993; Silberman and Klock 1986; Woodside 1990, 1996; Woodside and Sakai 2003). This approach focuses on evaluating tourists' responses to advertising campaigns within the context of destination awareness, visitation, and visitor expenditure. However, advertising evaluation research indicates the effectiveness of advertisement is not limited to solely the purchase of a product but

extends to both cognitive and psychological aspects related to awareness and intention that could play a vital role in the purchase decision over a longer period (Bendixen 1993; Siegel and Ziff-Levine 1990).

Another critical issue of advertising involves the choice of media channel. Different media channels have strengths and weaknesses in delivering different types of advertisement messages (Assael 1981; Batra, Myers, and Aaker 1995; Chauduri and Buck 1995; Krugman 1969; Petty, Cacioppo, and Schumann 1983). Advertisements delivered by different media aim to address different affective and cognitive processes, as well as different dimensions of psychological effect such as awareness, and intention to purchase (Assael 1981; Batra, Myers, and Aaker 1995; Krugman 1969; Petty, Cacioppo, and Schumann 1983).

As with other forms of advertising, websites on the Internet play a role in providing information and shaping perceptions of the places marketed. However, the Internet can go beyond traditional advertising by combining vibrant images and sound with text. In some ways, people do not need to leave home to travel (Mowforth and Munt, 1998). Research provides evidence that people carry out Internet research for self-empowerment instead of turning to experts and to escape from isolation or dull daily routines (Bakardjieva and Smith, 2001). This seems especially relevant to tourist websites.

A distinctive feature of tourist information is that the actual product cannot be tried out prior to purchase; rather the purchaser reserves future access to the product (Pigram and Wahab, 1997). Consequently there exists a systematic construction of

attractive locations in tourist advertisements (Hughes, 1998). Since the decision to purchase a travel product is based exclusively on information, the information quality proves important in shaping both the expectations of the tourism experience and then later satisfaction (Sheldon, 1997; World Tourism Organization, 1999).

Tourism Virtual Presence

Information Technology (IT) greatly influences one of the largest global industries, tourism (Law, Leung, & Buhalis, 2009) . Tourism marketing depends on a high level of information reliance (Hartvedelt, 2007), which is a special characteristic of this industry. IT facilitates tourism by providing both tourism practitioners and consumers with instant information as "Information is the lifeblood of tourism" (Buhalis, 1998, p. 409). Thus, IT becomes a crucial partner of tourism, because the tourism industry increasingly employs it as a tool to conduct "tourism marketing, distribution, promotion and co-ordination" (Buhalis, 1998, p. 411) in order to master the challenges faced by both supply and the demand side of tourism. As a result, the growth and future of tourism are acutely interrelated with the advancement of IT.

Research has shown that the search for information occurs at different stages of the decision-making process (Murphy, Mascardo & Beckedorff, 2007). Today websites provide valued information that contributes to the development of destination image and travel decisions (Kokolosalkis, Bagnall, Selby, & Burns 2006; Prentice, 2006). Beyond this, the emergence of online virtual communities enables tourists to choose what they want to experience by being active virtual participants (Cho, Wang, & Fesenmaier,

2002). Online options offer tourists the opportunity to experience the atmosphere of destinations assisting them in making better decisions about travel. Interactivity is what enhances the experience (Cano & Prentice, 1998; Gretzel, Yuan, & Fesenmaier, 2000) and thus increases the richness of the experience (Park et al., 2008).

A recent survey found that some 238 million people have registered accounts in fully immersive worlds (Mitham, 2008). There are estimates that 80% of active Internet users will be using virtual worlds by 2011 (Gartner, 2009). This has spurred major companies around the globe to set up presences inside virtual worlds in order to create new innovative ways of presenting their brands into the influential early adopter audiences. Research on virtual online world behavior particularly in the area of destination marketing currently is nonexistent. No one knows for sure what the impact of these online virtual worlds will be on the tourism market. Virtual worlds present new marketing opportunities. But, with opportunities may come challenges.

Information and communication technologies (ICTs) and current technological advancements have profoundly affected destination marketing and promotion (Bentley, 1996; Buhalis, 1998; Buhalis & Licata, 2002; Schwanen & Kwan, 2008). With the coming out of Web 2.0, Internet users engage in the roles of co-marketers, co-designers, and co-producers of information, particularly in the area of tourism (Sigara, 2007). Furthermore, under Web 2.0, has introduced diverse technologies, which increase travelers' accessibility causing DMOs to pay more attention to new technologies that meet the needs of experienced travelers (Buhalis, 1998). Only when DMOs and tourism-related leaders fully understand the newest innovative technologies and have the ability to

use them will these technologies be effective in destination promotion (Law & Jogaratnam, 2005).

Healthy Older Adults and Tourism

With the tendency of an aging population known as the "aging of America" (Moisey & Bichis, 1999), older travelers will account for a significant proportion of the overall travel market, particularly now that baby boomers have joined the 50+ age group (McDougall, 1998). The number of people at and over 50 years of age is projected to increase to 96 million in 2020, and to 116 million in 2040 (U.S. Census Bureau, 2008). Low birth rate, increased life expectancy, and the aging of the baby boom generation render the older population the fastest growing portion of the population (Administration on Aging (AoA), 2009; Godbey, 1997).

Thus, the importance of mature travelers becomes more important to the tourism industry as their number and wealth increases (Faranda and Schmidt, 1999; Harssel, 1995; Reece, 2004;). In addition to the sheer size of this demographic group, "Older Americans travel more frequently, go longer distances, stay away longer, and rely more on travel agents than any other segment of the population… they spend more, too" (Rosenfeld, 1986, p. 38). The American Association of Retired Person (AARP) provides data that older adults like to travel a great deal (Badinelli, Davis, & Gustin, 1991). Both the large volume of trips taken and the magnitude of trip-related expenses by older adults contribute to this market segment remaining a valuable target for tourism (Fleischer & Pizam, 2002; Horneman, Carter, Wei and Ruys, 2002). Senior citizens appear both

attractive and lucrative as they play an important role in the travel market primarily due to 1) the growing number of potential travelers, 2) the spending power, and 3) the availability of spare time.

Research has shown that more than 60% of people who are over 50 years of age claim good or excellent health and more than 75% of them consider tourism a vital aspect of physical well-being, thwarting poor health and social exclusion (Dann, 2001). These travelers are experienced travelers who tend to conduct less information search than their younger counterparts (Fondness & Murray 1999). However, knowledge about the travel behaviors of older adults is not being fully explored due to stereotypes held by the tourism industry that older travelers comprise a uniform market segment (Horneman et al, 2002; Harssel, 1995) but in fact the older travel market is distinct, diverse, and demanding (Harssel 1995).

The rapid progress of Information Technology (IT) and the trend of an aging population are greatly interrelated with the development of tourism. This leads to the importance of investigating how older travelers may make use of IT for their destination decisions. IT adoption traits and traveler information needs and how they may relate to travelers IT usage remain paramount to tourism marketing and strategy.

Travel Motivation and Tourism Experiences

The needs and expectations of older travelers may differ from those of younger travelers. To date, the focus of the majority of the previously published research which investigated older travelers has concentrated on descriptive issues such as travelers'

preferences (Moschis, Curasi & Bellenger, 2003; Horneman, Carter, Wei & Ruys, 2002; Lieux, Weaver & McCleary, 1994), needs (Ananth, Demicco, Moreo, & Howey, 1992), motivations (Jang & Wu., 2006) and behavior (Fleischer & Pizam, 2002; Javalgi, Thomas & Rao, 1992; Huang & Tsai, 2003; Reece, 2004; Shim, Gehrt & Siek, 2005). For example, Baloglu and Shoemaker (2001) have shown that older motor coach travelers tend to use travel as an approach to building friendships even though they are unlikely to return to the same place. One of the most important motivations identified for older adults were 'knowledge-seeking' as a push factor and 'cleanliness and safety' as a pull factor (Jang et al. 2006). Furthermore, the level of happiness for older travelers was associated with the level of activity on the trip instead of the actual trip experience (Milman, 1998). It is therefore important that the motivations of older travelers be understood if destinations are to provide appropriate tourist services for this market segment.

From a tourism perspective, older consumers' preferences are to accept a new service, to remember a message, or to shop at a place when they could easily relate the new situation to what they already know (Moschis et al., 2004). It seems that the most important factor to influence elderly customers' behavioral intentions was friendly service and individual attention instead of tangible aspects of service (Fu and Parks, 2001). Investigation of lodging preferences for the older adult tourism markets identified three major groups: "novelty seekers," (those who like to experience new things and new destinations), "active enthusiasts," (those interested in physical activities, seeking warm weather activities, taking trips of longer duration and they had higher income), and

“reluctant travelers” (those having low income and took trips of shorter duration) (Lieux et al., 1994). Thus, such research could be used to assist destination developers and managers to identify the factors that are related to older adults’ decisions to travel in order to create positive travel experiences and to maximize customer satisfaction and retention (Shim, et al., 2005).

The tourism experience can be defined as the temporary movement of people to destinations outside their normal places of work and residence, the activities undertaken during their stay in those destinations, and the facilities created to cater to their needs (Cook, Yale, & Marqua, 2002). It is the difference in choices that people make in travel destinations which reflects attempts to create memorable experiences thus resulting in the emergence of innovative forms of tourism. Motives leading travelers to select one opportunity over another may at first glance appear similar in root cause or need, but there are differences in choices people make. A tourist may go on vacation for instance, in response to a sense of internal damage or depletion which prompts a holiday that represents a period of replenishment and restoration (Crompton, 1979).

Consumer behavior knowledge about older adults is increasingly of importance to researchers and the travel industry. One such factor for travel lies in the desire to transcend the feeling of isolation obtained in everyday life. In other words the tourist simply wishes "to get away from it all" on vacation or escape which is supported by Crompton's (1979) study of push and pull factors. Crompton (1979) suggests that general, non-destination-specific push motives are often the major driving force in a person’s selection of not only when but also where to travel. The argument is that a person is

pushed to participate from internal imbalances and the need to find an optimal level of arousal, as well as pulled by the offerings of a specific destination. The pull motivations that a tourism destination offers are thought to be specific to that destination, whereas the push motivations are viewed more generally and have the likelihood of being fulfilled by a variety of different activities (Crompton, 1979; Iso-Ahola 1990; Snepenger, King, Marshsall & Uysal 2006).

Dann's (1977) describes ego-enhancement as a relevant motivational factor. The experience of traveling may provide an individual with a new social position to exploit for personal needs and recognition. This aspect of the escape motivation is termed ego-enhancement. By the tourist going to a place where his/her social position is unknown then he/she can feel superior as a result of this lack of knowledge in this place. Therefore, travel not only represents fulfillment of certain basic needs in the potential tourist but traveling offers the tourist an alternative world from which he/she lives daily (Dann, 1977).

Working from the perspective of socio-psychological theory of tourism motivation, Iso-Ahola (1982) established that it makes little sense to view motivation as an unconscious process. Iso-Ahola (1982) suggests that the central theory behind the motivation for tourism is satisfaction of personal desires for something that is missing or depleted. Thus, Iso-Ahola (1982) identified two primary forces behind motivation for tourism, (1) the desire to leave the everyday environment and (2) the desire to obtain psychological (intrinsic) rewards through travel in a contrasting environment.

Additionally, Pearce (1996) found that tourists are attracted to destinations in order to possibility fulfill self-actualization needs such as love and the sense of social belonging, and physiological needs. Pearce's findings were similar to the earlier concept of tourist motivation based on needs arousal proposed by Crompton (1979) and Heckhausen (1980). Thus, enters in the proposed concept of a travel career ladder. It is a five-fold hierarchical system for classifying tourist motivation to distinguish between intrinsic and extrinsic motivations (Pearce, 1996). The five tourist motivational levels described in his scheme for tourist motivation consisting of 1) relaxation needs, 2)0Safety/security needs, 3) relationship needs, 4) self-esteem and development needs, and 5)self actualization/fulfillment needs. The concept of hierarchical motivation utilizing Maslow's (1954) hierarchy of needs where each level of the hierarchy is related to both the previous and the next level of needs in the hierarchical system generates a unique drive or push within an individual that impacts the decision-making process (Pearce, 1996). Travelers were considered to have more than one level of travel motivation, though it was suggested that one set of needs in the ladder levels might be dominant (Pearce 2005).

One further aspect of motivation that assists understanding tourist behavior is intrinsic motivation. Intrinsic motives include escaping from personal or social pressures, social recognition or prestige, socializing or bonding, expressing self-esteem, learning or discovery, experiencing nostalgia, novelty/thrill, and distancing from crowds (Botha, Crompton, and Kim, 1999).

Thus, previous research has looked into many different motivators leading to the travel experience. A brief recap of these motivators includes: escape, rest/restoration, socialization, ego-enhancement, authenticity, novelty and education. In summary, although tourist motivation as been examined by several researchers (Crompton, 1979; Iso-Ahola, 1982; Pearce, 2006; Snepenger et al 2006) very little is published which specifically examined older adults travel motivations despite their importance as a important target market for many tourist destinations.

Information Technology

The rapid progress of Information Technology (IT) influences the world dramatically in many areas including society, community, and industry and has continued to do so since the 1960's. Today it is common knowledge that we are living in the information age. If there exist anything that characterizes the modern world it is the massive, almost unimaginable flow of information and therefore, of change. From books and movies to email and the Internet, this new information comes at us in a blizzard of data to be seen, felt, and heard. Proliferation of the Internet gave rise to the networking of the world, thus, leading to the world economy becoming globally connected (Buhalis, 1998).

Technical advances and the wide use of computer technology have made Internet access possible for a large number of people (Dholakia & Chiang, 2003). The ability to use Information Technology is a prerequisite to living in the information age (Selwyn, 2004).

A stereotypical perception exist regarding older adults aged 50+ that they cannot or will not learn to use computers and related technology (Filipczak, 1998). Many studies have proved this train of thought to be a misconception (AOA, 2009). One study funded by Microsoft showed that 30 % of older adults between ages 50 and 79 in the United States own and use a computer (Leavengood, 2001). The computer market for adults who are 65+ years of age is growing, while the market for the younger generation is stagnant (Filipczak, 1998). Older adults navigate the Internet and perform many Internet-related tasks such as online banking, online shopping and information searching (Leavengood, 2001). Thus, one can conclude that older adults like to use computers and the Internet. Many businesses have acknowledged this developing market.

Perceived Usefulness

Older adults who desire increased computer skills and learning about the Internet identifies the payback of IT. One of the most obvious benefits to older adults is that the use IT promotes inclusion and connection (Czaja, Fisk, zong, Rogers, Charmess, Nair, & Sharit, 2006; Czaj & Lee 2003), . For example using email and chat rooms as a communication tool allows older adults to keep in contact with family, friends, and their healthcare providers. Furthermore, associations can be created with other older adults in order to receive encouragement during difficult times as well as promoting independence (Czaja et al 2006; Czaja & Lee, 2003). IT increases employment prospects for older adults (Czaja & Lee, 2003). Older adults can pursue continuing education through the Internet (Czaja et al., 2006; Czaja & Lee 2003) while meeting needs and respecting their

dignity because some may be reluctant to take courses with students much younger than themselves. Computer literacy and the Internet empower older adults by providing an opportunity for them to share their wisdom and experiences of having lived through most of the 20th century (Grodsk and Gilbert, 1998).

Research has shown that there are many reasons why learning new computer skills appeals to older adults. Some older adults learn new computer skills in hope of bridging the generation gap (Grodsky & Gilbert, 1998). Older adults view ownership of a computer as an expected status symbol among their peers (Selwyn, 2004). Family members and peers encourage and influence many older adults to become computer literate (Selwyn, 2004). In addition to a providing a way to stay active some older adults use IT to seek interest and hobbies or as a means to draw information quickly that would facilitate other leisure activities (Selwyn, 2004)

Second Life

One of many emerging virtual worlds, Second Life leads the way for Internet-based, three-dimensional and interactive environments (Martin, 2008). This environment is designed to simulate real-world landscapes and social interactions and only differ from our Earth in that this world is "lived" via the Internet. Located at the forefront of information and communications technologies (ICT) Second Life now pushes the boundaries of how we live and interact in the real world. Virtual worlds such as Second Life have recently grained increased visibility from businesses seeking to market products to virtual world participants (Swarz, 2006). However, without understanding the

experiences of virtual participants particularly older adults, the effectiveness of marketing approaches in virtual worlds may be limited.

Virtual Worlds such as Second Life provide three-dimensional virtual environments as a form of multimedia computing. Multimedia computing distributes information in insightful, multisensory, and intuitive ways through the aggregation or rich audio, video, text, graphics, animation, and static images (Hong, Thong and Tam, 2004; Lim and Benbasat, 20000). These three-dimensional virtual environments utilize the concept of vividness. Vividness describes information that has the ability to attract and retain our attention while exciting the imagination (Nisbett and Ross, 1980).

Second Life remains passionate about creating a new version of an Earth where there exist fundamentally different and better capabilities. Phillip Linden the developer of Second Life wants to be able to reach everyone in the world while remaining an open system in which creativity rules (Second Life, 2009). Anyone with Internet access can use Second Life because of its open environment (Au, 2008). This creates potential for a number of real world problems including technical, moral, and legal issues (Au, 2008). Second life continues self-evolving because it is resident driven. In fact, it has achieved widespread success including attention from mainstream media, a growing interest from international communities, and multi-national organizations (Park et al, 2008). It emphasizes socializing and an in-world virtual economy.

Second Life thrives as a 3-D virtual world built and owned by its residents. The ability of the virtual world to provide excitement and social interaction provides the primary reasons for virtual worlds increasing popularity (Castronova, 2005). Since

opening to the public in 2003, Second Life has grown explosively and today more than 16 million residents from around the globe inhabit this 3-D virtual world (Linden Lab, 2009). Reasons for getting involved in online virtual communities include information exchange, social support, entertainment and social relations such as making new friends (Ridings and Gefen, 2004).

Numerous animations allow residents' avatars to physically interact with others (Hemp, 2006). The virtual environment consists of islands, some of which are public areas and others private. Residents purchase islands that they then control and can modify and build upon in any way they choose (Second Life, 2009). Residents creating objects in Second Life retain ownership of anything they create (MacInnes, 2006). This has resulted in an active economy within Second Life as residents create and sell materials to other residents, actually producing real world incomes (Papagiannidis, Burlakis, & Li, 2008). Full participation in the Second Life environment can be complex and present a sizable learning curve (Bourlakis, Papagiannidis, & Li, 2009). However, there is no external pressure to learn all these skills. Residents can interact with the environment and others as they choose (Yee, 2006).

The virtual world of Second Life currently supports millions of US dollars in monthly transactions (Linden Lab, 2009). This commerce functions with the in-world unit-of-trade, the Linden dollar. Utilizing the Linden Dollar (L$) allows residents to buy and sell. The Linden currency trades for US dollars (USD$) via the LindeX service. Linden Lab runs the LindeX service closely monitoring the currency while controlling or

restricting volume trades (Second Life, 2009). Monitoring the economy insures stabilization of the Linden Dollar.

Virtual Tourism

Collaborative virtual environments are those in which multiple persons interact, either in games or in collaborative activities like data exploration. Within the realm of virtual tourism rather than visiting a place in person, individuals will be able to experience a specific place, for example the interior of a museum via the computer. These virtual environments engage perceptual, cognitive, and social issues. This will create challenges of trying to recreate real places convincingly.

Residents explore destinations inspired by real cities, such as Dublin and Tokyo. One may also visit new spaces unique to Second Life, such as a Renaissance-inspired Camelot or the 3D home for your alma mater.

The age group most rapidly entering the digital virtual world environment is older adults (Moore, 2006). While Second Life exist as only one of a number of virtual world environments available today, it is recognized as the most established and robust environment available (Au, 2008, Rymaszewski, Au, Wallace, Winters, Ondrejka & Batstone-Cunningham, 2007) representing the key elements of the emerging digital culture.

Theoretical Framework

The process of adopting innovations has remained of interest for more than forty years (Rogers 2004). Diffusion represents the process by which an innovation is communicated through certain channels over time among the members of a social system (Rogers 1962). An innovation exist as an idea, practice, or object perceived as new by an individual or other unit of adoption. The characteristics of an innovation, as perceived by the members of a social system determine its rate of adoption.

Five attributers of innovations are 1) relative advantage, 2) compatibility, 3) complexity, 4) trialability, and 5) observability (Rogers 1983). The degree to which one perceives a new idea as superior to the idea that it replaces defines relative advantage. The degree to which one perceives a new idea as consistent with the existing value, experiences, and needs of potential adopters defines compatibility. The degree to which one perceives an innovation as difficult to understand defines complexity. The degree to which an innovation allows experimentation on a limited basis defines trialability. The degree to which the results of an innovation are visible to others defines observability. The perception of an innovation as having greater relative advantage, compatibility, trialability and observability, along with less complexity, will result in the more rapid adoption of the innovation than other innovations.

Therefore, diffusion of innovations proposes that the adoption of an innovation, defined as an idea perceived as new, spreads through a system over time in a predictable

manner through social networks of interpersonal communications (Rogers 1962; Campbell and Stanley 1963; Rogers 1983; Rogers 2003).

An analysis of scholarly research on IT acceptance and usage implies that Technology Acceptance Model (TAM) has emerged as one of the most prominent models in this stream of research (Davis, 1989; Davis, Bagozzi, & Warshaw, 1989). The Technology Acceptance Model (TAM) (Davis, 1986) represents an important theoretical contribution toward understanding technology acceptance behaviors (Davis, Bagozzi, and Warshaw, 1989; Robey, 1996). The basic concept underlying TAM is that the individual's reaction to the new technology leads to their attitude toward use of the technology, which in the end predicts the actual use of the new technology and thus, acceptance. The theoretical basis for the model was the Theory of Reasoned Action (TRA) (Fishbein & Ajzen, 1975).

TRA is a popular model from social psychology which focuses on the determinants of consciously intended behaviors (Ajzen, & Fishbein, 1977; Fishbein & Ajzen, 1975). According to TRA, an individual's participation in a specified behavior is determined by their behavioral intention (BI) to perform the behavior, and BI is decided by both the person's attitude (A) and subjective norm (SN) in relation to the behavior in question.

TAM uses TRA as a theoretical basis for specifying causal linkages between two key sets of constructs, Perceived Usefulness (PU) and Perceived Ease of Use (PEOU), and user's attitude (A), behavioral intentions (BI) and actual computer usage behavior (see Figure 2.1). PU is defined as the user's perception that the application is useful and

will provide a benefit through the applications use. PEOU is defined as the degree to which the user expects the application to be free of effort. In other words, the perception that it is easy to understand and use, what some would call user friendly. Both PU and PEOU predict attitude toward using the application, defined as the user's desirability of his or her using the application. A and PU influence the individual's BI to use the application. Actual use of the application is predicted by BI.

This also supports Rogers's (1995) framework for diffusion of innovations when describing the importance of compatibility of new innovations with the values and belief of the innovation being adopted. An innovation that runs counter to the accepted values or beliefs of a group may be less likely to be adopted and more likely to create the negative unintended outcomes.

Immersion

Immersion describes the degree of involvement with an online virtual world such as Second Life. A number of barriers can limit the degree of involvement. These barriers arose from a combination of human, computer and contextual factors (e.g. user preference, virtual world construction, environmental distracters), and the type of barrier suggested different levels of immersion (Brown and Cairns, 2004).Three distinct levels of immersion are 1) engagement 2) engrossment and 3) total immersion (Brown and Cairns, 2004).

To enter engagement one needs to invest time, effort and attention in learning how to function in Second Life and getting to grips with the controls (Brown and Cairns,

2004). Engrossment results when one's emotions are directly affected by the virtual world and the controls become ''invisible'' (Brown and Cairns, 2004). In total immersion a sense of presence, being cut off from reality to such an extent that the virtual world is all that matters and one stops thinking about the fact that they are in a virtual world in a computer (Brown and Cairns, 2004).

Broad findings indicate that immersion has the following features: 1) lack of awareness of time, 2) loss of awareness of the real world 3) involvement and a sense of being in the task environment (Haywood & Cairns, 2005).

Text and static pictures are insufficient to present rich information, particularly for experience attributes (Nelson 1974), such as tourism destinations. Insufficient presentation richness of online product demonstrations is a major impediment to ecommerce (Rose, Khoo, & Straub, 1999). Furthermore, the quality of product information on the Internet has been mediocre, particularly for consumers who are usually accustomed to evaluating product quality based on physical interaction (Alba, Weitz, Janiszewski, Lutz, Sawyer, & Wood, 1997; Burke, 2002).

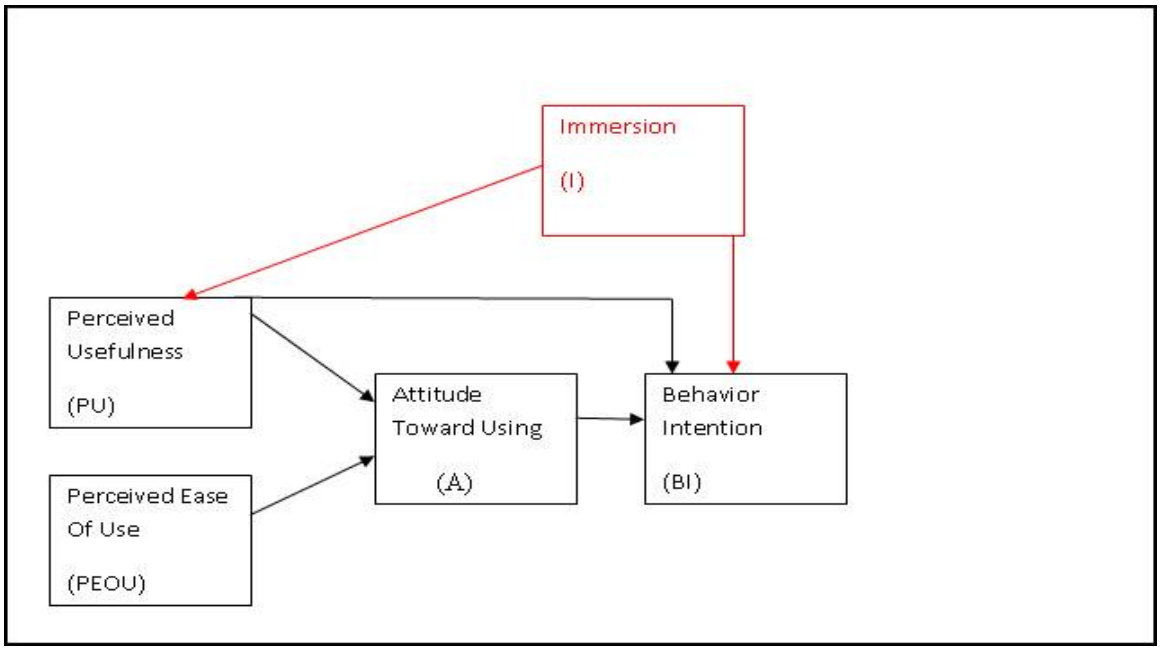

Figure 2.1: Conceptual Framework for Dissertation – Adapted Technology Acceptance Model

Internet As A Force For Innovation

The reputation of the Internet and associated information technology reigns as a favored topic in literature as both researchers and practitioners supposed that the Internet would transform the nature of businesses, markets, and the economy (Biswas & Krishnan, 2004). Early studies about the influence of the Internet on society predicted potential societal changes which included demographic shifts, the need to save time, and proliferation of product information as well as the acceptance of the Internet as a new marketplace (Brown & Cairns, 2004). Later, a large body of literature on the internet emerged, focusing special attention on topics that included:

1. Website characteristics and optimization (Burke, 1997; Jeong & Lamber, 2001; Jeong, Oh, & Gregoire, 2003); Morrison & Harrison, 1998)

2. Socio-demographic profiles of web users (Tierney, 2000; Weber & Roehl, 1999)
3. Potential and current problems related to use of the internet for travel arrangements (Chung & Law, 2003)
4. Impact of the Internet on marketing (Biswas & Krishnan, 2004; Clemons, Hann, & Hitt, 2002; Kasavana, Knuston, & Polonowski, 1997).

The Internet was rapidly adopted as an innovative communication and marketing instrument by numerous business organizations. The Internet surfaced as an efficient technology for value creation. Value creation on the Internet is obtained in three ways (Biswas & Krishnan, 2004):

1. Engaging in one-to-one online marketing
2. Integrating cost-effective electronic transactions into the company's core business
3. Providing information about the company's best customers in order to provide personalized service to these customers

Ranked as the top product promoted over the Internet, travel organizations account for the major part of the Internet transactions (Moran, 2004). Online statistics illustrate that Internet usage is growing and travelers are ignoring brick-and-mortar travel agencies in order to make their travel arrangements online (Price & Starkov, 2003). At the start of the Internet age, travel organizations and travelers were skeptical about the new technology (Law & Leung, 2000). Once the importance of this new technology was realized, many hotels, travel agencies and airlines invested tremendous amounts of resources in creating their own presence in this evolving electronic commerce

environment. Continued advancement in technology has accelerated Internet use as a major information source and marketplace for the tourism industry.

Travel organizations adopted the Internet as a new environment in order to increase their profits. Many created their own websites in order to bypass electronic travel intermediaries (Carroll & Siguaw, 2003). The Internet is utilized to increase profits in two ways (Kasavana et al., 1997):

1. Provide information
2. Promotional tool

Many studies explain how the Internet is used as a means of travel information dissemination (Decrop & Snelders, 2004; Gursoy & Umbreit, 2004; Huang, 2003; Kuo, Chu, Hsu & Hsieh, 2003; Susskind, Bonn, & Dev, 2004; Weber & Roehl, 1999).

The low cost of information dissemination ranks as one of the main reasons why travel organizations adopted the Internet so quickly (Carroll & Siguaw, 2003). Travel organizations can provide large amounts of information round the clock at a much lower cost than printed media (Price & Starkov, 2003). Online communities and interactive features of websites affect the overall effectiveness of travel marketing efforts (Wang, Yu, & Fesenmaier, 2004; Murphy, Olaru, Schegg, & Frey, 2003).

Once the Internet proved to be an effective means of advertising, marketing, and distributing travel products and services (Hoffman & Novak, 1996) research focused on website optimization by addressing (Kim, Lee, & Hiemstra, 2004; Hoffman & Novak, 1996):

1. How to attract consumers

2. Build customer loyalty
3. Generate repeat visitation/purchase

E-mail remains an effective tool for marketing communications by offering a more personalized interaction with consumers generating additional business by repositioning destinations in the minds of Internet savvy travelers (Murphy et al. 2003; Travel Industry Association of America, 2004). Thus, the Internet is a major travel information source and communication medium for travelers (Connolly, Olsen, & Moore, 1998). Utilization of the Internet provides organizations with the ability to transform intangible information about products and services into digitized tangible and vivid pictures (Wilson & Abel, 2002). Features embedded in the rich content of travel websites that help make products and services more tangible include room virtual tours and a plethora of photos of destinations. Although McLemore & Mitchell (2000) argue that the main use for travel websites is to gain information about a destination, travelers state that one of the most important changes brought about by the Internet is their ability to control the whole purchase process from information search through decision making and purchase (Yesawich, Pepperdine, Brown, & Russell, 2003). However, many travelers still only look for travel information online and then purchase offline (Moran, 2004).

New Platforms for Growth

Websites are no longer just static pages to be viewed in a browser but dynamic platforms upon which users generate their own experience. Thus, enters Web 2.0. Multimedia plays a role on the Web which will guarantee significant growth as

individuals and organizations increasingly generate digital content. As rich media and Web 2.0 converge, new requirements arise which need new solutions in order to share multimedia content generated by both DMO and tourists.

Web 2.0 created cultural changes in the tourism sector as DMOs adapt to a different consumer profile with internet users increasing familiarity of informal, transparent and collaborative forms of communication (Sigala, 2007). Examples of the use of Web 2.0 include wikis, social networking sites, blogging and podcasting (Lee & Gretzel, 2006). However, even in times of Web 2.0 websites generally are asynchronous and to a large extent are descriptive rather than experiential.

Virtual Reality in Tourism

As VR technology continues to evolve, there is little reason to doubt that it will become more prevalent throughout society, in general, and the tourism sector in particular. VR has led to the development of virtual online worlds. A virtual or online world is defined as a place where people come to interact, play and socialize simultaneously (Lastowka & Hunter, 2003). SL is a virtual online world designed to come as close as possible to face-to-face interactions as VRs should facilitate user-to-user interaction which is essential for participants (Moore, Duceneaut &Nickell, 2006). In these worlds residents build communities. Many enterprises have integrated virtual communities into their online strategies in search for the benefits of increased sales (Brown, Tilton & Woodside, 2002), effective market segmentation (Armestrong and Hagel, 1995), positive word of mouth (Bickert & Schindler, 2001), and increased website

traffic (Bughin & Hagel, 2000). There is potential in virtual communities for marketing within the tourism industry by more easily established VR (Stangl & Weismayer, 2008).

VR can be used to market a destination. Researchers have acknowledged VR's possible contributions to tourism marketing (e.g. Cheong, 1995; Prideaux, 2002; Sussmann & Vanhegan, 2000), and Williams and Hobson (1995) said, ''From a marketing perspective, VR has the potential to revolutionize the promotion and selling of tourism'' (p. 425). VR's tourism has marketing potential because it provides extensive sensory information to prospective tourists. This is especially suitable in tourism because many tourism products are experience goods that consumers are unable to test in advance and must decide whether or not to purchase based simply on available descriptive information (Gratzer, Werthner, & Winiwarter, 2004; Liu, 2005).

Internet marketing has established its importance in the tourism sector (Buhalis & Law, 2008; Doolin, Burgess, & Cooper, 2002; Gratzer et al., 2004), and the experiential nature of VR makes it an optimal tool for providing rich data to potential tourists seeking destination information. Cheong foresaw (1995), ''A person interested in exploring an island destination would be able to enter virtual island destinations such as Hawaii, the Virgin Islands, the Seychelles, the Maldives, Jamaica, and others'' (p. 419). By using VR a tourist could make more informed decisions as well as having more realistic expectations, which could then lead to a more satisfactory vacation (Cheong, 1995; Hobson &Williams, 1995).

Some tourism products are already making use of VR or VR-type technologies to attract tourists. For example, the Internet has many hotels (e.g. www.showhotel.com) and

destinations (e.g. www.virtualgettysburg.com) offering virtual tours (Cho, Wang, & Fesenmaier, 2002; Gilbert & Powell-Perry, 2002; Wan, Tsaur, Chiu, & Chiou, 2007). These virtual tours may simply be panoramic photographs that do not permit any free navigation, meaning they are not genuine VR, but they demonstrate an interest in VR-type technologies. Other researchers advocate the incorporation of interactive features into tourism websites (e.g. Cho et al., 2002; Doolin et al., 2002; Fotakis & Economides, 2008). Evidence from various studies that support these recommendations include Wan et al. (2007) which found that virtual experiences provided more effective advertising than brochures for both theme parks and natural parks. Lee and Oh (2007) found that a virtual tour of panoramic photos on a hotel website offers psychological relief to individuals feeling travel anxiety. Furthermore, sites featured in movies experience increased tourism (Riley & Van Doren, 1992; Tooke & Baker, 1996), and visiting a museum's website can increase interest in visiting the real museum (Thomas & Carey, 2005). Thus, previous research provides ample indirect evidence that visiting tourism destinations in VR may encourage real visitation.

Furthermore, VR additionally offers a unique platform for the communication of information between tourists. Buhalis and Law (2008) said, online travel communities, in which tourists exchange information through forums, chat services, or other tools, ''are gradually becoming incredibly influential in tourism as consumers increasingly trust better their peers, rather than marketing messages'' (p.612). Therefore, tourism providers benefit from establishing awareness within such communities while analyzing and

responding to the opinions of their products voiced within the communities (Buhalis & Law, 2008).

Even though currently most online travel communities do not seem to use VR, the increasing popularity of virtual worlds like SL (Bates, Istance, & Vickers, 2008) quite possibly foreshadows the adoption of such technologies by online travel communities. Such virtual worlds may become an important element in tourism marketing. For example, one VR travel community named 'Itchy Feet' (http://www.itchy-feet.org) is being developed as a SL-type virtual world providing tourists a means to seek out travel information, communicate with other tourists, and make travel purchases (Berger, Dittenbach, Merkl, Bogdanovych, Simoff, S., & Sierra, 2007; Ga¨rtner, Seidel, & Berger, 2008; Seidel & Berger, 2007).

Chapter Summary

This chapter reviewed the literature regarding the impact of the tourism industry. There is a review of tourism advertising and then the influence of the internet and technology on tourism and destination marketing. Next was reviewed the importance of older adults as a marketing segment. This was followed by the introduction of the virtual world of Second Life tying in virtual tourism. The theoretical framework that sensitized this study was conceptualized. Finally, the literature review focuses on the concepts of 1) the internet as a force of innovation; 2) new platforms for growth; and 3) virtual reality in tourism. Addressing these concepts helps in identifying the guiding principles for the use of virtual world technology such as Second Life for travel and tourism marketing.

CHAPTER THREE

RESEARCH METHODOLOGY

Introduction

Currently, the tourism industry does not have an in-depth understanding of the usefulness of on-line virtual worlds such as Second Life, and how this technology might affect the industry. This study employed a qualitative case study approach to explore this problem. Reasons for using a qualitative research methodology include the type of research problem, developing holistic understanding, and the research questions (Strauss & Corbin, 1998).

The nature of this research problem required digging deep into the experiences of older adults being exposed to online virtual world technology for the first time and exploring the process by which this technology acceptance takes place. This required longer, more detailed and variable content of qualitative data which permit an understanding of the world, from the unique terms of the participants (Atkinson & Hammersley, 1998; Denzin & Lincoln, 1998; Hammersley & Atkinson, 1995; Huberman & Miles, 2002; Lincoln & Guba, 1985; Merriam, 2002; Patton, 2002).

Qualitative research is grounded in alternative methods focused on "verisimilitude, emotionality, personal responsibility, and ethic of caring, political praxis, multi-voiced texts, and dialogues with subjects" (Denzin & Lincoln, 1994, p.5). Through detailed descriptions, qualitative research seeks to capture the complexities and subtleties

of both the individual human experience and the life of a group or organization (Lawrence-Lightfoot & Davis, 1997). A key element in qualitative case studies is the use of multiple data sources, incorporated to address a common theme by demonstrating connections between various types of evidence.

A case study lends itself to the research when the primary goal of the researcher is to focus on questions about how and why participants act in the ways they do particularly when the researcher is studying contemporary events (Yin, 2003). The case study approach constitutes a specific way of collecting, organizing, and analyzing data; in that sense it represents an analysis process (Patton, 2002). The purpose is to gather comprehensive, systematic, and in-depth information about the case of interest. The analysis process results in a product: a case study. Thus, the term case study can refer to either the process of analysis or the product of analysis, or both.

This study utilized a case-study specific way of collecting, organizing, and analyzing data and presented a socio-cultural interpretation of the data, resulting in a specific product of analysis. This was an instrumental collective case study in the sense that it focused on the adoption of an online virtual world technology by one specific group of individuals, older adults, in one particular context, virtual tourist in Second Life. The group of older adults represented the whole case made up of data collected for each person, representing an individual case; it was within-site and focused on an issue because the study examined the adoption of new technology within the social context of Second Life. Each participant was treated as a clearly bound system and compared across all cases (participants) in the study. The data analysis in this study was rich and holistic

in nature but bounded by the context of the virtual travel experience. The case study methodology allows the researcher to set boundaries of time, events, processes, people studied, and context (Glesne & Peshkin, 1992; Glesne, 1999; Stake, 1994, 1995).

Empirical research about online virtual world use in general is in its infancy, and thus an exploratory study was appropriate. Specifically studying older adults and the online virtual world of Second Life needed to be examined in depth in order to gain a better understanding of processes and its effects on individuals who participate in the online virtual world of Second Life. The researcher attempted to understand situations and experiences in their context. However, qualitative research does not answer what may happen in the future or make predictions; rather, it establishes motivations for behavior. Thus, it is inductive; the findings from the data are usually themes, categories, typologies, or tentative hypotheses. The researcher is the instrument for data collection and analysis.

In order the examine the impact of technology on tourism, the researcher wanted to understand the lived experiences of participants in the online virtual world of Second Life particularly older adults. The case study approach provided a framework useful for a classroom setting, with the researcher as a participant and guide in the classroom; the goal being collecting as much information as feasible from participants in the class. By using this strategy, the researcher was immersed and focused on reflections motivated by the interactive processes between the participant and researcher (Denzin & Lincoln, 2000). Thus, this study utilized a qualitative methods mixed data tools approach in an effort to provide increased understanding of the relationship between the constructs and

to provide in-depth analysis of older adults' culture within the virtual world of Second Life as it relates to the virtual travel experience. The following details the methodology utilized in the study.

Pragmatism as an underlying paradigm provides a means for negotiating mixed data and the perceived incompatibility between the assumptions of positivism and interpretivism (Howe, 1988). Pragmatism, a paradigm utilized by researchers (see Hanson, Creswell, Clark, Petska, & Creswell, 2005), revolves around the perception that metaphysical truths are nonexistent. Truth ultimately remains a practical or pragmatic consideration in employing what is effective. Noted researchers supported pragmatism and a mixed data approach to social science research (Creswell, 1994, 2003; House, 1994; Reichardt & Rallis, 1994; Tashakkori & Teddlie, 1998). The overall design mirrors the research process of working back and forth between inductive and deductive models of thinking.

Therefore, scale data collection techniques were added to the qualitative approaches. The advantages of using scale data is that it measures the perception attitudes, preferences, norms, satisfaction, experiences, characteristics, and motivations of the participants, limiting the responses to a set of questions facilitating comparison of the individual over a period of time. There are multiple perspectives obtainable from a number of data collection methods in order to facilitate the discovery of the new and unexpected. (Henderson, 1991, p. 25). Thus, leading to the desire for epistemologically 'open' research into this social experience, this study will integrate multiple tools into the

study design in an attempt to provide increased understanding of the constructs being investigated.

Study Site

A location that could provide necessary resources such as a dedicated computer laboratory and technical staff available to setup the Second Life client software which could be conveniently accessed by older adults was selected. The Clemson University satellite location at the Greenville University Center (GUC) in Greenville, SC met all the minimum requirements for the classroom needs. A dedicated computer learning lab was used for all weekly research work. Each participant had use of an individual personal computer and headsets that allowed audio but not the use of microphones.

From possible online virtual world environments, Second Life (SL) was selected for the following reasons: 1) system included the most advanced technological platform offering the richest resources for analysis in multiuser, 3D virtual environments; 2) SL had the largest user-base, and therefore provided the most potential for interaction, and; 3) virtual environment had the largest usage in a variety of applied settings, enabling insights into the role of nonverbal cues in a wide range of purposes.

Within the wide landscape of the SL environment, all activities were conducted in publicly available SL areas, that is, in those areas accessible to all SL users. From the set of publicly available SL areas, individual locations were selected in a semi-structured manner. The selection of SL areas was semi-structured because this research was not aimed at analyzing a specific site, but at examining a specific type of online behavior. A

semi-structured selection of settings yielded a wide range of tourism experiences from historical sites such as Chichen Itza, Mexico to countries such as Japan and Egypt, as well as beaches, art galleries, Victorian villages, religious sites, and more.

The participants invited to participate consisted of older adults ranging in age from 51 to 79 years of age with minimum computer experience and no knowledge or experience with online virtual technology known as Second Life. This age group was selected due to their available time for travel, and discretionary income making them the one of the most lucrative market segments to the tourism industry. Specifically our questions focused on ease of using this new technology for travel experiences, and potential outcomes related to tourism from the travel experience. Participants were recruited from members of an organization known as Senior Action (SA). SA is located in upstate South Carolina and is dedicated to strengthening Greenville County's maturing population and their families by providing access to resources they need for physical, emotional and social well-being. The researcher visited two different SA center locations on two different days and greeted people entering the SA facility with an opportunity to read a description of a computer class for which they were allowed to sign up provided and they met the required research parameters. The description for the computer class was as follows:

> Haven't you ever wanted to fly, hover or teleport? Would you be happy to be able to just walk or run no matter what you physically felt like if it meant hanging out with family and friends? How would you like to visit Paris without even having to pack your bags? What if there were no tickets required, no money spent and no

need to leave your seat. This is your golden opportunity to tour the world through the use of the latest technology that your children and grandchildren may already be using. Come with us this fall and make your escape. Tourists through their online embodiments can lounge at the beach, dine at a romantic restaurant, or go out dancing at a crowded nightclub.

Data Collection

Data was collected in several forms. The researcher used five methods to gather the data. Field data were collected during the period of October, November and December, 2009. This study placed a strong focus on understanding the nature of the processes of Second Life adoption rather than testing hypotheses. Theory sensitized the data collection. This research involved a small set of bounded cases or participants which were explored in great detail.

Participants were given the opportunity to take a computer course on using Second Life. Participation was strictly voluntary and upon signing a release agreement it was explained that the participant had the option of discontinuing the research project at any time. The researcher participated and led the course as a participant observer in the role of facilitator not as an instructor. The researcher provided resources, direction and assignments to the sample participants as she guided them through an introduction to Second Life.

The class met once a week for one and a half hours at the GUC over a four week period. A dedicated computer learning lab was used for all weekly research work. Each

participant had use of an individual personal computer and headsets throughout the research project that allowed audio but not the use of microphones. Therefore, all communications in the virtual world of Second Life had to be typed via the keyboard. This provided multiple periods of data collection. The model in Figure 3.1 clearly demonstrates process and flow of the research methodology.

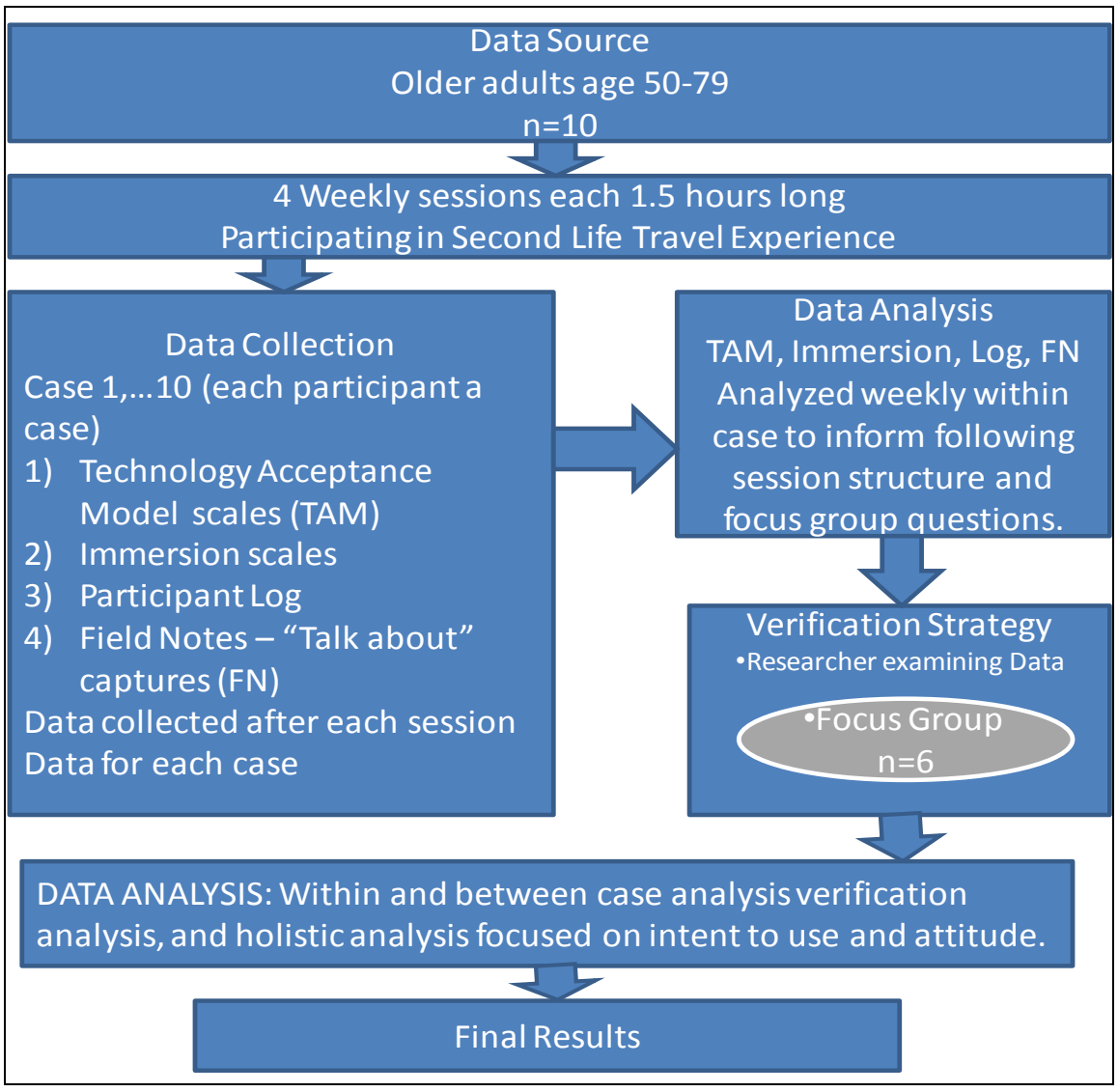

Figure 3.1: Research Methodology

The model shows clearly the steps followed for this study. During each of the four classes data was collected specifically using the following four tools of collection that were analyzed weekly, and this led to the design of a focus group at the end of the classes. This was then incorporated as a verification strategy for the previous data, and re-analyzed within and between case for a holistic interpretation. All steps are described in detail below.

TAM/Immersion

A theoretical framework provides the philosophical stance behind a methodology. Thus, the conceptually modified TAM as seen in Figure 3.2 supplies assumptions that guided the research methodology. The modified TAM framework with the addition of Immersion provided a context for the process involved and a basis for its logic and its criteria.

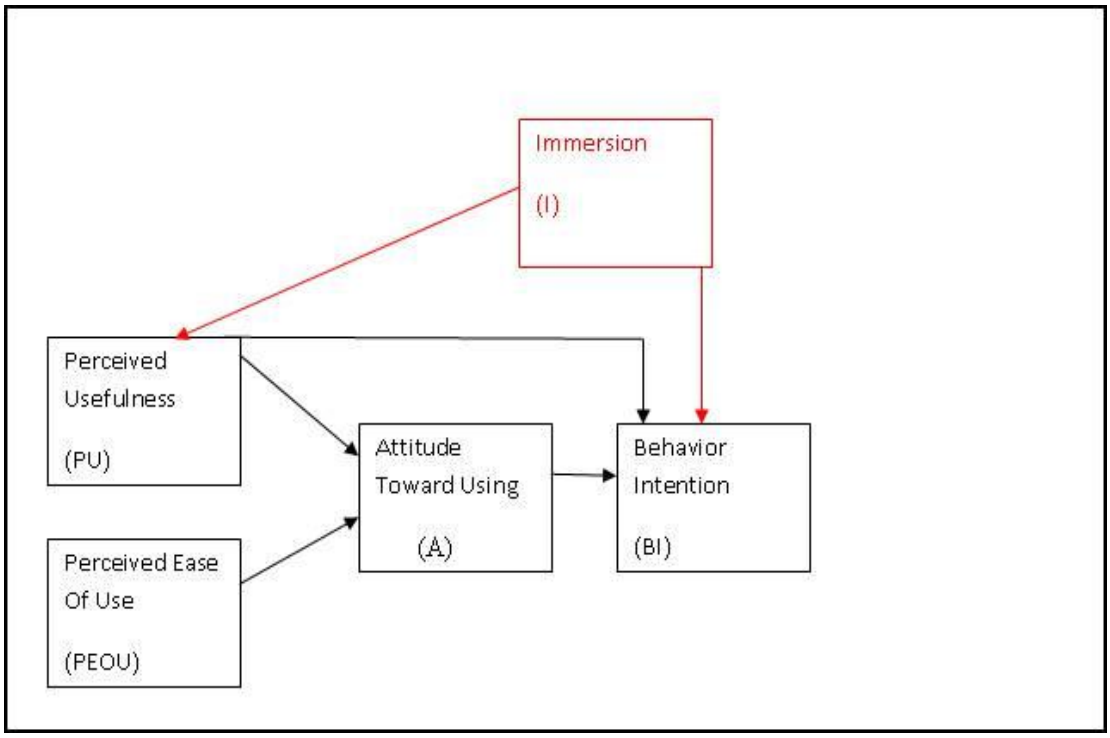

Figure 3.2: Conceptual Framework - Adapted Technology Acceptance Model

This project utilized existing previously validated Technology Acceptance Model (TAM) and Immersion scales. The scale data was be used to graph the progress of each participant as a single case and at the end of the study the group as a whole. These graphs can be used to provide a trajectory of what can be expected both individually and group wise. Administering these scales at the end of each class period will give insight into the affect of skill development over time and intention to use SL. Thus, standardized scales for TAM and Immersion were used. The use of standardized scales helps to support the goal of being an instrumental case study that may have useful information for other similar populations.

TAM uses multiple-item scales to operationalize the constructs in order to measure these constructs more reliably than would be possible with single-item scales.

Previous research has found the Cronbach Alpha reliability of TAM scales to excee .9 (Davis, 1993; Davis & Venkatesh, 1996). In addition, TAM scales exhibit a high degree of discriminate, convergent and nomological validity (Davis & Venkatesh, 1996). The importance of these psychometric properties has led to confidence in TAM for studying IT adoption (Davis, 1993; Davis & Venkatesh, 1996). Scholarly research on IT acceptance and usage suggests that TAM has emerged as one of the most influential models in this stream of research (Davis, 1989; Zakour, 2004). The sum of these studies has confirmed the validity and reliability of Davis' instrument, and to support its use with different populations of users and different software choices (Gahtani, 2001; Straub, Keil, & Brenner, 1997).

As noted above, TAM is measured using the following four scales; PEOU, PU, A, BI. Each scale was used for this study and all four are presented on the following pages.

PEOU Scale

"Perceived Ease of Use" is a 6 item 7 point Likert scale 1=Strongly Disagree, 3=Disagree, 5=Agree and 7=Strongly agree

1. Learning to operate SECOND LIFE is easy for me.
2. I find SECOND LIFE to be flexible to interact with
3. I find it easy to get SECOND LIFE to do what I want to do
4. It is easy for me to become skillful at using SECOND LIFE.
5. I find SECOND LIFE easy to use.
6. My interaction with SECOND LIFE is clear and understandable.

PU Scale

"Perceived Usefulness" is a 6 item 7 point Likert scale 1=Very Unlikely, 3=Unlikely, 5=Likely and 7=Very Likely

1. Using SECOND LIFE would improve my life
2. Using SECOND LIFE would enable me to accomplish more quickly.
3. I would find SECOND LIFE useful for my needs.
4. Using SECOND LIFE would increase my productivity
5. Using SECOND LIFE would enhance my effectiveness.
6. Using SECOND LIFE would make it easier to experience travel.

A Scale

"Attitude Toward Using" is a four item 7 point semantic differential scale 7= extremely, 6=quite, 5=slightly, 4=neither, with two items reverse coded.

1. Good Bad
2. Harmful Beneficial
3. Wise Foolish
4. Negative Positive

BI Scale

"Behavioral Intentions" is a 4 item 7 point Likert scale 1=Strongly Disagree, 3=Disagree, 5=Agree and 7=Strongly agree

1. I intend to use Second Life for communicating with others.
2. I intend to use Second Life frequently.
3. I intend to use Second Life to learn about tourism information.
4. I intend use Second Life to plan vacations.

Immersion is the state of consciousness where the participant's awareness of physical self is reduced or lost by the act of being surrounded in an engrossing total environment such as Second Life (Figure 3.2). This mental state can be accompanied by spatial excess, intense focus, a distorted sense of time, and effortless action. The term is widely used to describe immersive virtual reality carrying the connotation of being particularly engrossing. The sensation of immersion in virtual worlds can be so described as loosing critical distance to the experience and getting emotionally involved. It could be not only a game you are a part of while you feel as if it is very real but know it is not.

Brown and Carins (2004) found that immersion is indeed used to describe the degree of involvement. Three distinct levels of immersion were identified 1) engagement, 2) engrossment, and 3) total immersion. The following pages present all questions used in measuring and monitoring the process of immersion.

"Immersion" is a 23 item 7 point Likert type scale 7=Very well, Very natural, Very much, Very compelling, Very able, Very involved, No delays, Very Quickly, Very proficient 4=Moderately well, Moderately natural, Some, Moderately compelling, moderately able, Moderately involved, Moderate delays, moderately fast, moderately proficient 1=Not well, Not natural at all, Not at all, Not compelling, Not able, Not involved, Many delays, Not quickly at all, Not at all proficient.

"Immersion 1-12".

1. This question refers to how much were you able to control events. How responsive do you think was the environment to actions that you initiated (or performed)?
2. How natural did your interactions with the environment seem?
3. How much did the visual aspects of the environment involve you?
4. How much did the auditory aspects of the environment involve you?
5. How natural was the mechanism which controlled movement through the environment?
6. How compelling was your sense of objects moving through space?
7. How much did your experiences in the virtual environment seem consistent with your real world experiences?
8. Were you able to anticipate what would happen next in response to the actions that you performed?
9. How completely were you able to actively survey or search the environment using vision?
10. How well could you identify sounds?
11. How well could you localize sounds?
12. How well could you actively survey or search the virtual environment using touch?

"Immersion 13-23".

13. How compelling was your sense of moving around inside the virtual environment?
14. How closely were you able to examine objects?
15. How well could you examine objects from multiple viewpoints?
16. How well could you move or manipulate objects in the virtual environment?
17. How involved were you in the virtual environment experience?
18. How much delay did you experience between your actions and expected outcomes?
19. How quickly did you adjust to the virtual environment experience?
20. How proficient in moving and interacting with the virtual environment did you feel at the end of the experience?
21. How much did the visual display quality interfere or distract you from performing assigned tasks or required activities?
22. How much did the control devices interfere with the performance of assigned tasks or with other activities?
23. How well could you concentrate on the assigned tasks or required activities rather than on the mechanisms used to perform those tasks or activities?

Face validity can be judged after a measure has been developed prior to application in another study, by potential measurement users. High face validity of an instrument enhances its use in practical situations by inducing cooperation among respondents via ease of use, proper reading level, clarity, and appropriate response formats. Therefore, the TAM scales and the Immersion scales instruments found in appendix A described as Form A and Form B were administered to 10 healthy older adults not a part of this study to determine if they were readable and understandable. The only problem that arose was questions for clarity on Form A under the section "Attitude Toward Using". The instrument was modified to include an example and a plan for the first day the form is administered to provide additional instruction on filling in that part of the form.

Chronbach's alpha is a measure of internal consistency, assessing whether all items with an instrument measure the same thing (George & Mallery, 2003). The closer the alpha is to 1.00, the greater the internal consistency of the items in the instrument. Table 3.1 provides a detailed look at the variables and associated reliability taken from data collected each week over a four week period. As the table depicts, all of the multi-item scale measures achieved a 0.70 or higher Chronbach Coefficient Alpha. The Chronbach alpha measures produced by the current instrument indicate that the instrument constructs had sufficient reliability. More specifically, the measures point to an acceptable level of internal consistency of the multiple items scales.

Scale	Chronbach's Alpha
Perceived Ease of Use	0.96
Perceived usefulness	0.92
Attitude Toward Using	0.70
Behavioral Intention	0.82
Immersion	0.92

Table 3.1: Scale Statistics

At the end of each weekly session the TAM and Immersion scales were administered. Data was keyed into data files using a computerized statistical software program SPSS for each participant on a weekly basis. The TAM and immersion scales to track any process changes within case (see Appendix A). TAM and Immersion data was analyzed weekly within case to inform following session structure and generation of semi-structured questions used by participants to complete weekly log entries.

Scale data assisted in providing insight into skill development and its affect on adoption of SL. However, additional data is needed to fully develop knowledge about the processes and how it will ultimately impact travel and tourism. Therefore, Participant logs and field notes were utilized.

Participant Logs

Semi-structured questions were developed using the data gathered each week from the TAM and Immersion scales in order to drill down for in-depth rich data. At the end of each weekly session the participants were asked to write by hand about perceptions and feelings related to the course. Semi-structured questions guided the writing in the weekly logs. This provided multiple periods of exposure to Second Life travel destinations followed by personal log entries by the participants guided by semi structured questions purposively designed (see Appendix C). Participant log entries were keyed into computerized word processing software by researcher. Data analysis of participant logs was analyzed weekly within case to inform following session structure.

Field Notes

Qualitative research occurs in a natural setting which facilitates the researcher becoming highly involved with the study site and the subjects as well as their authentic experiences. The data collection methods included field notes by the researcher which is a part of the research and cannot be separated out from the research.

Researchers should consider two main issues during observation exercises (Patton 2002). First, the extent of the researchers participation must be evaluated, where it ranges on a spectrum from full participation to an on-looking observer. Second, the researcher should consider whether the observation taking place is overt or covert observation. In overt observations, the participants know that they are being observed. With covert

observations, the participants would not be aware that they were being observed. In this study the researcher was a direct participant observer. The researcher's main concern was to observe the activities and interactions between the participants and the virtual world of Second Life. This observation was overt. The participants in the study were fully informed about the researcher's role and the purpose of the research.

The researcher at the end of each weekly session developed field notes to document observations, and data from personal interviews as well as data generated from "talk about" methods used with random participants. All field notes were typed into computerized word processing software.

According to Guba and Lincoln (1985) interviews are the backbone of evaluative research. They allow the researcher to grasp the larger context of the phenomenon under investigation and help to determine key concerns of the respondents. In this study the researcher sought critical and information-rich respondents (Patton, 2002) who provided data upon which to base the findings. The respondents were chosen to clarify attitudes and intentions. These interviews and the technique of "talk about" filled gaps in information and elaborated on the issues and concerns. Thus, the main body of the interviews and "talk about" was structured to collect data related to behaviors, experience, opinions, values and concerns of the participants.

Field notes were analyzed in conjunction with participant logs to examine the processes of adoption involved with older adults and Second Life as virtual tourists. Scale data assisted in providing insight into skill development and its affect on adoption of SL. However, additional data is needed to fully develop knowledge about the

processes and how it will ultimately impact travel and tourism. Data from TAM, Immersion, Participant Logs, and Field Notes weekly analysis were used to develop focus group questions.

See Appendix B class plans for topics covered and detail on each weekly assignment. Two weeks following the last meeting time the participants met for a focus group discussing the overall experience.

Focus Group

The Focus Group meeting was used as a form of member checking in the process of establishing validity/trustworthiness. The focus group meeting took place at the GUC with 6 participants from the research project. The focus group meeting lasted for a little over 3 hours and was recorded and transcribed into computerized word processing software for later analysis.

Data Analysis

Data analysis for an interpretive study is open-ended and inductive (Lincoln & Guba, 1985). The data cannot be specified at the beginning of the inquiry because the data that will be produced is unknown in advance. The primary goal is to make sense of the data "in ways that will, first, facilitate the continuing unfolding of the inquiry, and second, lead to a maximal understanding" (Lincoln & Guba, 1985, pp. 224-225). Thus, data analysis begins at the first instance of data collection and continues throughout all the phases of the study in order to facilitate the emergent design of the methodology.

Qualitative research is evolving and usually begins with initial codes, expands into broad themes, and comes together in interpretation. The researcher interprets the data by describing the subjects and the setting, analyzing for themes or categories, and drawing conclusions or interpretations about the meaning of the data based on experience and knowledge of researcher as well as meaning expanded by participants. The researcher used inductive, multifaceted, iterative, and simultaneous reasoning.

In order to achieve the best results during the analysis process the researcher used manual methods. The researcher used outside researchers to help with coding and theme development. Data from transcripts of the observation field notes and personal log entries and focus group were analyzed using open coding, followed by formation of categories resulting in the emergence of central themes. The researcher used the coding process to organize and analyze the data. It provided a way to identify first categories, then later themes and the relationships that would eventually assist in building a clear picture and cohesive understanding of the problem under investigation.

The analysis of data gained from surveys, interviews, field notes, focus group meeting and other supporting materials utilized a cyclical nature. While the components of the intended analysis may appear to be sequential, they actually proceeded through repeated iterations as the data gathering progressed. Furthermore, data were collected at different levels of detail throughout the research as the researcher reviewed the field notes regularly.

Data analysis consisted on analyzing the mixed data tools within and between case analysis, verification analysis, and holistic analysis focused on intent to use and

attitude toward Second Life destinations as virtual tourists. The researcher employed a variety of appropriate computer software, including Microsoft Office, applications, including word processing, spreadsheet and analysis programs. Software was used to manage and store information, and to assist with transcription.

A graph was created for each participant detailing progress over the study period and for the entire group of participants for "Perceived Ease of Use", "Perceived Usefulness", "Attitude Toward Using", "Behavioral Intention" and "Immersion". Data were organized around the "cases of interest", forming a picture of each individual case as a bounded system. These cases of interest were analyzed, both independently of one another, and then across cases, to draw out patterns, similarities, and differences.

Data collection and interpretation was undertaken from a subjective stance requiring the adoption of procedures to continuously assess the interpretations and findings of the study. Such procedures do not justify the rigor of the finds but builds trustworthiness, authenticity, and ethics (Guba & Lincoln, 2002). Credibility, transferability and reflexivity allow the production of findings that are plausible, context relevant and stable. Credibility is one of the most important criteria for establishing trustworthiness. Credibility depends on the compatibility of the different constructed realities provide by the participants in the context of the study. Therefore, the researcher's objective was to gain a comprehensive interpretation of these realities.

Furthermore, an important aspect for building credibility is communicating the various constructions of reality back to the participants in a form that will be affirmed by the participants. This was accomplished during the focus group meeting. Reviewing the

data weekly and a portion of the researcher's field notes provided a means of supporting transferability as well as credibility and dependability of the study. The researcher's field notes provided records of her insights, thought, concerns, logistics and emerging methodological decisions. Reflexivity allowed the researcher to demonstrate how her own traditions, history and understanding of the research influenced the conduct of the study and the derived interpretations and meaning of the findings. This means that the study findings cannot be seen as facts as such, but are constructed through the continuous interactions between researcher, the study participants, the collected data and the reader of this study.

A level of intrusion occurs when a researcher utilizes interview and observation participation techniques for data collection. Consideration was therefore given to ethical matters to insure that participation was voluntary. The Study participants were not obligated to continue participation in the study and no compensation was offered to the participants. They were given the freedom to withdraw from the study at any time. Consideration was given to maintaining confidentiality of the data. The study participants were promised that the recorded data and their transcripts would be kept in a secure place accessible only to me and that all quotes would be referenced by pseudonyms in order to maintain anonymity.

Researcher's role, an instrument of the research (reflexivity)

Multiple qualities come together to create a researcher who can serve as an instrument in a participant observation inquiry. These qualities go beyond the ability to

just observe. To begin with, the researcher opened herself to not only watching but to "surrendering" (Wacquant 2004, p. 11) to the culture or situation in order to become a trusted member of the group while at the same time remaining able to examine the situation from the outside. This dichotomy refers to as being an insider/outsider, sometimes fully consumed in the activity and at other times more engaged in watching from the outside and always being aware of both roles. The ability for introspection is another important quality of a researcher serving as an instrument of this research. This relates to the insider/outsider quality requiring the researcher to be able to step back, think and write about the feelings and experiences that occur. Life experience is never really left out of any research, but it is particularly important in participant observation for the researcher to be aware of what the researcher brings to the situation. Naturally there are preconceptions, but these preconceptions can also be seen as strengths. The researcher possesses many of the characteristics enabling her to be an effective instrument in research of this type. For example, many years in the field of systems analysis prepared her well to investigate deeply from multiple perspectives and she had already polished the art of introspection and journaling in other parts of her personal life, and thus brought these natural skills into practice in the course of the research as well.

Further, in the course of considering and preparing this research the researcher spent many hours with other researchers embarking on the use of SL technology in research. Many hours were spent in preparatory training to gain extensive knowledge of the technologies capabilities and limitations. Finally, the researcher spent extensive hours as a SL resident to learn the culture from an insider's point of view before witnessing the

research group coming into this new world environment as outsiders commonly called newbies. Thus, having walked the walk and talked the talk the researcher was prepared to recognize where there might be struggles and was able to objectively observe multiple cases in the lab environment.

Conclusion

Denzin and Lincoln claim that all "qualitative interpretations are constructed" (1994, p. 15). The role that the researcher played in identifying emerging themes illustrated the approach required in most qualitative research. Therefore, the researcher engaged in reflection and imposed interpretations at each stage in the process of constructing themes.

This exploratory study allowed researcher to examine in depth the experiences of older adults being exposed to online virtual world technology for the first time and sought the in-depth processes by which this technology acceptance takes place. The very nature of this research utilized the longer, more detailed and variable content of qualitative data combined with scales in order to permit an understanding of the world, from the unique terms of the participants which were ten healthy older adults as virtual tourists in the context of a Second Life destination.

Interpretations of data from a purposively selected set of participants have a propensity to be interlinked with procedures and analysis, and consequently provide in-depth and detailed descriptions, thoughts and observations about that group's perceptions, feelings, knowledge, intentions, and meanings. Using a qualitative approach as a result

does not attempt to fit participants' behaviors into a standardized category, but rather results in thick descriptions of individual experiences and meanings. In addition, during the coding and analysis of data, the researcher will not be checking for internal validity, external validity, generalizability and objectivity, rather she will employ techniques such as credibility, transferability, verification strategies, and dependability in interpretations and discussion of the data (Creswell, 1998; Henderson, 1991; Strauss & Corbin, 1998).

Chapter Summary

This chapter focused on the research methodology employed in this study. The researcher introduced the reasons for using qualitative research. The study area and the methodology used to guide the study were explained. Data source and collection methods were established. Data analysis procedures and verification strategies were described.

CHAPTER FOUR

RESULTS AND DISCUSSION

The participant recruitment for this study yielded ten participants. The participants ranged in ages from 51 to 79 years of age with two, from 51-60, six, from 61-70, and two, from 71-79 as seen in table 4.1. There were nine women and one man as seen in table 4.2. All participants participated in a course on SL and travel. The four 1.5 hour classes and one focus group meeting took place between October and December of 2009. The researcher was the leader of each class as planned. Each participant was allowed to select from a stack of fictitious names given to predesigned avatars for use in this study. All references refer to the avatar names so the participants remain anonymous.

51-59	60-69	70-79
Gilda Goldshark	Leslie Fairlady	Faith Foodiboo
Duchess Waffle	Dell Choovio	Valentine Chiwanga
	Hotstuff Doghouse	
	Boof Difference	
	Lapis Bluebird	
	Purdy Carolina	

Table 4.1: Age Grouping of Participants

Male	Female
Boof Difference	Purdy Carolina
	Leslie Fairlady
	Dell Choovio
	Gilda Goldshark
	Faith Foodiboo
	Valentine Chiwanga
	Hotstuff Doghouse
	Duchess Waffle
	Lapis Bluebird

Table 4.2: Gender of Participants

Additionally, the range of participants contained a diversity of:

- Computer skills
- personality
- life experiences
- values

All participants were volunteers and not compensated for their time and efforts. Upon signing release forms before beginning the study it was explained to the participants that they could discontinue the study at any time. All participants completed the study. One participant was unable to attend the week four activities because of a strep infection but after a round of antibiotics she was able to attend the focus group meeting. Four participants had scheduling conflicts during the time of the focus group meeting leaving six participants that attended the focus group meeting.

The results of this study are organized into six sections described below:

- Weekly classes – four 1.5 hours classes
- TAM/Immersion – TAM and Immersion by participant and group
- Participant logs – handwritten responses to weekly semi-structured questions
- Field notes – weekly researcher observations
- Focus group – interpretation of the participants perspectives on adopting virtual world technology of SL two weeks following last class
- Themes – the data resulted in four overall themes

Weekly Classes

Upon entry to the computer lab for this research project prior to starting any of the classes each participant was administered the TAM and Immersion scales (see appendix A - Form A and Form B) to be used as a baseline. Some of the participants found completing these scales strange since the participants knew absolutely nothing about SL at that point.

During the class meeting for week one all the participants participated in an introduction to SL. The participants were provided with a brief lecture on the history of virtual worlds and the evolvement of SL. During the introductions and explanation of what Second Life is and their first exposure to the term avatar the participants came to realize the names the participants had selected were for avatars that would be a digital representation of themselves in SL. There were questions about the cost of SL and could anyone get it. At this point all the participants were allowed to log into SL for their first exposure and proceeded to acquire and practice basic skills for mobility in SL.

All participants started out on the same SL location, "Clemson Learning Island". Their assignment objectives for the first week was to learn how to access SL, recognize their avatar and meet and communicate with each of the other participants' avatars in the study. This included walking, running, flying, and use of keyboard communication as the participants explored the Clemson Island and then later that day the SL orientation island. Once the participants had completed exploring the Clemson learning island they were exposed to the map features of SL and how to teleported to the SL orientation island for full exposure to the SL culture. Overall, the participants spent about 1 hour maneuvering

within the SL technology the first week. Thus, the participants completed the first of four weekly classes with the participants' first exposure to new technology of the virtual online world of SL.

During the class meeting for week two all the participants were given the opportunity to ask questions about what the participants had done the week before in order to support their ability to function freely within SL and remember the avatar names for the other participants in our research group. Even though the participants had been introduced to each other's avatar the week before, some of the participants could not remember who was who but all of the participants remembered their own avatar. This week the participants were introduced to the concept of friendships and how to offer and accept friendships within SL. By making sure that the participants all had offered and accepted friendships from each other they would be able to teleport each other to locations whenever they wanted. The participants were also guided on how to access and use their inventory. Now the participants were ready to proceed to guided tours and the targeted destinations within SL.

The assignment for week two included two planned tourist destination sites, 1) Chichen Itza, Mexico and 2) Egypt. The first destination provided an automated narrated tour on a butterfly that could only be taken by one participant at a time. At the end of the two destination tours the participants were given additional instructions on how to search for more tourism destinations and then participated in a free shopping expedition within SL.

During the class meeting for week three it was time to separate the participants and let the participants tour travel destinations alone and interact with strangers within SL. All of the participants showed up a little earlier than usual this week and wanted begin early due to the fact that this week was the next to the last week for classroom activities and the participants wanted to squeeze in all the SL time the participants could get in as a group. This week's planned activities included working with how to use the search feature to find locations that might interest the participants and how to teleport to those locations. The participants had previously been shown how to communicate through the local chat feature with other avatars. For today the participants were to find any travel destination island that both interested the participants and where there were strangers/avatars that the participants did not know and to have conversations and try to make friendships to the point that they would be able to learn about new cultures and locations. One key point that the researcher stressed was that the participants were not to take or follow anyone else in the classroom. The participants were to stay away from each other and function for themselves and approach strangers. Participants would only receive assistance if a participant had a difficult time finding someone to talk back to them. Some of the travel destinations within SL that the participants chose to visit included Hawaii, Elvis Land, Egypt, Dublin, Japan, Outer Space, Paris, Canada…..and many more. The participants were allowed at their own discretion to change their avatar's clothing or appearance.

By the final class meeting, week four, all the participants appeared confident and comfortable functioning within SL on their own. The participants were given an

assignment to use either the search feature within SL or the newly explained option of using “Hot Spots” to find places of interest to suit their individual taste. The participants were told that by the end of today since this was the last time we would be meeting in the computer lab that the participants would be asked what was their favorite SL travel destination. For this week’s assignment each of the participants had the freedom explore and to decide if they would communicate with any other avatars, known or unknown. While the participants worked on this assignment each participant was interviewed individually outside of the room so they would not be heard by the other participants allowing the individual participant to feel comfortable about what they said as being private. The last travel destination all the participants visited was the “Blarney Stone”, an Irish pub located on the island of Ireland where the participants all had been invited by the owner to congregate as a group before ending our class sessions. Today’s assignment left the participants in the computer lab without the researcher’s presence so the participants were totally on their own dependent on their current abilities or any assistance the participants could get form in world avatars or their peers which were busy working on their assignments.

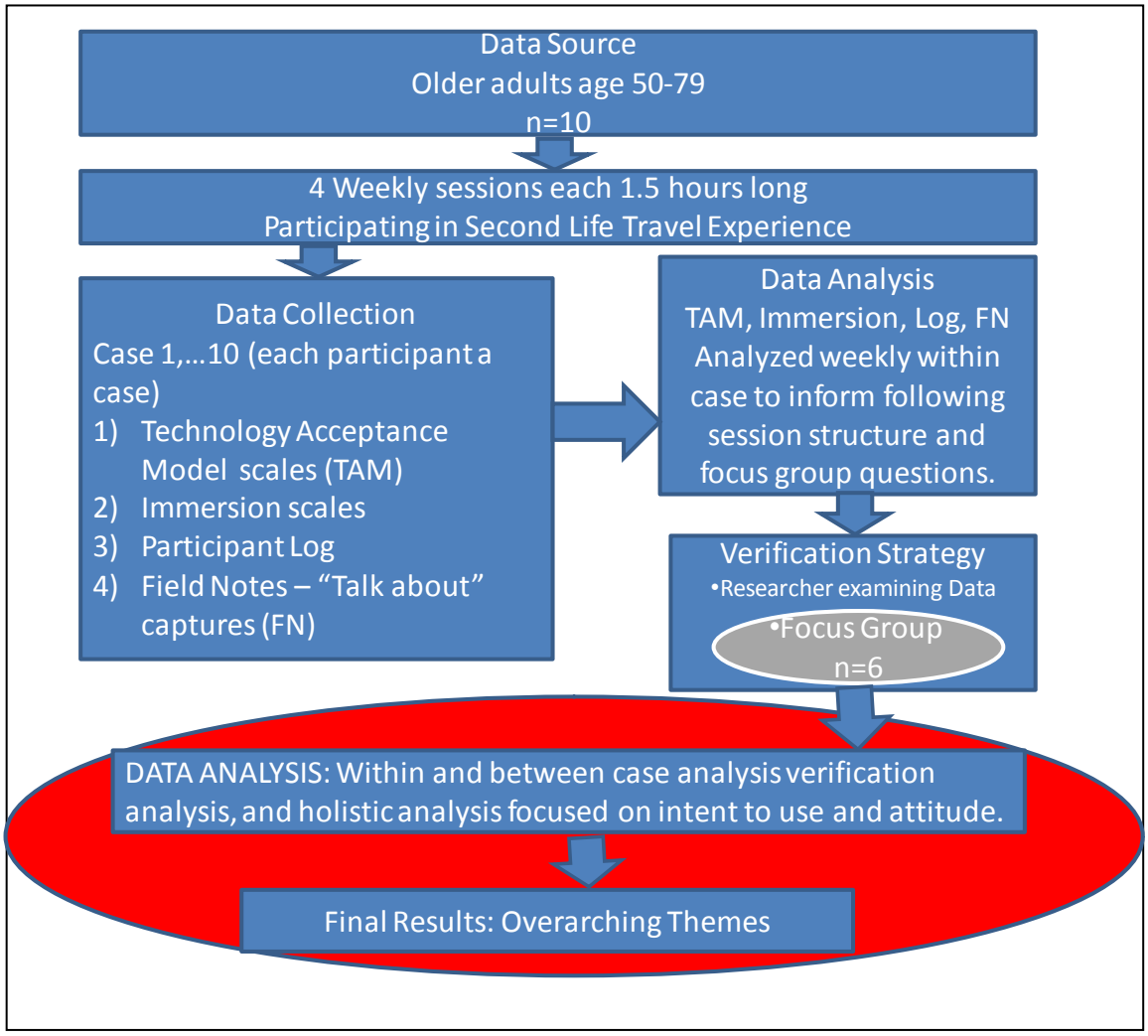

Figure 4.1: Research Methodology – Analysis

Results (Figure 4.1) are presented by incorporating field note information in the TAM, Immersion and Participant Log data.

The following results are presented for with summary of scale data and then in a framework that comes from the four overarching themes defined from analysis of all data sources noted in Figure 4.1. Each theme is stated and supported by corresponding data.

TAM/Immersion Scales Results

The graphs seen in Figure 4.36 show data for the research group as a whole based on group means for each construct. For the group as a whole there appears to be somewhat consistency for attitude and intention. From the baseline to the end of week one there was a positive increase for both attitude and intention. At the end of week two the movement went down for attitude and intention. But for the end of week three attitude continued down while intention moved up. Then at the end of week four attitude went back up and intention moved down.

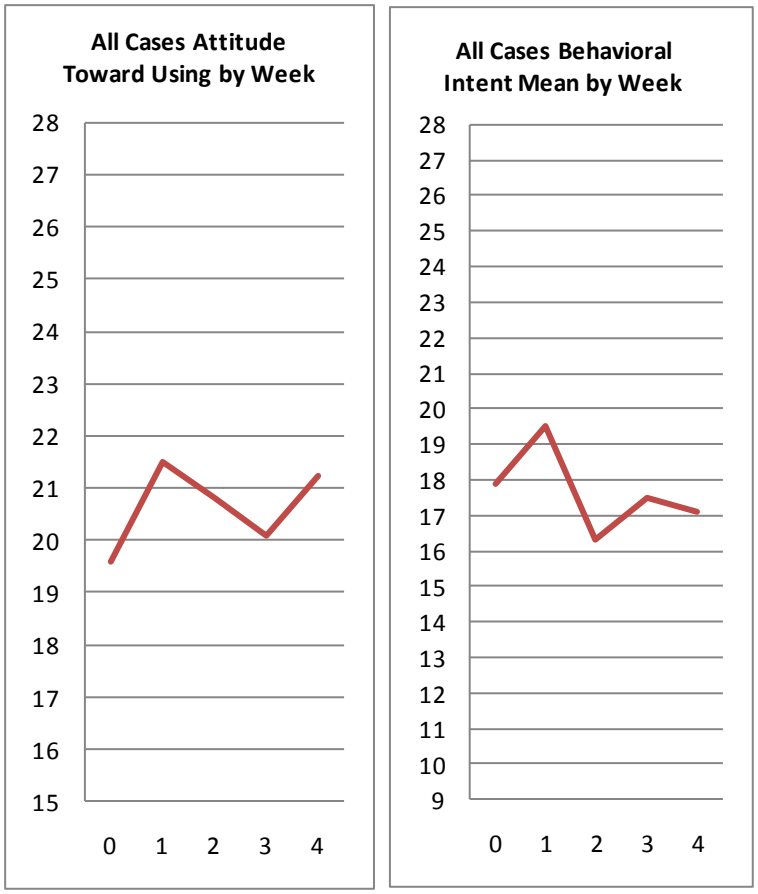

Figure 4.36: Group - Attitude Toward Using and Behavioral Intention Graphs

For the research group as a whole the scaled results for each construct only differed a little. However, immersion appears to be the only construct that for the most part consistently moved up as seen in Figure 4.37.

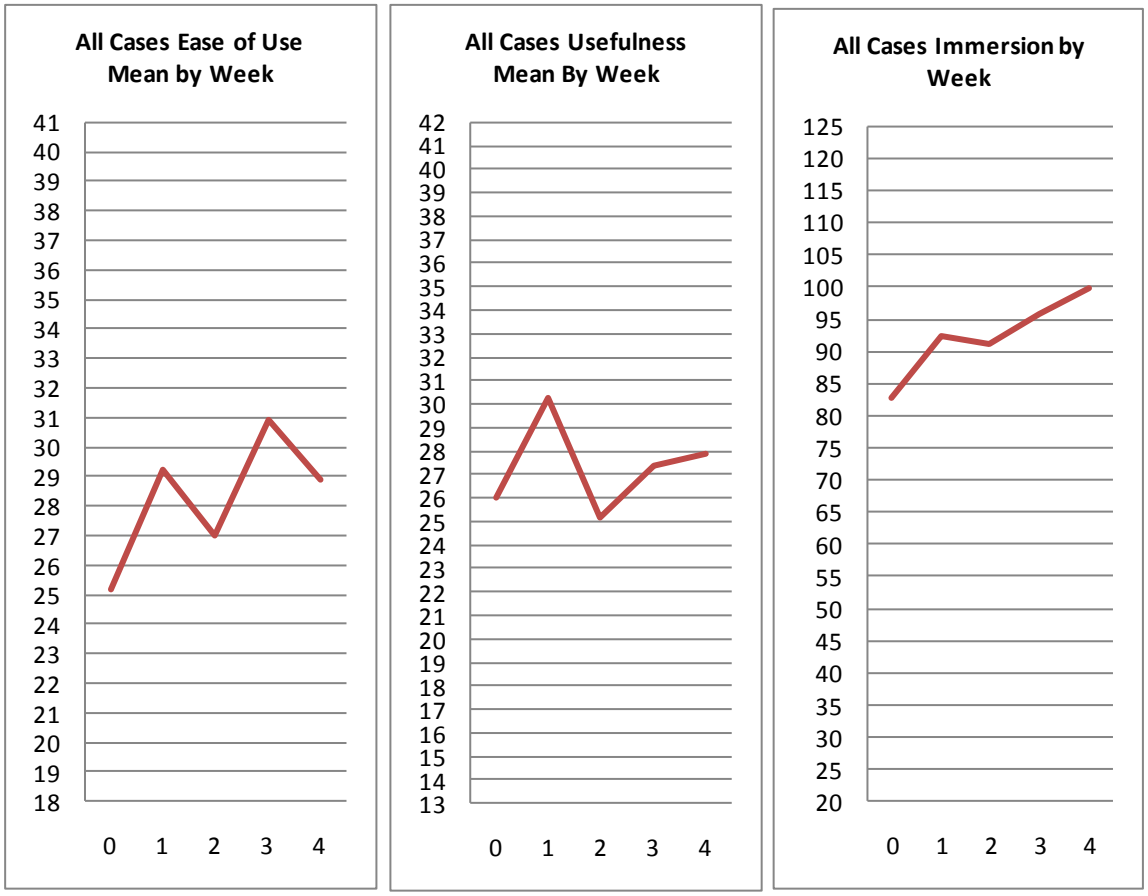

Figure 4.37: Group - PEOU, PU, and Immersion Graphs

The construct that appears to have had the overall greatest consistency with intention is perceived usefulness as seen by the graphs in Figure 4.38.

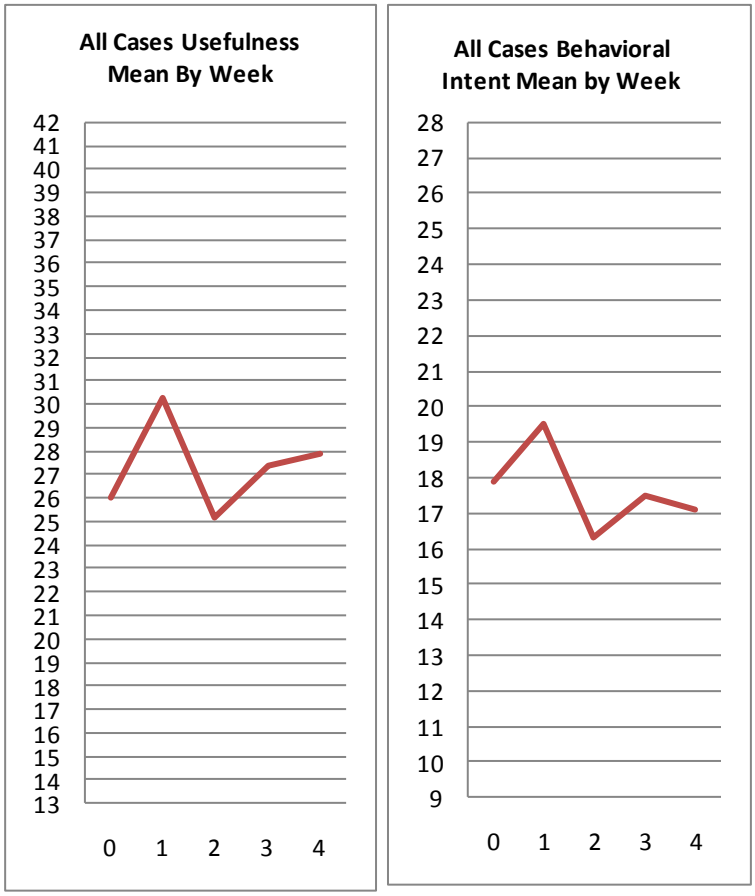

Figure 4.38: Group - Greatest Consistency with Behavioral Intention

The graphs in Figure 4.39 reflect that for this group of older adults on average the construct of perceived usefulness had the greatest consistency with attitude.

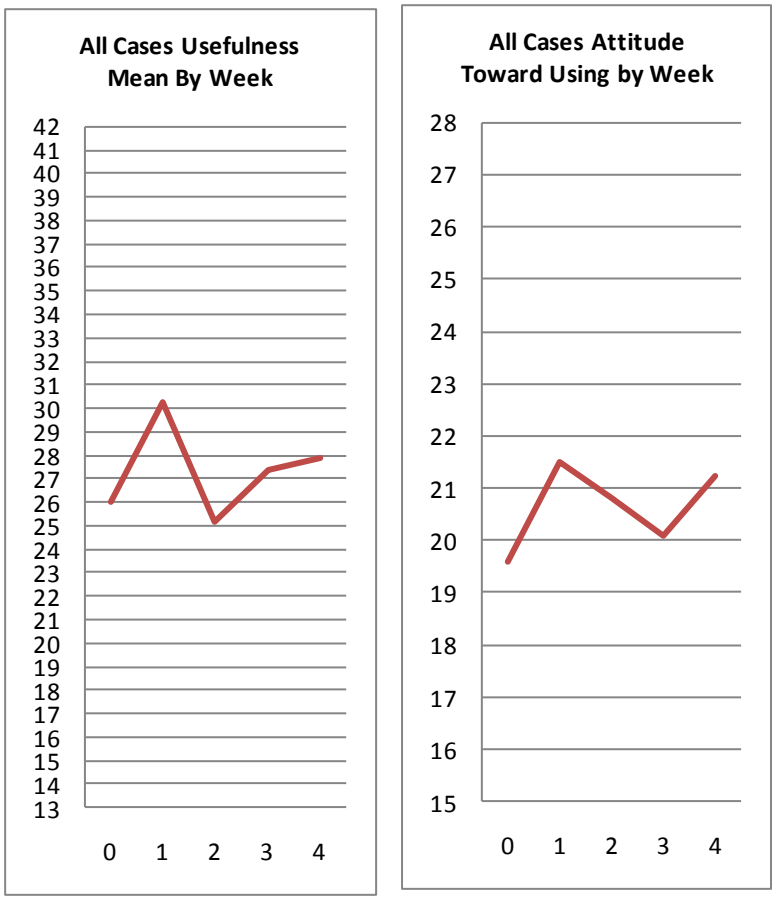

Figure 4.39: Group - Greatest Consistency with Attitude Toward Using

TAM/Immersion Scales Summary

The table 4.3 shows that for four of the ten participants for attitude toward using SL was not consistent with the behavioral intent to use SL. Only two participants were consistent and four participants were somewhat consistent. The group mean was somewhat consistent.

Attitude Toward SL consistent with Behavioral Intent to use SL			
Case	Yes	No	Somewhat
Purdy Carolina		X	
Leslie Fairlady			X
Dell Choovio			X
Gilda Goldshark		X	
Faith Foodiboo			X
Valentine Chiwanga	X		
Hotstuff Doghouse			X
Duchess Waffle		X	
Lapis Bluebird	X		
Boof Difference		X	
Group Mean			X

Table 4.3: Attitude Toward Using Consistent to Behavior Intent to Use SL

During the weekly analysis the researcher was concerned that the construct of attitude was not a valid mediating variable because of the inconsistencies with intention. From these graphs the data shows that the participants could have either a positive or negative attitude toward using SL and have the opposite behavior intention. Therefore, after the final analysis of the graphs with the data showing that even though a participant could have either a positive or negative attitude toward SL the participants may still intend to use it but attitude remains enough of an effect on intent that the construct still needs to be included in the future models for statistical testing.

The table in table 4.4 shows by participant which constructs had the greatest consistency overall with attitude toward SL. Perceived usefulness is referenced six times. Perceived ease of use is referenced two times and immersion once. For the group mean perceived usefulness had the greatest consistency with attitude.

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	Consistent Factor with Attituded Toward SL		
Case	Percieved Ease of Use	Perceived Usefulness	Immersion
Purdy Carolina			
Leslie Fairlady			X
Dell Choovio		X	
Gilda Goldshark		X	
Faith Foodiboo			
Valentine Chiwanga	X	X	
Hotstuff Doghouse			
Duchess Waffle		X	
Lapis Bluebird		X	
Boof Difference	X		
Group Mean		X	

Table 4.4 Consistent Factor with Attitude Toward SL

The table 4.5 shows by participant which constructs were most consistent overall with behavioral intention to use SL. Perceived usefulness is referenced five times. Perceived ease of use is referenced two times and immersion three times. For the group mean perceived usefulness had the greatest consistency with intention.

	Consistent Factor with Behavioral Intent to Use SL		
Case	Percieved Ease of Use	Perceived Usefulness	Immersion
Purdy Carolina			X
Leslie Fairlady	X	X	X
Dell Choovio			
Gilda Goldshark			X
Faith Foodiboo		X	
Valentine Chiwanga	X		
Hotstuff Doghouse		X	
Duchess Waffle			
Lapis Bluebird		X	
Boof Difference			
Group Mean		X	
Blank=Undeterminable			

Table 4.5: Consistent Factor with Behavioral Intent to Use SL

When considering both attitude and intention the construct of perceived usefulness was reference eleven times. Perceived ease of use was reference four times and immersion was reference four times. Clearly, the most important consideration by this group of older adults based on the scale data is the perceived usefulness of SL.

An overview of all the participant comparisons for each of the following five constructs can be found in Appendix D.

- PEOU - perceived ease of use
- PU - perceived usefulness
- Immersion
- A - attitude toward using
- BI - behavioral intention

Additional individual participant analysis of each participant can be found in Appendix E.

Participant Logs

Each of the ten participants wrote by hand about their experiences at the end of each weekly class meeting. The participants were guided by question generated on a weekly basis from the previous week's data analysis in order to dig deeper into exploring the process of adopting SL within the context of a travel experience.

The research group's overall feelings about SL after their first exposure were very positive. The participants came into the research study with very little information and

really did not know what to expect since none of the participants had ever participated in any online virtual world prior to start of the class.

Field Notes

The researcher wrote field notes after each weekly class. The field notes added to the data in that it included observations of the environment and the participants (e*veryone was excited about getting started and was in a very happy giggly mood),* interviews, the use of a technique called talk about where the researcher was able to ask a participant to talk about what they were thinking and feeling as they were actively engaged in a SL destination.

Field notes enabled the researcher to track what seemed important to the participants as the participants were actively participating in SL (*There were several comments about their different outfits. Some of them wanted to know if they could change clothes. Some wanted to know if they could change their hair color*). General observations allowed the researcher to capture information and what was going on that might not have been asked otherwise (*They loved flying because it was faster and they could see more).*

Table 4.7 provides a list of general questions asked by these participants as new SL users.

How do people find out about SL?
Does SL cost anything?
How do you get SL on your home computer?

Table 4.7: General SL Questions

Without field notes there would have been no way to account for unexpected events like the lag experienced when the participants took the automated guided tour in Mexico.

The GUC has technical problems with lag. I spoke with the technical people on staff and they stated that was a common problem with students taking online courses that their system would lag and the sound would stop and then break up. The person on the butterfly would ask me what happened when the audio would stop in the middle of a sentence and all I could do was explain that there was a problem with lag in the lab.

The researcher learned from one of the participants that being able to speak and not having to type everything would have added greatly to immersion. Leslie was in Paris and listening to conversations between some French speaking avatars. This was a good time to use talk about with the participant.

Researcher: Did the French conversing make you feel more like you were really there?

LF: Yes it did.

Researcher: Talk about what you are feeling and experiencing now.

Leslie: When they were speaking French I really feel like I am there. Hearing them makes a big difference. The typing part is difficult in the process of feeling immersed in an environment. To be able to just converse like normal would really make a difference in feeling a part of a location.

Focus Group

All the participants were invited to attend a focus group meeting about SL to convene two weeks after the end of the weekly classes. As seen in table 4.8 six of the participants were able to attend. The direction for the focus group evolved after the researcher came to know the perspectives of the ten participants in this research study. The focus group allowed the researcher the opportunity to moderate and observe interactions among six of the participants on their perspectives of SL, something that would not have been possible before the classes. The focus group allowed a richer interpretation of the participants in terms of adopting this virtual world technology of SL.

Focus Group Attendees	
Yes	No
Purdy Carolina	Faith Foodiboo
Leslie Fairlady	Valentine Chiwanga
Dell Choovio	Lapis Bluebird
Gilda Goldshark	Boof Difference
Hotstuff Doghouse	
Duchess Waffle	

Table 4.8: Focus Group Attendees

Over the four weekly class meetings the researcher had established trust, rapport, and authentic communication patterns with the participants. By establishing trust and rapport at the beginning of the study, the researcher was able to capture the nuances and meanings of each participant from the participant's point of view.

It is important for the researcher to provide guidance to DMO's about SL adoption. Clarification was needed about these older adults becoming immersed in SL. Specifically, the researcher wanted verification of the main influences on adoption and use by these older adults. From the analysis of the TAM and Immersion scale data the

researcher saw a lot of back and forth patterns emerge. There is more going on here than just can older adults learn this technology and will the technology appear useful to an older person.

Time appeared very valuable to the participants in this study. How the participants spend any of that time is a choice and they weigh that choice against best options. During the classes how friend and family members viewed the participant for using the technology arose as a key element to their continued dedication of time to using the technology. The researcher wanted to drill down further into how these older adults determine the advantages and disadvantages for this new technology. The participants could through the focus group provide insight into seeing advantages as greater than the disadvantages for using this technology. Specifically, the researcher wanted more understanding about the needs of these older adults in order to accept and immerse themselves in this technology.

The focus group meeting took place in a conference room at the GUC. The focus group lasted for approximately 3.5 hours. Conversations were recorded and transcribe. The data analysis resulted in categorization that led to the development of four themes.

Overarching Themes

The following results come from scales, participant logs, field notes and the focus group. This means that all focus group questions were developed from the results of the other forms of data collected in this study. The focus group questions can be found in Appendix C. A synthesis of meaning for the focus group data came out of combining all

sources of data to develop four overarching themes for this study. Table 4.9: Collective Participant Mean Analysis and Table 4.10: Construct Values will be used during the discussions of each of the four following themes.

	Collective Case Mean Analysis				
	Baseline	Week 1	Week 2	Week 3	Week 4
PEOU	25.2	29.2	27	30.9	28.9
PU	26	30.3	25.2	27.4	27.9
Immersion	82.7	92.4	91	95.7	99.89
Attitude	19.6	21.5	20.8	20.1	21.22
Behavior Intention	17.9	19.5	16.3	17.5	17.11

Table 4.9: Collective Participant Mean Analysis

	Construct Values			
	Possible Range		Actual Range	
PEOU	6 to 42		18 to 41	
PU	6 to 42		13 to 42	
Immersion	23 to 161		23 to 121	
Attitude	4 to 28		16 to 28	
Behavior Intention	4 to 28		9 to 28	

Table 4.10: Construct Values

Theme 1

Theme One: SL is easy to use in the context of travel experiences and this context creates a positive attitude toward its use. Participants in this study

communicated enjoyment from using SL to travel. The researcher repeatedly heard the words “it is fun”. Learning to fly within SL not only was easy for these participants but one of the most used features of SL. Interacting with other people was enjoyable for these older adults. Meeting people from other countries contributed to the sense that SL was real and not just a game.

Scale data graphs as seen in Appendix D shows the data results for PEOU by week beginning with a baseline measure for all participants. Appendix E discusses individual nuances by participant. Table 4.10 shows the individual participant values could range from a low of 6 to a high of 42. The actual ranges reported from the data analysis as seen in Table 4.10 was 18 to 41. Table 4.9 shows the collective participant mean for PEOU by week starting with the baseline measurement. The overall group means for PEOU by week starting with the baseline measurement was 25.2. The group mean generated from the data collected at the end of week one for PEOU was 29.2. The group mean generated from the data collected at the end of week two for PEOU was 27. The group mean generated from the data collected at the end of week three for PEOU was 30.9. The group mean generated from the data collected at the end of week four for PEOU was 28.9.

Participant Logs and Focus Group data related to theme one quotes will be distinguished by person and noted as Participant Log (PL) or Focus Group (FG). Field notes will also be used (FN).

The participants found exploring the Clemson Island a lot of fun.

(PL) Purdy said "Was more fun than work! I thought it was going to be more like a job."

(PL) Faith: I had almost no preconception of what we would be doing. Thought it might be something like WiiFit. This was fun and I think something I will enjoy learning. Can't wait to go on vacation tours.

(PL) Gilda: It was fun!

For the people that were very analytical the first exposure to SL was still fun but the participants had already started evaluating the positional usefulness of time spent with this new technology and the efforts that would be needed to harness full use of something this new. Some of the participants were surprised at the animation and compared it to a video game while trying to rationalize how it would fit their normal use of technology for travel.

(PL) Leslie: It was fun – like a video game. I have never played video games but I can see why kids like it.

(PL) Duchess: I had no idea what to expect. My first impression is positive and I look forward to becoming more familiar with how it works.

One of the unique features of SL compared to other media considered interactive is the use of an avatar. Everyone in SL has a digital embodiment that interacts with the environment and other people. The flexibility to make this digital representation contributes to the overall experience. Some people see their avatars as very representative of themselves even when the participants look nothing like the avatar because of what they perceive is the avatars personality which is actually their own. Some comments about how closely the avatars that the participants were using in SL during this research study actually resembled the participants were:

(PL) Gilda: Now that I got to go shopping I like my new outfit and hair. I look better than the real me!

(PL) Hotstuff: My avatar is completely unlike me. Perhaps it is best. Fantasy is more fun that reality.

The Focus Group meeting that took place two weeks after the last classroom setting gave the participants time to reflect on their overall experience with SL and the following comments reflect their concluding attitudes.

(FG) Hotstuff: I think SL is fun…. meet new friends… You can learn to fly

(FG) Gilda: It is an escape… I loved flying it was fun, everybody wants to fly, that was thrilling

(FG) Purdy: Everybody has that dream, to fly

(FG) Gilda: I thought it was more fun when we had friends in there… the fun in SL was talking with other people because they could have been form anywhere in the whole world. …. it was really fun to talk to people from other places,

(FG) Leslie: ….one of the most interesting parts was that it was real.

Theme 2

Theme Two: Older adults were highly motivated to use SL for travel experiences when they perceived a high level of usefulness in their daily life. When the perception that SL could alleviate issues of time and concern about money, this created a high level of motivation for use. These older adults liked the idea of saving money and saw SL as a tool to save money while accessing information. The participants view SL as a potential tool for conceptual mapping of future destinations so that the participants would be familiar with the location layout prior to arrival. These older adults wanted to use SL for reflections on previous real world experiences.

Scale data graphs as seen in Appendix D shows the data results for PU by week beginning with a baseline measure for all participants. Appendix E discusses individual

nuances by participant. Table 4.10 shows the individual participant values could range from a low of 6 to a high of 42. The actual ranges reported from the data analysis as seen in Table 4.10 was 13 to 42. Table 4.9 shows the collective participant mean for PU by week starting with the baseline measurement. The overall group means for PU by week starting with the baseline measurement was 26. The group mean generated from the data collected at the end of week one for PU was 30.3. The group mean generated from the data collected at the end of week two for PU was 25.2. The group mean generated from the data collected at the end of week three for PU was 27.4. The group mean generated from the data collected at the end of week four for PU was 27.9.

Participant Logs and Focus Group data related to theme one quotes will be distinguished by person and noted as Participant Log (PL) or Focus Group (FG). Field notes will also be used (FN).

Once the participants started visiting scheduled tourist locations in SL where the information was presented in a multisensoral way with rich and varied features there were varying response to the experiences. However, some of the participants were very moved by what the participants experienced in a positive way. Some of the participants saw this experience as a way to gather basic information about a location without having to spend a lot of money which was valuable to the participants regardless of the animation. Thus, the following comments show how SL can lead to a positive desire to travel to real world destinations.

(PL) Duchess: Positive impact, in terms of the likeness of the landscape. Having only been to Egypt, I'm impressed with the 'real feel' one gets about pyramids, rivers, shops and the likes and look forward to visiting other countries and options.

(*PL*) *Hotstuff: The information presented by Second Life was wonderful and very much impacted my desire to visit Egypt.*

(PL) Lapis Bluebird: I saw many things in Egypt that was fascinating. I think it would be great to see the "real thing".

(PL) Leslie: The tour gave historical information and points of interest that would help a person figure out what they would want to see if they went there in person. (The lag time was a deterrent for getting a good feel for this)….The best information is obtained from someone who has been there and as you tour the screen, they would give you pointers and suggestions about what to see.

When discussing their avatar and how closely their avatar resembles themselves Leslie also related to the researcher that she does not get into shopping at all in the real world so it held no fascination for her in SL either. Leslie views herself as very practical and her comments on her avatar at this point in time to be a tool for use.

(PL) Leslie: Not close – but this does not seem to matter to me. I see my avatar as a tool to help me visualize where I am and not as a projection of myself. I do not see the other avatars as images of other people, just animations.

Safety can be an important issue under any circumstances. Table 4.6 shows some of the issues that were discussed by the participants. All the participants felt physically safe within SL. The anonymity of being online provides a level of safe feelings. SL opens opportunities for people to visit places in the world they might not feel safe visiting in the real world. Flying in SL felt safe to even those that have a fear of heights. However, as safe as the participants felt physically there are other safety concerns that arise when in an online virtual world like SL. For example there are concerns about unwanted contact from strangers met online. As seen in table 4.6 four of the participants had concerns about unwanted contact from others but only one participant had a concern about computer viruses. Beyond this there are safety concerns for property such as users computers being subject to attacks from viruses.

	Safety issues
10	Felt physically safe
4	Safety concerns about unwanted contact from others
1	Safety concern about computer virus

Table 4.6: Safety Issues

(PL) Lapis: Some places in the world, I wouldn't want to go there for real because of safety concerns, but this enables me to "travel" there and see what it is like.

(PL) Duchess: So far, quite safe, perhaps because there's no interaction with others outside the group, so far. It feels natural to wonder around whatever country I'm in and to explore paths and bridges.

(PL) Leslie: Never felt unsafe in touring through Second Life because I felt I was totally anonymous. There were no other avatars that interfered with my safety or travel. For the tour on the butterfly – felt safe because it was only an animation. If I had been actually flying, I would have felt very unsafe.

(PL) Hotstuff: Safety is the biggest concern I have about Second Life,… Afraid of annoying unwanted correspondence.

(PL) Faith: No fear for self. Hope there will be no bad virus connected to program.

(PL) Purdy: Other avatars make me uncomfortable when they come into location and use inappropriate gestures and are x-rated. I am glad that I can exit that location quickly

One of the biggest advantages of SL is to feel that one can sample a destination before spending any money.

> *(PL) Lapis: I like the aspect of seeing places first without having to spend thousands of dollars to go there just to find out that I wish I still had the money instead.*

Some people like the aspect of having other people tell them about travel destinations. They feel as if this gives more realistic input to make judgments concerning travel needs. Instead of reading travel forums SL allows one to talk to other avatars/people at a site to gain information. If a person is not very trusting they may be reluctant to approach strangers within SL. If an avatars appearance is not what one is used to in the real world it could turn them off in SL also. Talking with strangers from other countries provided an aha moment for most of the participants in that it made the participants realize that SL was not just a game but there were real people from all over the world available for the participants to talk with and gain information. However, all the participants felt more comfortable talking with strangers in SL than the participants would have in the real world.

(PL)Hotstuff: I traveled to Paris and met a man in the cathedral there and he spoke to me in Spanish..... I asked questions about the site. ..... I don't feel comfortable interacting with strangers.

(PL) Gilda: I went to Australia, Quebec, Montreal, Hawaii, London, Paris, Italy, and tried to go to Japan. I met many people... It was fun!… One guy wanted me to walk on the beach at Venice Beach. He was so cute! Most were pleasant ..... I did not even worry about safety.

(PL) Purdy: I was pleased the strangers responded to my questions, but they were characters I would not have talked to in real life (shady-looking). ……They were very helpful when I asked questions.

(PL) Faith: This was a very different experience. I enjoyed meeting people but it took me some time to realize that I was actually talking with real people around the world. ……This could be a great way to get info from other countries.

(PL) Leslie: I really enjoyed the conversations with real people… Most of the people tried to help me and showed their personalities through the conversation. The ones who did not know English well tried to use English in a simple form. We even shared humor which is difficult in different cultures – like Japanese!...

I think I could form a relationship with some of the people. This session interested me more than anything we have done. I have mentioned that I am not a fan of animation, but I totally forgot about the animation and had a good experience.

(PL) Duchess: I hadn't realized we would be meeting people……..The overall experience was pleasant and I was able to get answers to a couple of questions I had.

(PL) Duchess: It appears one can explore potential travel sites and get a better feel for what's available than from a basic travel brochure. In addition there is an opportunity to observe the culture and get some idea of language requirements. One might be made aware of points of interests that aren't included in print material.

(PL) Dell: I like meeting people from other places and countries, you get to know how they live, what they like to do, most people are really very nice.

By the time the participants had finished the classes and their participant log entries there were trails of where the participants had traveled and what the participants had enjoyed the most and why. Some of the participants enjoyed visiting places the participants had been to before in the real world to relive pleasant memories.

(PL) Lapis: (Hawaii) My husband and I flew there 8 ½ years ago and stayed in Oahu for five days and then flew to Kawaii for five days. It is beautiful place to visit. We were there for our first wedding anniversary.

Some were fans of history and wanted to see anything historical. SL provides a medium that can allow people to experience history as it was.

(PL) Dell: (Rome) I liked Rome. I love old buildings history. The café's on the streets, the Spanish steps, touring in all the little towns around.

Some sought out locations that would allow the participants to experience personal hobbies and activities that they like to participate.

(PL) Valentine: …But, of the ones I visited, I guess the dance halls were my favorite because dancing gives me pleasure.

Still for some participants was the interaction with real people from other places and cultural exchanges.

(PL) Leslie: I liked Japan. The reason is that I got into a 2-way conversation using simple English and I was able to see the cultural reserve and polite manner of the individual. He was pleased that we were communicating. We both

"laughed" and enjoyed the experience. I think if I needed more information about Japan, I would be able to get good data from that person. His avatar was cute also –Asian and colorful.

Concluding remarks about the usefulness of SL experience.

(FG) Duchess: SL allows you to interact… it does allow you to go out and explore and have an adventure.

(FG) Purdy: everyone uses the computer more for everything including travel where as we used to not use it for anything but work.

(FG) Leslie: So that could help you make decisions if you saw it on SL first

(FG) Hotstuff: You could save on phone calls by using SL

(FG) Duchess: if I am going to spend big bucks to visit some place I want to know whether I am going to see 80 gazillion stores and all of the franchises and all of the commercial stuff or if I am actually going to see sights and interesting attractions.

(FG) Leslie: But also they use today a lot of rating systems that I find really valuable….connecting with someone who is interested in travel….being able to

communicate to people who are there…. If I were really planning a trip already to actually have a conversation with somebody who might be able to give me some insight into how to get from the airport to a hotel or something like that

(FG) Duchess: ….thing is when talking with people they may be aware of local attractions that travel agencies and tour groups and that kind of things aren't aware of. You know their recommendations on the greatest local restaurant…

(FG) Gilda: …with SL you feel more like you are more actually there … Yeah, you are the person that is actually seeing everything

Most of the participants had shared the fact that they would be participating in this study with family and friends. At the onset family and friends were supportive of the participant's efforts to learn this new technology although some of the family and friends did not know what the participants were really talking about since the participants did not know themselves exactly what would be taking place.

(PL) Valentine: my family said, Great! Thought it was wonderful that I was participating in something new and wanted to know what I learned after each class. This made me feel very good. Just hope I can remember everything we learned.

(PL) Faith: My children said 'Great!', my friends said 'You're doing what?' These comments made me feel good that I was encouraged by my children and grandchildren.

(PL) Duchess: Those who 'do' computers were excited and are looking forward to hearing what it's all about which made me feel good.

For some participants the avatar is simply a tool and appearance plays no part in what they think of the experience. In discussing how much the participant thought that their avatar represented themselves it was said:

(PL) Duchess: Pretty close, now that I have gone in and made some necessary body adjustments. With today's shopping trip, one has the option to dress like the 'inner you' or whoever you feel like at the time.

Human beings with all their similarities always have unique differences. Likewise, what people see as advantages and disadvantages will always be different. The use of the participant logs enabled the researcher to gain insight into what was in the minds and hearts of the participants individually such as their likes and dislikes. There were concerns about learning as well as what others thought of the participant for trying something new.

(PL) Leslie: SL has rich ground for learning and growing in the electronic realm. It connects me with some of the things my grandchildren are doing and they appreciate it when I am able to communicate with them about their interests in electronic "travel" and games.

Animation may not be anyone's favorite way to visit travel destinations but it is overlooked when it allows one to see anything that they might not otherwise have access to or as an option to meet and make new contacts. SL provides easy exit when confronted by people or situations that do not match an individual's value system.

(PL) Faith: I enjoy flying over areas and would really enjoy entering buildings – especially houses or hotels.

(PL) Dell: It's a good way to make friends you thought you would never meet

(PL) Leslie: I can see getting information and a feel for a place before you go to be an advantage for planning purposes and for efficiency in deciding where to go. For an outgoing person, they can talk to people for help. For the shy person, they can look around on their own without being interrupted by someone they do not want to talk to.

(PL) Hotstuff: If one has no experience at all of history and geography and has had no opportunity to visit actual museums or seen artifacts from the great civilizations or even never opened an art book, then perhaps one would be impressed with Second Life.

For some their favorite destinations were based on how well the level of detailed design and graphics were done in order to generate a feeling of realism or peace.

(PL) Hotstuff: I enjoyed the Egyptian Pharaoh site. The graphics were beautiful and the recreation of King Tut's tomb was fantastic.

(PL) Duchess: The beach in Saudi Arabia….it was beautiful and had a sense of peace. The Victorian site would have come in as a close second and I hope to return to both sites. Victorian has beautiful buildings of the period and the landscaping provides a sense of peace and quiet.

Theme 3

Theme Three: The more older adults become immersed into the detail of the SL experience the more likely they will eventually be concerned by the potential inauthentic nature of the experience. The novelty of the SL tourism experiences made for high levels of excitement when participants first began use of the technology. Over time the immersion level and PEOU and PU increased. This eventually led the

participants to question the authentic nature of their experiences. This in turn led many to reflect on other potential problems with overuse of media.

Some of the participants still had a desire for SL to incorporate technology that enabled more realistic looking locations and not just animation. The last day of classes the participants had used the "Hotspots" feature of SL which should have provided the participants with some of the best sites in the SL world. Yet immersion and intention dropped for the majority of the participants (See Appendices D). As well designed as the SL sites used were, that is the day that the participants realized that places visited in SL do not always mirror real world destinations even though it is called the same name as a real world destination. Also, negative press about children becoming addicted to video games came up as a red flag for these older adults in that none of the participants wanted be perceived as addicted to video games.

Scale data graphs as seen in Appendix D shows the data results for Immersion by week beginning with a baseline measure for all participants. Appendix E discusses individual nuances by participant. Table 4.10 shows the individual participant values could range from a low of 23 to a high of 161. The actual ranges reported from the data analysis as seen in Table 4.10 was 23 to121. Table 4.9 shows the collective participant mean for Immersion by week starting with the baseline measurement. The overall group means for Immersion by week starting with the baseline measurement was 82.7. The group mean generated from the data collected at the end of week one for Immersion was 92.4. The group mean generated from the data collected at the end of week two for Immersion was 91. The group mean generated from the data collected at the end of week

three for Immersion was 95.7. The group mean generated from the data collected at the end of week four for Immersion was 99.89.

Scale data graphs as seen in Appendix D shows the data results for BI by week beginning with a baseline measure for all participants. Appendix E discusses individual nuances by participant. Table 4.10 shows the individual participant values could range from a low of 4 to a high of 28. The actual ranges reported from the data analysis as seen in Table 4.10 was 9 to 28. Table 4.9 shows the collective participant mean for BI by week starting with the baseline measurement. The overall group means for BI by week starting with the baseline measurement was 19.9. The group mean generated from the data collected at the end of week one for BI was 19.5. The group mean generated from the data collected at the end of week two for BI was 16.3. The group mean generated from the data collected at the end of week three for BI was 17.5. The group mean generated from the data collected at the end of week four for BI was 17.11.

Participant Logs and Focus Group data related to theme one quotes will be distinguished by person and noted as Participant Log (PL) or Focus Group (FG). Field notes will also be used (FN).

Some of the participants really did not like the animation or cartoonish nature of SL. Some felt the destinations were not realistic enough to assist in making a decision about visiting that location in the real world.

(PL) Faith: This was not realistic enough to make me want to visit.

(PL) Valentine: Found this means to be too "out of touch" with what is in the real world.

(FG) Leslie: …personal contact with others makes it real… But I still felt like I was looking at a picture of a cartoon.

(FG) Duchess: … if the travel industry truly wants this to be a tool that people use to make travel decisions they are going to have to go to more realistic video images and less of the game style. You should still be able to use your avatar and walk up that trail and that sort of thing but as you say let's make it real with the real videos

(FG) Hotstuff: We would be looking for a certificate of authenticity… I think that the only way it would work is that if it were actual visuals that you were actually visiting…. I went to Paris… I am walking…you don't get the feeling that you are walking down the street in Paris. You see these constructions but they are not the actual thing.

(FG) Duchess: what we are looking for is someone that will look at SL and say if this is a real place and this is what you really are going to see and what is really available…If this place is really true then it needs to be starred or somehow identified on the hotspots list.

(FG) Leslie: Somebody has to review each location in SL and validate it ….and come back and say yes that is right.

(FG) Gilda: They could put approved by Samantha Brown.

(FG) Hotstuff: I think one of the biggest disadvantages is getting addicted to it and staying home when they could be living a life outside.

Theme 4

Theme Four: Older adults with mobility challenges perceived SL as a tool for "visiting" in SL destinations perceived as too physically challenging as well as a tool to prepare for travel experiences ahead of time. For people that already deal with mobility and dexterity challenges or those that foresee future mobility challenges, SL is a very interesting world indeed. In addition to normally considered mobility issues there is also a concern among older adults about the possibility of experiencing strokes, heart attack or other life threatening events in real life which would then increase the difficulty for future travel and tourism. These concerns for health and safety are real and cannot always be remedied in real world travel experiences. Thus SL offers a type of proxy for "real" travel that may in turn offer actual benefits of travel to participants.

While in the real world people often experience mobility challenges, in SL their avatars can fly, walk, jump and communicate via facial expressions with ease. No matter what the level of physical limitation one may experience in the real world, within SL they

will be able to continue to enjoy skydiving, fishing, dancing, hike trails and mountain climb. One can change their avatars appearance and attire at anytime. No longer will you be limited to current age, physical size or any stigma attached to any sort of disability. The sky is the limit as virtual reality begins to play an important role in banishing the loneliness, isolation and depression that is all too often part of ageing as well as playing a big role for people either living with diseases that make them housebound or with permanent disabilities.

Scale data graphs as seen in Appendix D shows the data results for Attitude Toward Use by week beginning with a baseline measure for all participants. Appendix E discusses individual nuances by participant. Table 4.10 shows the individual participant values could range from a low of 4 to a high of 28. The actual ranges reported from the data analysis as seen in Table 4.10 was 16 to 28. Table 4.9 shows the collective participant mean for Attitude Toward Use by week starting with the baseline measurement. The overall group means for Attitude Toward Use by week starting with the baseline measurement was 19.6. The group mean generated from the data collected at the end of week one for Attitude Toward Use was 21.5. The group mean generated from the data collected at the end of week two for Attitude Toward Use was 20.8. The group mean generated from the data collected at the end of week three for Attitude Toward Use was 20.11. The group mean generated from the data collected at the end of week four for Attitude Toward Use was 21.22.

Although Attitude Toward Using was the construct of focus in explain theme four, this theme clearly follows the thought of perceived usefulness by the participants.

All the information relating to perceived usefulness discussed with theme two can just as easily be applied here to theme four also.

Participant Logs and Focus Group data related to theme one quotes will be distinguished by person and noted as Participant Log (PL) or Focus Group (FG). Field notes will also be used (FN).

The participants discussed in their log entries advantages this new technology could provide for their travel that went beyond what travel brochures could provide like the freedom to explore what is of interest to the individual instead of just what the brochure provider thinks is important. The possibility of traveling virtually appealed to the participants once the participants realized they could use this medium to meet up with friends and family that do not live close by and could then communicate and go to places together within SL. On several occasions the SL location was viewed as being so nice that the participant did actually feel like the participants were there. The participants quickly realized that this medium could provide a way to overcome physical handicaps or limitations as the participants age further.

The participants specified that the participants would like the option of visiting in SL locations that in the real world were either inaccessible or posed difficulties to the participants due to physical limitations as they age. The following quotes exhibit this:

> *(FN) Valentine Chiwanga: I have had two husbands that died and both of them were sick for a long time before they passed. When my husband was not able to do any traveling I had to stay home and care for him. If this had been around*

back then we could have gotten on the computer and gone places and had a mutual experience we could have shared and enjoyed together like we were still traveling.

(FG) Duchess Waffle: I think that would be wonderful. I said to you, I know that is not what it was designed for but you know mother's immediate neighbors, one is quadriplegic, one is paraplegic and the other one's she is confined to a wheelchair. The two guys are very computer savy. Even when you got handicap access there are a lot of places they can't go. Even if they could go to the Saudi Arabian beach that was just wonderful and peaceful and gorgeous, while they could never go actually enjoy that because you can't run the wheelchair across the sand. But in SL they could go through and walk and see it all and experience it …

(FG) Leslie: One use for travel to me would be if you are looking to go on a cruise and you are getting on this gigantic ship and you don't know the first way to get around. If they have the ship outlined you could do it animated it doesn't have to be real. And you walk through the ship to see where the ballrooms are, see where the meals are, see where, you would feel much more comfortable getting on that ship before you got on it and it would speed up your orientation

(FG) Gilda: Cause when you get on those ships it takes a day to figure it out

(FG)Duchess: Well, when you go to large resorts it's the same thing, where is the gym where is the pool, where are the boutiques…. For this is doesn't even have to realistic

(FG) Leslie: Any kind of place that you go to that you have to have an orientation that would be a place to have in SL so your avatar could walk it before your arrival….Animation is ok on these kinds of things; it is not like you are actually going out and touring a place. You are just needing to know where a room is.

(FG) Dell: This is great for event planners

(FG) Gilda: You know I was at the Louvre(real world) and I was there for six hours… I got museumed out… could let you go back and see what you didn't see.

(FG) Purdy: If you have been there before you want to go back and see what you remember. Like we hiked down in the Grand Canyon… I can't do that anymore not with my knee…I would like to do it again but I can't but maybe I could look at it in SL.

(FG) Leslie: It might bring back memories for you…. When I am sitting in a nursing home and can't do anything else maybe I would want to do this.

(FG) Gilda: "we can look any way we want to look no matter what our true physical limitations in the real world."

(FG) Leslie: I don't like to walk through museums, it's a pain, but to do it on a computer like that got me into this museum and it got me interested in it.

(FG) Purdy: Or even the national parks where you can't go because you don't have the money.

(FG) Gilda: Right, like I would like to go to the Himalayas. I know I am not going to go up to the top of Mt Everest, … that might be something to do in SL…Mt Kilimanjaro, some of those places where I know I could never physically go now or afford.

(FG) Purdy: you could see inside someone's really big mansion

(FG) Gilda: I know at the Whitehouse (real world), I have taken the tour there and there is only a few rooms that they let you see… if you could see the rest of the white house which does not have public access then I might pay for that.

Chapter Summary

This chapter investigated the objectives outlined in Chapter 1 related to the purpose of the study. First, the results of the scale analysis were presented. Then the participant logs, field notes and focus group analysis provided a holistic focus on technology acceptance directing intent to use and attitude. Finally, the summarizing themes for this study were presented.

CHAPTER FIVE

CONCLUSIONS AND IMPLICATIONS

This chapter consists of 4 sections. The first section reviews findings reported in chapter 4. The second section discusses the theoretical implications of the findings. The third section addresses the implications of the study's findings for professional practice. The final section provides recommendations for future research.

Review of the Findings

The purpose of this study was to explore the acceptance and use of the online virtual world of Second Life by older adults in order to gain in depth knowledge of the process and how this knowledge can be used for future virtual world design to support tourism. The study sought to determine if older adults had the ability and would adopt new online virtual world technology such as Second Life in the context of tourism. Mixed data tools were utilized in order to facilitate the findings in this qualitative instrumental collective case study.

At the onset of the study, all ten case (participants) generally indicated confidence in their ability to master virtual world technology and use it regularly. The data showed that all ten cases considered using Second Life as a virtual tourist in the context of a travel destination to be relatively easy to use and had a very positive attitude about their experience. The participants all adapted very quickly to using the basic functions, such as moving avatars and communicating with others, stating that it was relatively easy to learn. All participants reported that using Second Life was effective for learning about

tourist destinations and the perspectives of others, but had concerns about the authentic nature of the sites.

The majority of the participants were happy to capitalize on social interactions in Second Life. Their reactions to social interactions in Second Life were particularly positive. The participants liked the social interaction activity in Second Life better than the guided tour, and the participants liked group activities more than individual work. Therefore, capitalizing on social interactions is likely to help create positive experiences.

Even though the participants found SL easy to use that is not enough for the participants to decide to use SL. The data showed that perceived usefulness was the most consistent with a participant's behavioral intention is to use SL. Following perceived usefulness, ease of use and immersion captured equally importance for these older adults in adopting SL.

The overarching themes that evolved from this study are the following:

1. SL is easy to use in the context of travel experiences and this context creates a positive attitude toward it's use.
2. Older adults are highly motivated to use SL for travel experiences when they perceive a high level of usefulness in their daily life.
3. The more that older adults become immersed into the detail of the SL experience, the more likely that they will eventually be concerned by the potential inauthentic nature of the experience.

4. Older adults with mobility challenges perceived SL as a tool for "visiting" in SL destinations perceived as too physically challenging as well as a tool to prepare for travel experiences ahead of time.

Research Questions

1. What is the process of acceptance and ease of use of the online virtual world of Second Life by older adults?

   Older adults find SL fun and easy to navigate. They in their life experiences do not feel required to totally understand all the deep cognitive functions available to a SL user in order to use this technology for a tourism experience. Just because someone may not totally understand the cognitive roots of electricity does not stop them from flipping on a light switch when they want lights. Likewise, for these older adults SL was fun and novel thus creating in them a desire to develop basic skills quickly in order to navigate the SL world.

2. What is the process by which people become immersed in new technology, specifically Second Life, in the context of travel experiences?

   The longer people partake of travel experiences in SL the more immersed they become. The older adults in this study found relaxation from peaceful restorative settings. They were most excited about the control they had and their ability to move and interact with other people heightening the level or realism in the experience.

3. How does acceptance and immersion affect the future design of Second Life destinations for tourism?

For these older adults authenticity became a very important issue. They would like to use SL to experience destinations prior to visiting and had concerns about how would they know if what they were experiencing was like the real destination. In designing future sights there is a need to be verify that the sight is like the real world location. Lots of details are beneficial. These older adults liked interaction either from objects located at the sight or from other avatars positioned at the site to interact and talk with the visitors. Even though it was a limitation that this group of older adults did not have microphones with their headsets and had to communicate via the keyboard, sound was still a major influence on the overall experience. Visiting places with sounds of birds, and waterfalls made these visitors want to spend more time at that location compared to locations with no ambient sounds. Being able to hear people at a location talking the native language of that location made the overall experience seem more real even if it was just a recorded message on entering the SL location.

Theoretical Implications

As stated above, the purpose of this study was to explore the process of adoption of new virtual world technology known as SL within the context of travel destinations. This dissertation utilized a modified TAM model which included immersion to sensitize the qualitative collective case study. The study contributes to the tourism marketing

literature due to its exploratory nature into the field of virtual world technology. Specifically it can lead to future studies linking marketing strategies with virtual world technology to determine impacts. The findings also provided general support for the modified TAM model for use with the online virtual world known as SL. However, no statistical analysis was done in order to generalize the findings. Thus, the modified model remains for future statistical testing and analysis.

However, probably the most interesting implications from this study come from its ability to provide a snapshot of a virtual travel experience for seniors in its own right. The data from this study mirror actual research on travel experiences, specifically for older adults. The following are the most notable:

1. Novelty or the desire to see or do something new is a strong motivator for tourism. Iso-Ahola (1982) suggested that the desire to leave the everyday environment behind and to escape personal and or interpersonal environments is a strong determinant of tourism behavior. These older adults experienced escape within the virtual world of Second Life. Second Life opened up an entire new world or opportunities for travel experiences.
2. Authenticity or the desire for the "real" the authentic including connections to real people has also been studied as a motivator for tourism. Crompton's (1979) general scheme of seven motive domains, of which educational value/intellectual enrichment was only a single domain requiring authenticity. Authenticity as verisimilitude is achieved through meeting tourists' expectations about what a place looks like. Although there were concerns from the travelers in this study

about the authenticity of the sites they were visiting there was a heightened enthusiasm when connecting and communicating with real people from around the world. As the participants stated, the fascinating thing about Second Life is that it is real. When the participants interacted with avatars from other countries or cultures the participants felt as if they were there, somewhere else having a relationship with the other person.

3. Interest may vary among individuals but the desire to obtain psychological or intrinsic rewards through travel in a contrasting environment is at the heart of interest as the individual seeks personal and/or interpersonal rewards. Pearce (1996) found those tourists are attracted to destinations to meet hierarchical needs. Thus the tourist may strive to fulfill self-actualization needs such as love and a sense of social belonging. As communities are formed in Second Life it becomes easier to find a specific category of person to associate with in that people with similar interests attract one another. This kind of networking used to take months to unfold. Within the realm of Second Life it happens in what seems like an instant.
4. Ego-enhancement is a relevant motivations factor (Dann, 1977). It is further argued that the desire for ego-enhancement is conducive to the creation of a fantasy world, one to which the tourist plans a periodic escape. Traveling in Second Life affords any individual the opportunity to rise to a new social position. With just a few keystrokes an individual in Second Life can alter their total appearance seeming much younger, stronger, and healthier than in reality.

Implications of virtual tourism as in SL for travel are that people with mobility issues can still visit places that provide these qualities in their life. For the tourism industry the implications are that people may be willing to pay for these virtual travel experiences. This is important information in terms of rethinking virtual experiences as an actual travel experience to an actual destination.

Professional Practice

It has remained crucial that tourism businesses make effective and efficient marketing investments due to the fact that tourism is a service goods industry in that the product rarely can be tested prior to consumption. Previously in the marketplace, consumers were persuaded toward potential tourism destinations through interpersonal conversations with friends and family and through such means as advertising and publicity in the mass media. This study indicates that new technology may now be available that would provide the consumer the ability to test and try a tourism product prior to purchase. This new technology may also provide potential to tourism marketers as a new advertising medium. Thus, presenting new advertising strategies for most effectively and efficiently persuading potential tourists to visit a specific destination. This is the first of many research projects that may be directed at online virtual worlds and their use and consistency with the tourism industry. Therefore as cutting edge research it can provide strategic advantage to early adopters in its use for tourism in order to influence destination selection.

The third theme listed may provide guidance to tourism marketers in addressing issues important to the Older Adult market, and potentially other ages in terms of authenticity of virtual world technology. The concept of virtual world technology includes a spectrum of experiences from pure fantasy to simulating actual places and experiences. Who maintains and manages virtual world sites is still an evolving issue and one that has the potential to impact tourism market and tourism destinations a great deal. The tourism industry may want to weigh in on the guidelines and policies in the use of virtual worlds as they represent actual travel destinations.

Recommendations for Future Research

While implications are important to the travel and tourism field, this study was limited by focusing on only healthy older adults in a laboratory setting for a short period of time. Based on this, the study needs to be replicated in other settings, for longer periods of time and with other populations. This will further develop and improve the body of literature on technology acceptance, use, and design of virtual worlds for tourism marketers.

This study should be conducted on other older adults and include the effects of gender, ethnicity, and regionality. This would provide practical interest to travel marketers if they were to know if cross cultural difference, or differences in gender or ethnic groups, responded differently to a virtual tourist experience in Second Life.

This study should be conducted on different age groups to see if they respond the same as older adults. Other subject populations of interest to study would also be non-

travelers, international consumers, and different income strata. Such research could help travel marketers effectively and efficiently focus their marketing to specific market segments. Furthermore, this study should be conducted in different virtual worlds to see if all virtual worlds are as easy to use and quickly accepted and if not why the difference.

This study has laid the groundwork for future research. Now that we know the use of virtual worlds is appealing to these older adults further quantitative studies should follow in order to generalize to the older adult population. Further diffusion of innovation studies should be conducted to determine how this medium might be promoted. The impact of influential media such as informal word-of-mouth and any negative or positive publicity that might be encountered for tourism should be incorporated into future research. Research for niche markets such as issues related to handicap individuals should researched.

Certainly, measuring real behavior as opposed to behavioral intent would increase the study's importance. Therefore, longitudinal research is recommended to accurately capture the impact of a virtual online world such as Second Life on the tourism market.

This exploratory study was the first of its kind to generate ideas about how older travelers will react to virtual online technology such as Second Life. Iso-Ahola (1982) suggests that people act on psychological or physiology stimuli in order to satisfy a felt need to achieve and anticipated goal better known as motivation. Crompton (1979) argued the importance of understanding motivations based on three major areas of benefits 1) paving the way for creating better products and services, 2)satisfaction with tourism experiences is intrinsically related to initial motives of tourists, and 3) motives

must be identified and prioritized first before a destination marketer can understand tourist decision-making processes. Crompton's initial remarks from 1979 pointed out that effective tourism marketing is impossible without an understanding of consumers' motivations. Further study of travelers in Second Life can help answer questions about how motives vary across tourism situations, destinations, and people.

Motivational researchers in tourism stress the need to track motive changes and structure over time and over changing markets. As the world becomes more globalized and cultures interact continuously, the study of motivations will certainly be a part of a growing body of tourism literature especially now that changing markets includes new technological markets such as online interactive virtual worlds.

APPENDICES

Appendix A

Data Instruments

Form A

TAM Scales

Form B

Immersion Scales

Sample Form C

Semi-Structured Question for Participant Log

Appendix A – Data instruments

Name_____ **Session**___

Scales For Measuring Various Constructs (Form A)

Perceived Ease of Use

	Strongly Agree (SA)		Agree (A)		Disagree (D)		Strongly Disagree (SD)
1. Learning to operate SECOND LIFE is easy for me.	7	6	5	4	3	2	1
2. I find SECOND LIFE to be flexible to interact with.	7	6	5	4	3	2	1
3. I find it easy to get SECOND LIFE to do what I want to do.	7	6	5	4	3	2	1
4. It is easy for me to become skillful at using SECOND LIFE.	7	6	5	4	3	2	1
5. I find SECOND LIFE easy to use.	7	6	5	4	3	2	1
6. My interaction with SECOND LIFE is clear and understandable.	7	6	5	4	3	2	1

Perceived Usefulness

	very likely (VL)		likely (L)		unlikely (U)		very unlikely (VU)
7. Using SECOND LIFE would improve my life.	7	6	5	4	3	2	1
8. Using SECOND LIFE would enable me to accomplish tasks more quickly.	7	6	5	4	3	2	1
9. I would find SECOND LIFE useful for my needs.	7	6	5	4	3	2	1
10. Using SECOND LIFE would increase my productivity.	7	6	5	4	3	2	1
11. Using SECOND LIFE would enhance my effectiveness.	7	6	5	4	3	2	1
12. Using SECOND LIFE would make it easier to experience travel.	7	6	5	4	3	2	1

Form A continued

Attitude Toward Using

Please check X your response about using Second Life on the following four scales based upon what you think to be the most appropriate response for filling in the blank.

Example: compare the two words by placing them in the blank then decide where your opinion lies on the scale and mark with an X. In this example the individual feels that using Second Life is slightly more of a good idea than a bad idea.

1. Good Bad

		X				
extremely	quite	slightly	neither	slightly	quite	extremely

All things considered, my using Second Life is a(n) _____ idea.

1. Good Bad

extremely	quite	slightly	neither	slightly	quite	extremely

2. Harmful Beneficial

extremely	quite	slightly	neither	slightly	quite	extremely

3. Wise Foolish

extremely	quite	slightly	neither	slightly	quite	extremely

4. Negative Positive

extremely	quite	slightly	neither	slightly	quite	extremely

Behavioral Intentions

	Strongly agree (SA)		agree (A)	(U)	disagree (D)		strongly disagree (SD)
1. I intend to use Second Life for communicating with others.	7	6	5	4	3	2	1
	(SA)						(SD)
2. I intend to use Second Life frequently.	7	6	5	4	3	2	1
	(SA)						(SD)
3. I intend to use Second Life to learn about tourism information.	7	6	5	4	3	2	1
	(SA)						(SD)
4. I intend use Second Life to plan vacations.	7	6	5	4	3	2	1

Immersion Questionnaire (Form B)
(adapted from Wittmer, B. and Singer, M. (1998). Measuring presence in virtual environments: A presence questionnaire. Presence 7.3 (June): 225-240.)

1. This question refers to how much were you able to control events. How responsive do you think was the environment to actions that you initiated (or performed)?

1	2	3	4	5	6	7
Not Well			Moderately Well			Very Well

2. How natural did your interactions with the environment seem?

1	2	3	4	5	6	7
Not Natural At All			Moderately Natural			Very Natural

3. How much did the visual aspects of the environment involve you?

1	2	3	4	5	6	7
Not At All			Some			Very Much

4. How much did the auditory aspects of the environment involve you?

1	2	3	4	5	6	7
Not At All			Some			Very Much

5. How natural was the mechanism which controlled movement through the environment?

1	2	3	4	5	6	7
Not Natural At All			Moderately Natural			Very Natural

6. How compelling was your sense of objects moving through space?

1	2	3	4	5	6	7
Not Compelling			Moderately Compelling			Very Compelling

7. How much did your experiences in the virtual environment seem consistent with your realworld experiences?

1	2	3	4	5	6	7
Not At All			Some			Very Much

8. Were you able to anticipate what would happen next in response to the actions that you performed?

1	2	3	4	5	6	7
Not Able			Moderately Able			Very Able

9. How completely were you able to actively survey or search the environment using vision?

1	2	3	4	5	6	7
Not At All			Moderately Able			Very Able

10. How well could you identify sounds?

1	2	3	4	5	6	7
Not Well			Moderately Well			Very Well

11. How well could you localize sounds?

1	2	3	4	5	6	7
Not Well			Moderately Well			Very Well

12. How well could you actively survey or search the virtual environment using touch?

1	2	3	4	5	6	7
Not Well			Moderately Well			Very Well

13. How compelling was your sense of moving around inside the virtual environment?

1	2	3	4	5	6	7
Not Compelling			Moderately Compelling			Very Compelling

14. How closely were you able to examine objects?

1	2	3	4	5	6	7
Not Able			Moderately Able			Very Able

15. How well could you examine objects from multiple viewpoints?

1	2	3	4	5	6	7
Not Well			Moderately Well			Very Well

16. How well could you move or manipulate objects in the virtual environment?

1	2	3	4	5	6	7
Not Well			Moderately Well			Very Well

17. How involved were you in the virtual environment experience?

1	2	3	4	5	6	7
Not Involved			Moderately Involved			Very Involved

18. How much delay did you experience between your actions and expected outcomes?

1	2	3	4	5	6	7
Many Delays			Moderate Delays			No Delays

19. How quickly did you adjust to the virtual environment experience?

1	2	3	4	5	6	7
Not Quickly at All			Moderately Fast			Very Quickly

20. How proficient in moving and interacting with the virtual environment did you feel at the end of the experience?

1	2	3	4	5	6	7
Not At All Proficient			Moderately Proficient			Very Proficient

21. How much did the visual display quality interfere or distract you from performing assigned tasks or required activities?

1	2	3	4	5	6	7
Not At All			Some			Very Much

22. How much did the control devices interfere with the performance of assigned tasks or with other activities?

1	2	3	4	5	6	7
Not At All			Some			Very Much

23. How well could you concentrate on the assigned tasks or required activities rather than on the mechanisms used to perform those tasks or activities?

1	2	3	4	5	6	7
Not Well			Moderately Well			Very Well

Form C (Sample)

1. What was your first impression of Second Life and how did it match what you expected?

Appendix B

Weekly Class Plans

Appendix B – Class plans

Participants will meet once a week for 1.5 hours over a 4 week period. Participants have agreed that if for any reason it is absolutely necessary to miss a weekly class period that they will arrive ½ early the following week to work one on one with the instructor to catch up on any material they have missed. Provided the participant attends no less three of the class meetings they will be included in the focus group meeting scheduled at the end of the classes.

Class day **Week 1**:

Sign all release forms, tour of facilities, explanation of what to expect during the research project.

Select identity for premade list of names.

Administered Form A and Form B to all participants prior to start of class so that there is a baseline per case.

Topics:
Introduction and explanation of Second Life (SL) briefly explaining history and development. Explanation and layout of SL.
Definition and use of avatars.
Individual will be using premade avatars for SL use.
Logging on/entering SL
Visiting Clemson University in SL
Basic movements within SL
Communicating with others in SL
Flying
Pie menu
Bottom line features
Preferences
Accepting offers to teleport

Assignment objectives: Log into SL, recognize your avatar and meet and communicate with all the other avatars of our research group. Practice moving about by walking, running, and flying as you explore Clemson Island. Once this is completed accept offer to teleport to SL Orientation Island.

At the end of the first day of class each participant will be given Form A, Form B, and Form C. Each participant will be directed to section "Attitude toward using" on Form A for any needed questions or additional explanations. Then they will complete all forms.

When each participant turns in their forms they will be instructed that upon arrival to class the following week they may go ahead and login to SL and practice until the class actually starts if they wish.

At the end of every class the researcher will then write daily ethnographical log entries. Then researcher will enter data from Forms ABC into computer software. Researcher will review analysis of data to determine what additional questions need to be addressed the next week.

Class Day **Week 2:**

Topics:
Virtual tourism destinations (1)Mexico (2)Egypt
Inventory management
HUD use
Shopping
Attaching items from inventory
Moving together as a group to explore SL
Tourism destinations
Searching for more tourism destinations
Friends
Teleporting yourself and friends

Assignment objectives: Only one person at a time can take the guided tour on the butterfly. While one person in on or getting on the butterfly all the others will explore the island using the abilities they have developed to see what they can find and experience. After some time I will teleport them all to Egypt for further individual exploration and experiences. They may move as any size group that they want. At the end of thier virtual tours they must add inventory items for future use that acquired through the SL virtual shopping experience.

At the end of each class or the remaining class days the participant will be given Form A, Form B and Form C to complete. Form A and Form B will remain the same throughout the research process. Form C will change from week to week to reflect different semi-structured questions.

Researcher will then write daily ethnographical log entries. Then researcher will enter data from Forms ABC into computer software. Research will review analysis of data to determine what additional questions need to be addressed the next week.

Class Day **Week 3:**

Topics:
Searching for more tourism destinations
Traveling alone
Communicating with strangers
What can you find out from other avatars
Changing clothing
Changing appearance

Assignment objectives: Today each participant is to travel inside SL alone without the company or assistance of anyone from the research group. You are to find destinations based on your own interest using search techniques you have learned or advice from avatars you meet that are not part of our research group. You must meet and communicate with a stranger at any travel destination you choose but you cannot invite or teleport anyone from our research group to your location. You may at your own discretion change your avatars clothing or apperarance.

At the end of each class or the remaining class days the participant will be given Form A, Form B and Form C to complete. Form A and Form B will remain the same throughout the research process. Form C will change from week to week to reflect different semi-structured questions.

Researcher will then write daily ethnographical log entries. Then researcher will enter data from Forms ABC into computer software. Research will review analysis of data to determine what additional questions need to be addressed the next week.

Class Day **Week 4:**

Topics:
Individual interviews with researcher
Hotspots
What is your favorite travel destination
Blarney Stone – invitation

Assignment objectives: This will be your last class day in the computer lab. Using hotspots to find new travel destinations that you have not previously visited you are to spend your time exploring places you might like to go. You may go with or take anyone from our research group or go alone. You may talk to strangers or not depending on what you want to do. Near the end of our class time you will accept teleports to the Blarney Stone, where you have been invited to visit some Second Lifers for fun at an Irish Pub. Concluding today's activities you will be asked what was your favorite SL travel destination and why. Your facilitator will be outside of the room today and you have to depend on your own abilities or anyone inside SL should you need assistance.

At the end of each class or the remaining class days the participant will be given Form A, Form B and Form C to complete. Form A and Form B will remain the same throughout the research process. Form C will change from week to week to reflect different semi-structured questions.

Researcher will then write daily ethnographical log entries. Then researcher will enter data from Forms ABC into computer software. Research will review analysis of data to determine what additional questions need to be addressed the next week.

Appendix C

Weekly semi-structured questions

Focus Group Questions

Appendix C – Weekly semi-structured questions & Focus Group Questions

Week 1

1. What was your first impression of SL and how did it match what you expected?

2. What comments did your family and friends make when they heard you would be participating in this study?

3. How did these comments make you feel?

Week 2

1. In what ways did exploring a tourist location in Second Life where the information is presented in a multisensorial way with rich and varied features impact any desire on your part to visit this location in the real world?

2. How closely do you feel that your avatar represents the real you?

3. Discuss your feelings regarding safety in touring through Second Life?

4. What do you like or dislike the most about Second Life and why?

Week 3

1. Discuss your travels today in Second Life as it relates to strangers that you met and your feelings about the experience. For example, did you expect to meet a lot or a few people and what happened? Did you trust/distrust the information they passed on to you? Was the overall experience pleasant or repulsive or somewhere in between? Was safety on your mind while interacting with these people? Did you meet anyone that you feel like you would like to maintain a friendship with and maybe like to tour Second Life with that you did not know before today? Would you have acted differently if you had a family member with you when you met this stranger? Do not limit your discussion to just these questions but use them as a starting off guide to writing about your feelings.

Week 4

1. Describe what you perceive as advantages and disadvantages of using Second Life as an individual tourist.

2. How do you feel about the number and type of strangers that you encounter in Second Life?

3. Describe your favorite destination in Second Life and why you valued this island so much?

4. At any time did you feel like you were somewhere else? Tell me more about this experience.

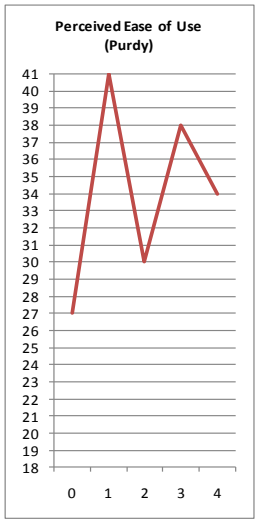
Focus Group Questions

1. Discuss any perception of advantages or disadvantages to visiting a tourism location in Second Life (SL).
2. Discuss whether or not you perceived SL as useful and in what ways.
3. Discuss how you view you skill development over the period of the course in SL.
4. Discuss how you feel your skill development had an impact on your attitude toward SL.
5. Discuss whether you feel that your SL experience of a tourism destination gave you a good sampling of what that destination may be like.
6. Discuss whether your experience with a SL tourism destination creates a desire to visit the destination in the real world.
7. Discuss how the opinions of others either makes you more likely or less likely to participate in SL.
8. Discuss whether you feel that visiting a tourism location in SL provides a complete tourism experience for you.
9. Discuss your most favorite and least favorite destinations visited.
10. Discuss what would have made the tourism experience better for you.
11. Discuss how you perceive family and friends would react to experiencing a tourism destination in SL.
12. Discuss if you would spend real US $ to visit SL tours.

Appendix D

Overview of all the case comparisons for each of the following five constructs

- PEOU - perceived ease of use
- PU - perceived usefulness
- Immersion
- A - attitude toward using
- BI - behavioral intention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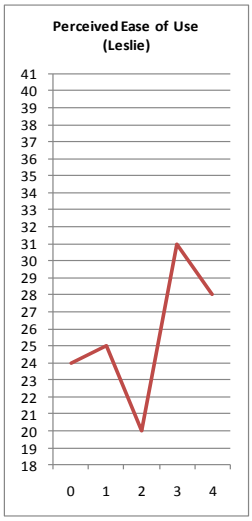
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(Leslie)
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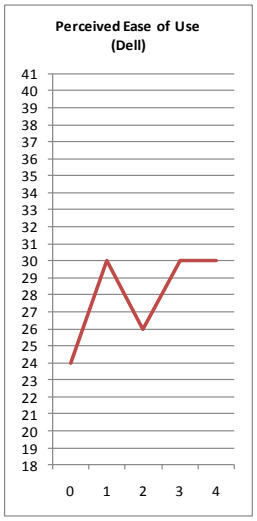
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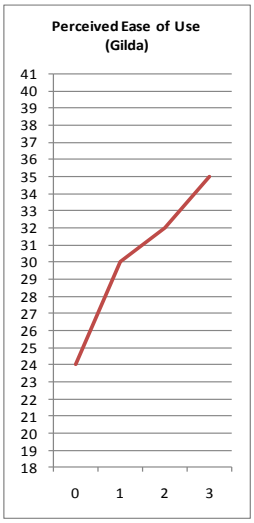
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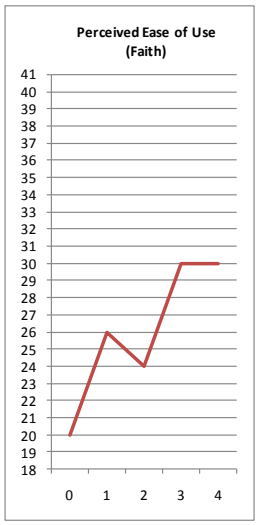
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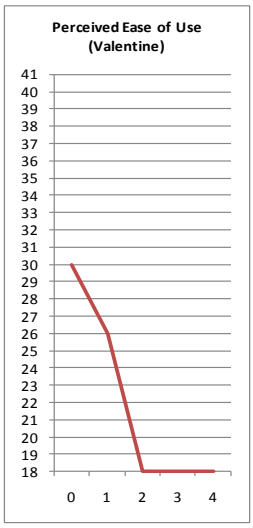
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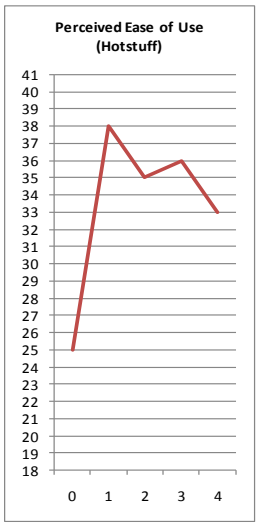
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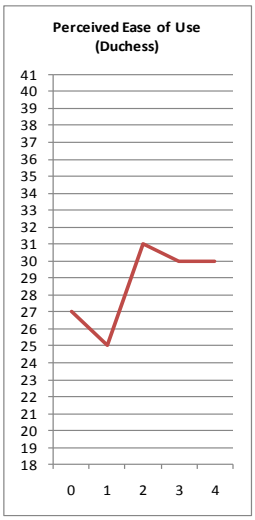
Perceived Ease of Use
(Duchess)
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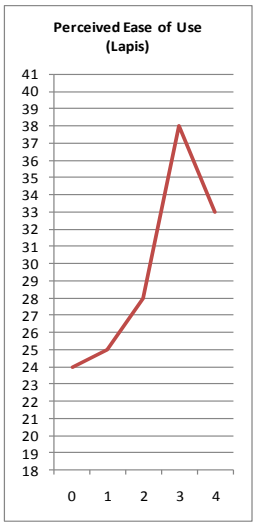
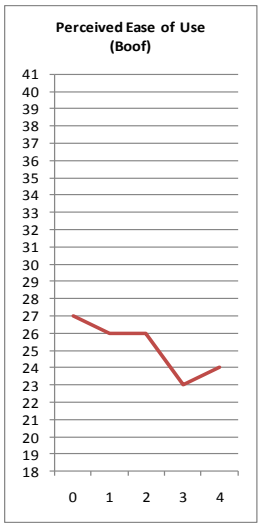
0 1 2 3 4


Perceived Ease of Use
(Lapis)
41 40 39 38 37 36 35 34 33 32 31 30 29 28 27 26 25 24 23 22 21 20 19 18
0 1 2 3 4


Perceived Ease of Use
(Boof)
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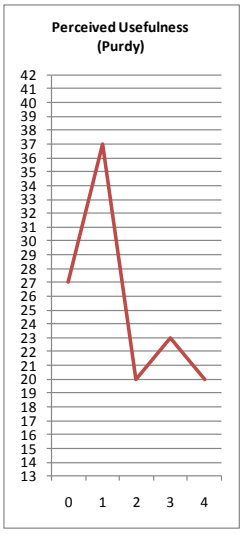
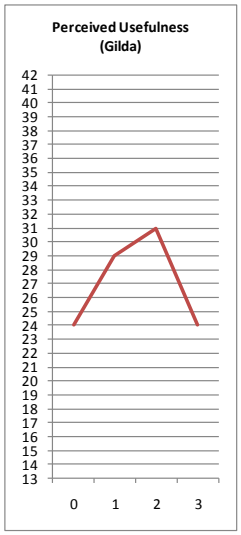
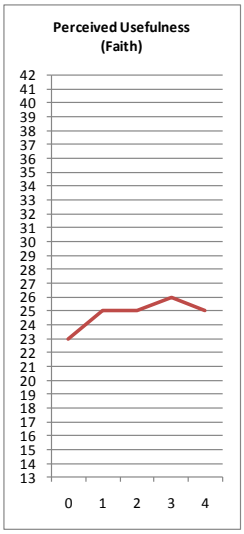
0 1 2 3 4

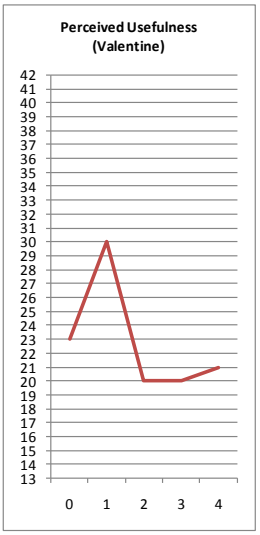

Perceived Usefulness
(Purdy)

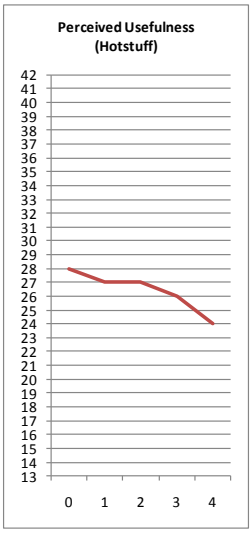

Perceived Usefulness
(Leslie)

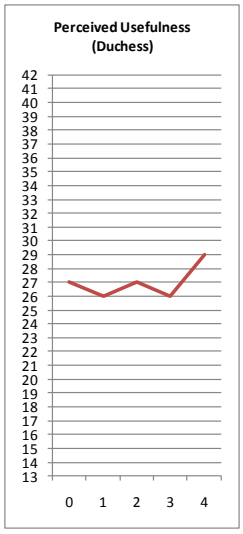

Perceived Usefulness
(Dell)


Perceived Usefulness
(Gilda)

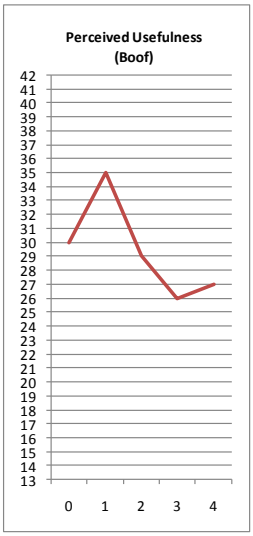

Perceived Usefulness
(Faith)

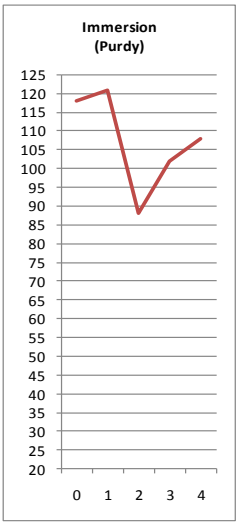

Perceived Usefulness
(Valentine)

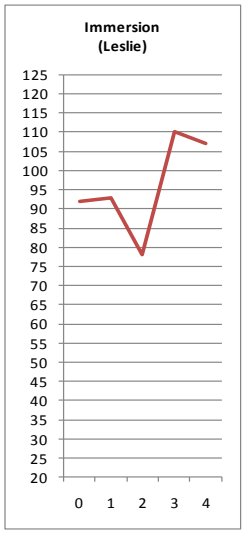

Perceived Usefulness
(Hotstuff)

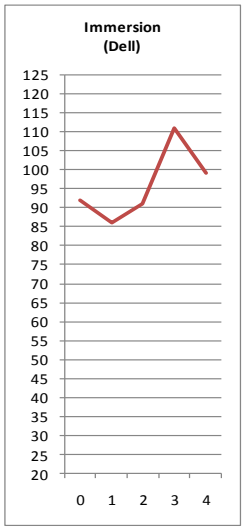

Perceived Usefulness
(Duchess)

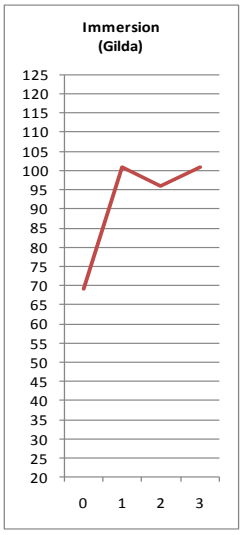

Perceived Usefulness
(Lapis)

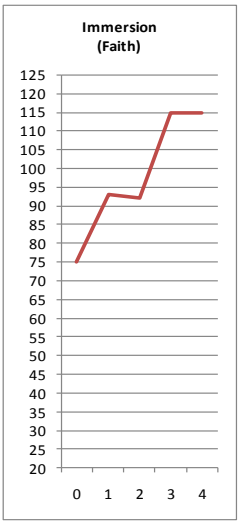

Perceived Usefulness
(Boof)

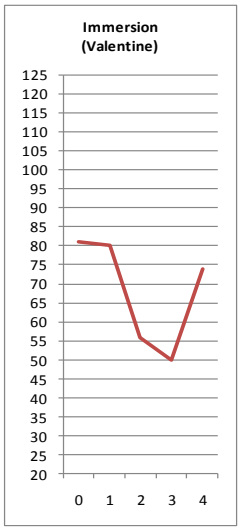

Immersion
(Purdy)

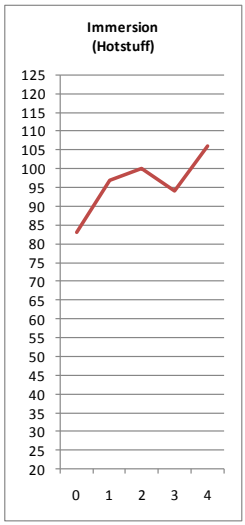

Immersion
(Leslie)

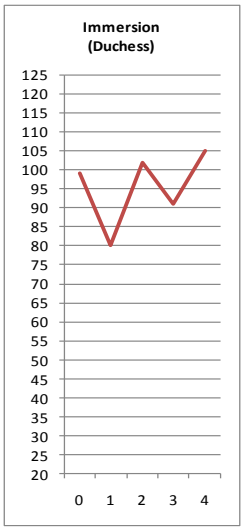

Immersion
(Dell)

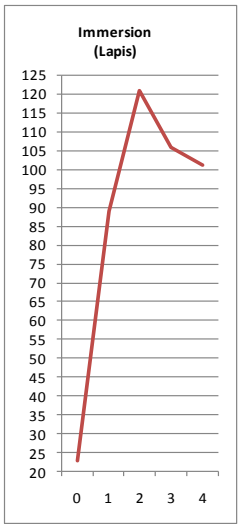

Immersion
(Gilda)

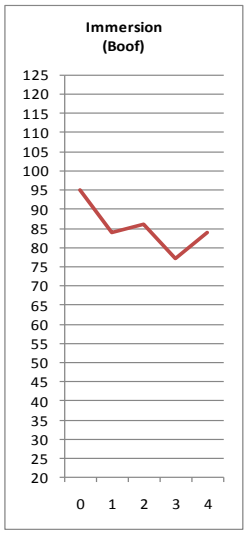

Immersion
(Faith)

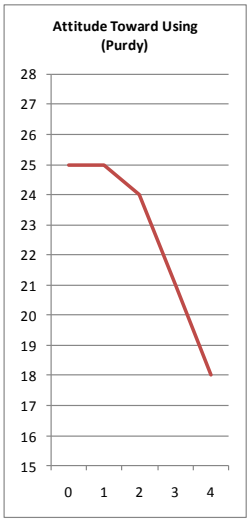

Immersion
(Valentine)


Immersion
(Hotstuff)


Immersion
(Duchess)


Immersion
(Lapis)


Immersion
(Boof)


Attitude Toward Using
(Purdy)
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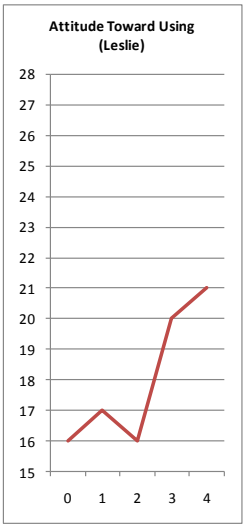
0 1 2 3 4


Attitude Toward Using
(Leslie)
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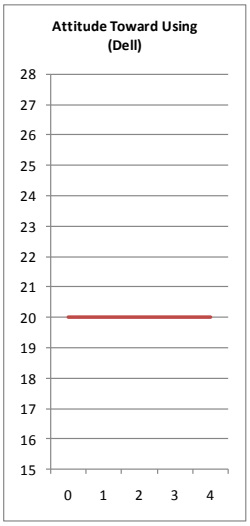
0 1 2 3 4


Attitude Toward Using
(Dell)
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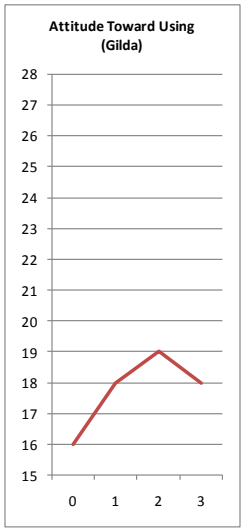
0 1 2 3 4


Attitude Toward Using
(Gilda)
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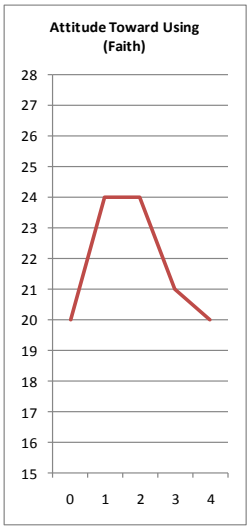
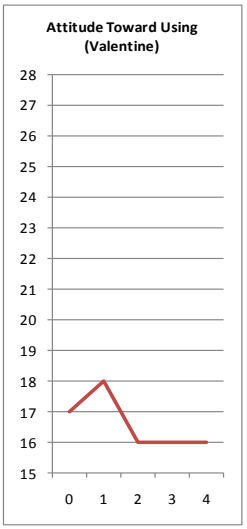
0 1 2 3


Attitude Toward Using
(Faith)
28 27 26 25 24 23 22 21 20 19 18 17 16 15
0 1 2 3 4


Attitude Toward Using
(Valentine)
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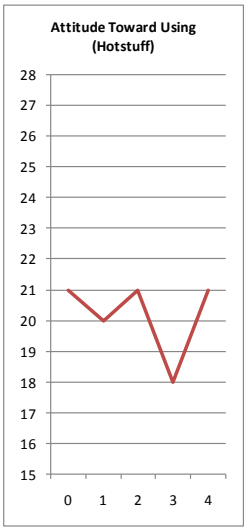
0 1 2 3 4


Attitude Toward Using
(Hotstuff)
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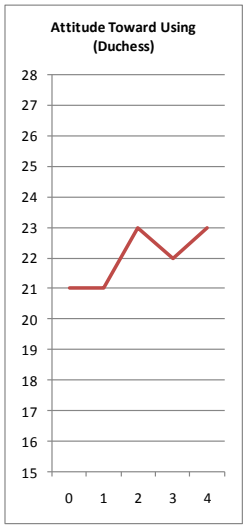
0 1 2 3 4


Attitude Toward Using
(Duchess)
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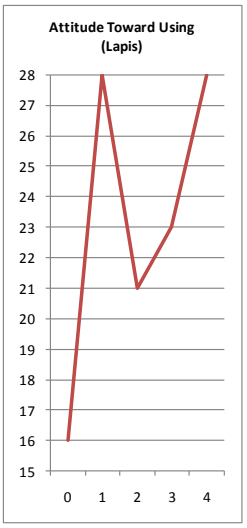
0 1 2 3 4


Attitude Toward Using
(Lapis)
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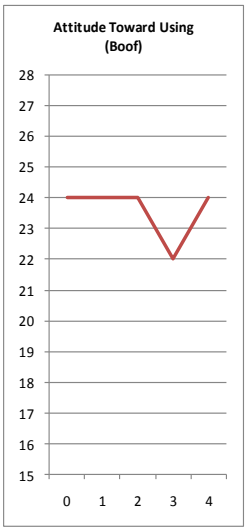
0 1 2 3 4


Attitude Toward Using
(Boof)
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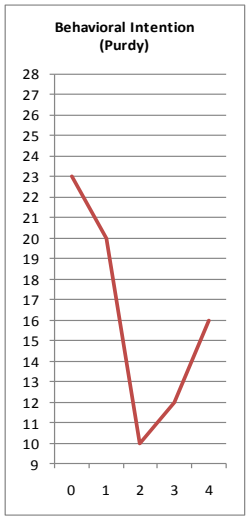
0 1 2 3 4


Behavioral Intention
(Purdy)
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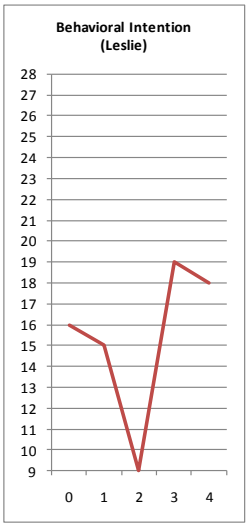
0 1 2 3 4


Behavioral Intention
(Leslie)
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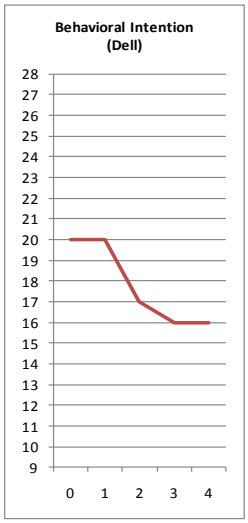
0 1 2 3 4


Behavioral Intention
(Dell)
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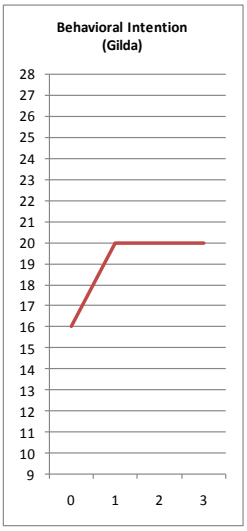
0 1 2 3 4


Behavioral Intention
(Gilda)
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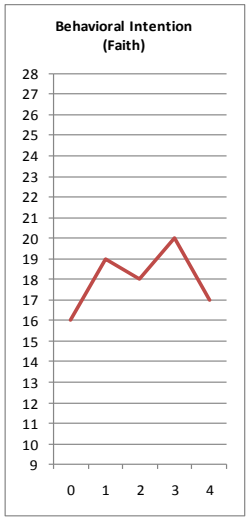
0 1 2 3


Behavioral Intention
(Faith)
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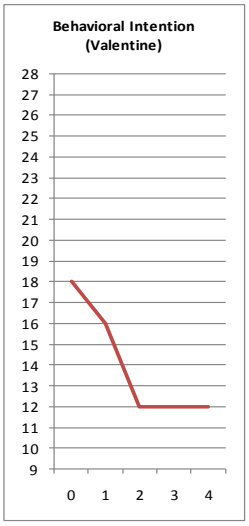
0 1 2 3 4


Behavioral Intention
(Valentine)
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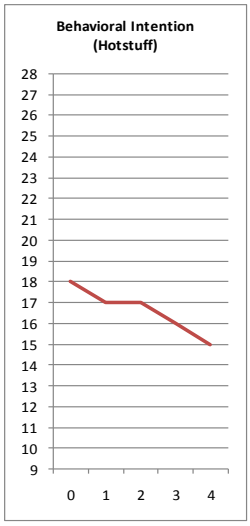
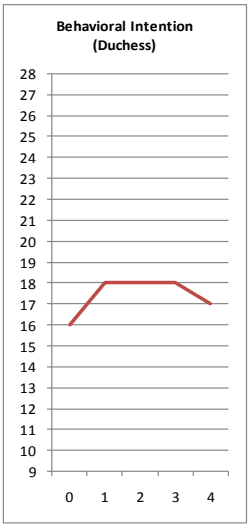
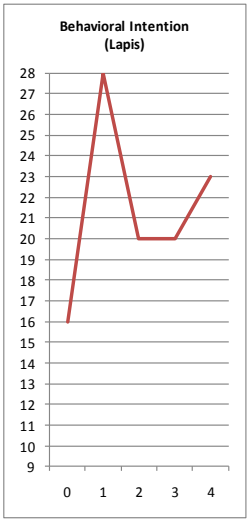
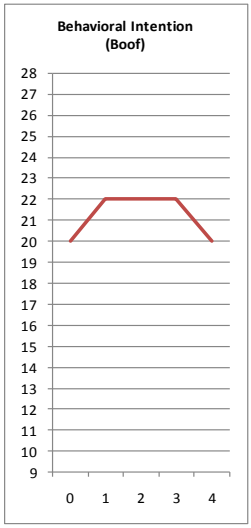
0 1 2 3 4


Behavioral Intention
(Hotstuff)
28 27 26 25 24 23 22 21 20 19 18 17 16 15 14 13 12 11 10 9
0 1 2 3 4


Behavioral Intention
(Duchess)
28 27 26 25 24 23 22 21 20 19 18 17 16 15 14 13 12 11 10 9
0 1 2 3 4


Behavioral Intention
(Lapis)
28 27 26 25 24 23 22 21 20 19 18 17 16 15 14 13 12 11 10 9
0 1 2 3 4


Behavioral Intention
(Boof)
28 27 26 25 24 23 22 21 20 19 18 17 16 15 14 13 12 11 10 9
0 1 2 3 4

Appendix E

Case scale analysis for each of the ten participants

Case 1- Purdy Carolina

First, the data results seen in the graphs shown in Figure 4.2 for Purdy's attitude toward using SL and behavior intention to use SL are not consistent. From the baseline to the end of the first week attitude stayed the same but behavioral intention dropped. The second week attitude only dropped a little while behavioral intention took a nose dive. By week three attitude had continued to fall but behavioral intention was moving up in a positive direction which it continued through week four while attitude still plummeted.

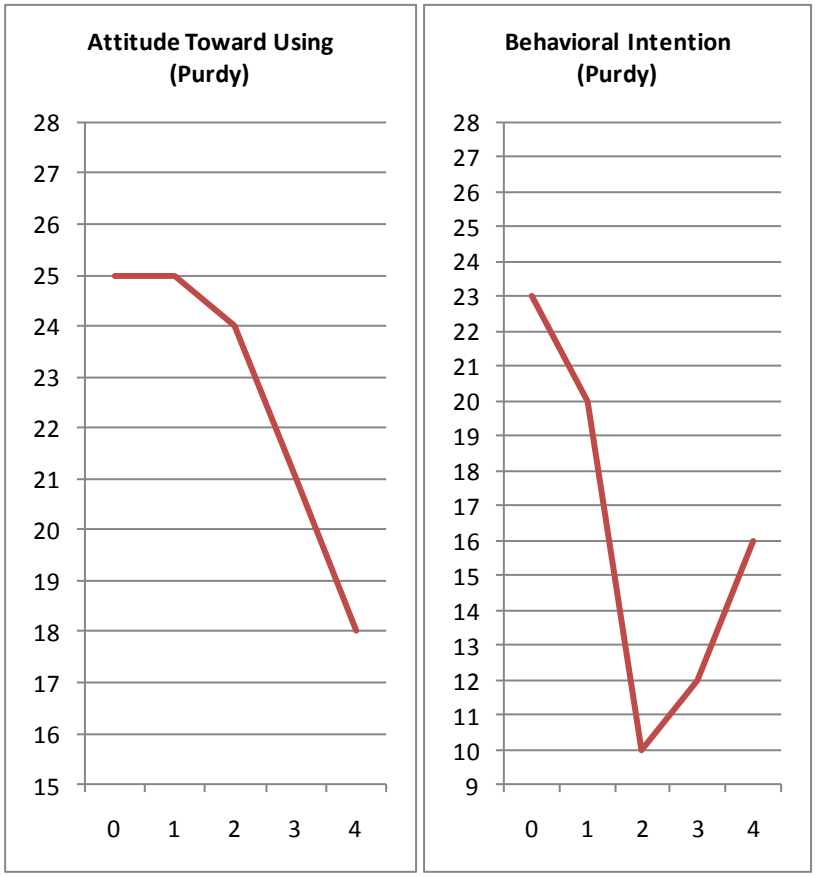


Figure 4.2: Case 1 - Attitude Toward Using and Behavioral Intention Graphs

The data shows that Purdy experienced her biggest spike in ease of use the first week. She had no problems adapting to the basic use of SL and *enjoyed the freedom of exploring the Clemson Learning Island*. The second week there was a drop in ease of use. During the guided butterfly tour the computer lab was experiencing lag which caused the automated flight to stop intermittently and the sound to not match the activity. Thus, explaining some of the perceived difficulty with perceived use, usefulness, and immersion on the second week as seen in the graphs in Figure 4.3.

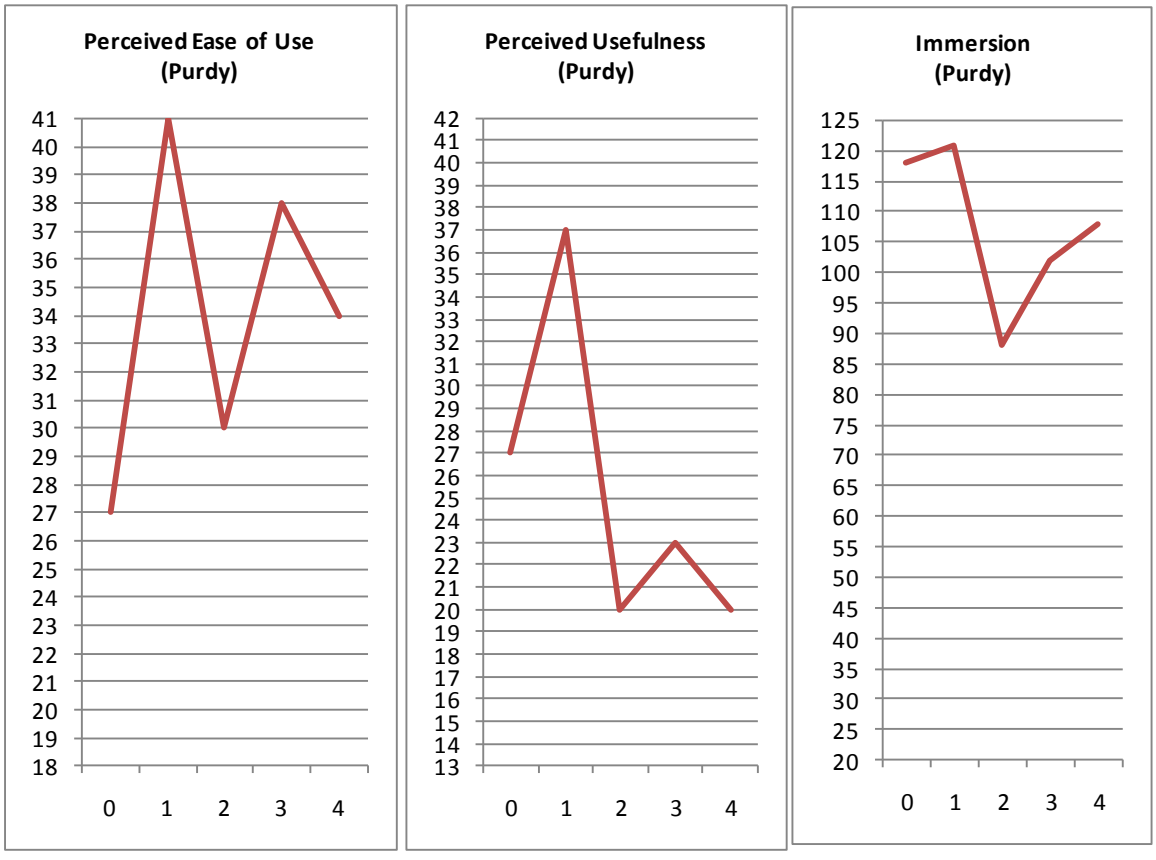


Figure 4.3: Case 1 - PEOU, PU, and Immersion Graphs

Figure 4.4 shows graphs of the Immersion and Behavioral Intention. When asked about her avatar, Purdy stated *that she felt the avatar was exactly like her*. When questioned further she said the avatar was *perky and friendly and just like her*. These are personality indicators and not physical reference which supports immersion.

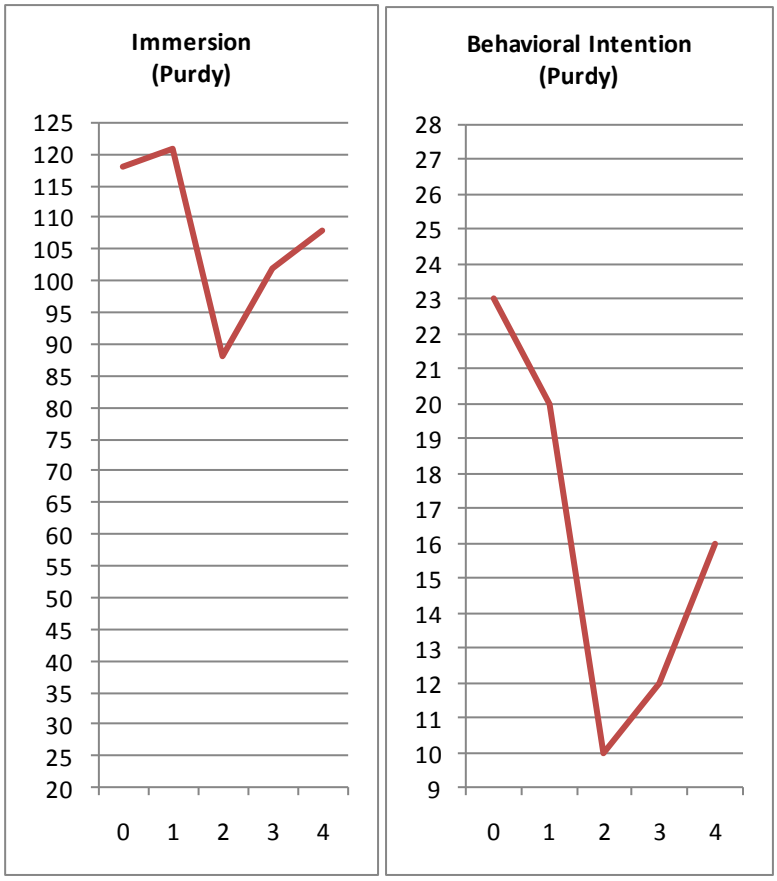


Figure 4.4: Case 1 - Greatest Consistency with Behavioral Intention

Case 2 – Leslie Fairlady

Leslie Fairlady was a very logical and practical case. She was quiet in class and very reflective in her thoughts and feelings. Her scales showed the most consistency across the board. Figure 4.5 shows the graphs representing attitude toward using SL and

behavioral intention to use SL as somewhat inconsistent but not wildly so. From Leslie's baseline to the end of week one her attitude had a positive increase but her intention had a slight decrease. *She stated that she was not a big fan of animation.* However, over time animation became less of an issue for her. From week one to week two there was a drop in both attitude and intention. From week two to week three there was a positive rise in both attitude and intention. Week four presented a rise in attitude and a drop in intention but not greatly.

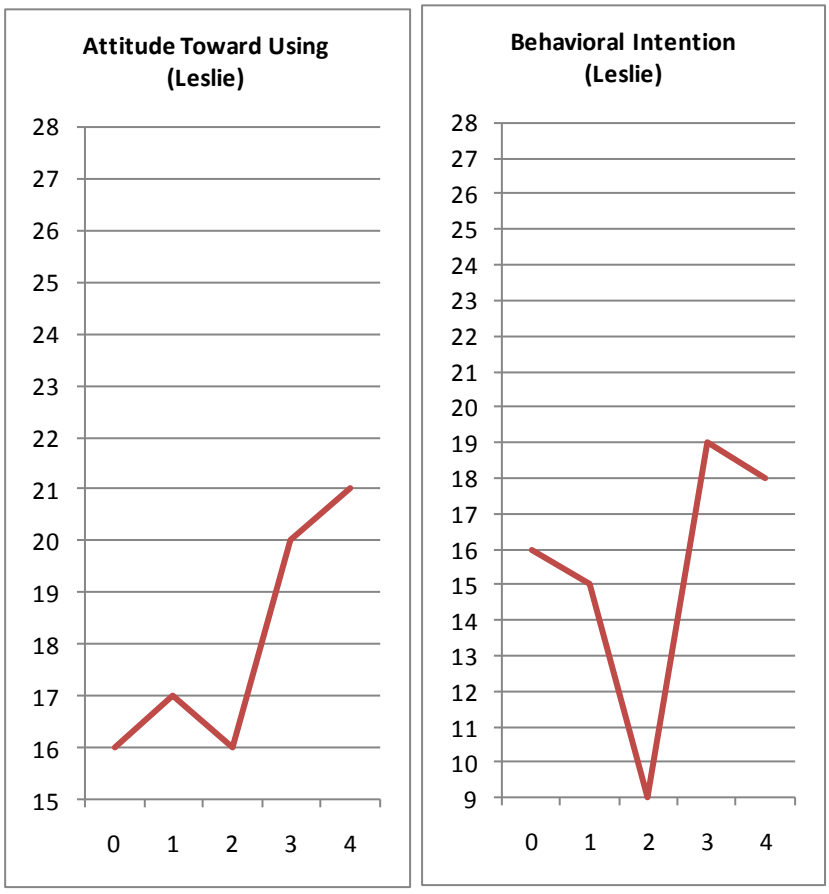


Figure 4.5: Case 2 - Attitude Toward Using and Behavioral Intention Graphs

Figure 4.6 shows Leslie's graphs for PEOU, PU, and immersion as very consistent. Leslie was the case that followed the TAM model predictions the closest of all the cases.

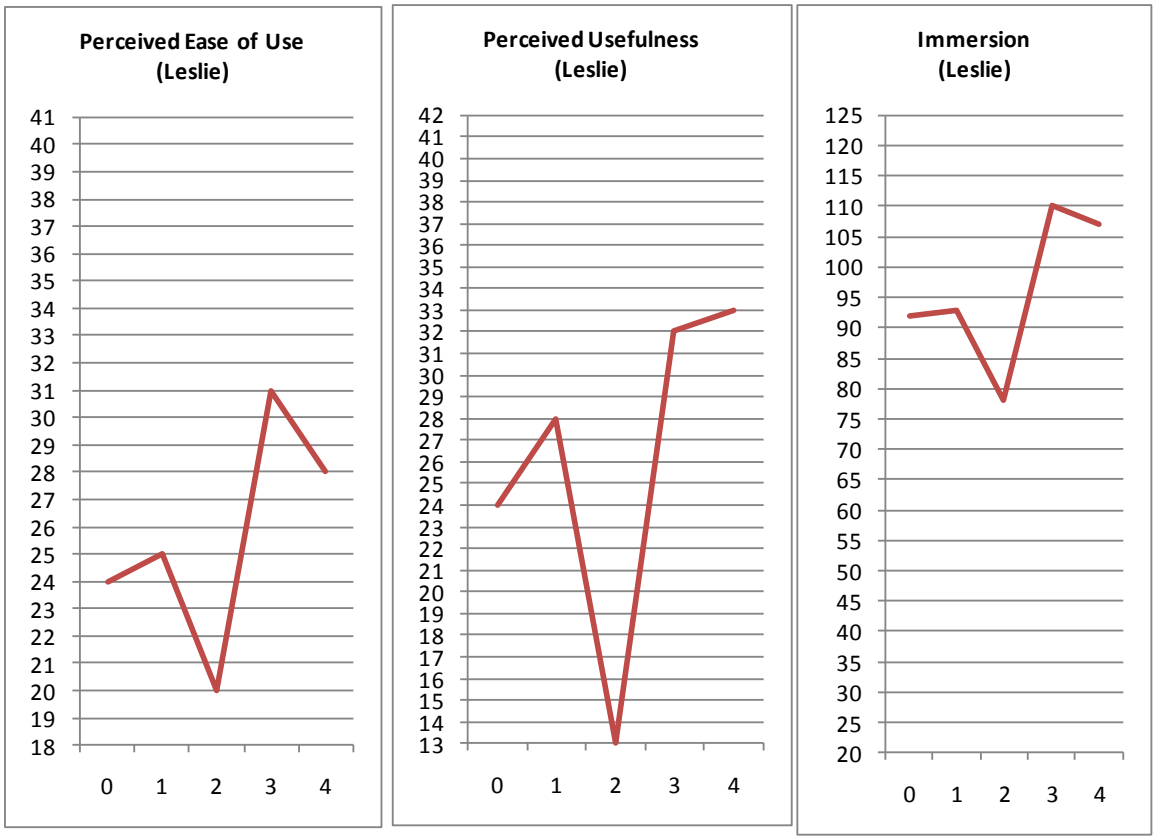


Figure 4.6: Case 2 - PEOU, PU, and Immersion Graphs

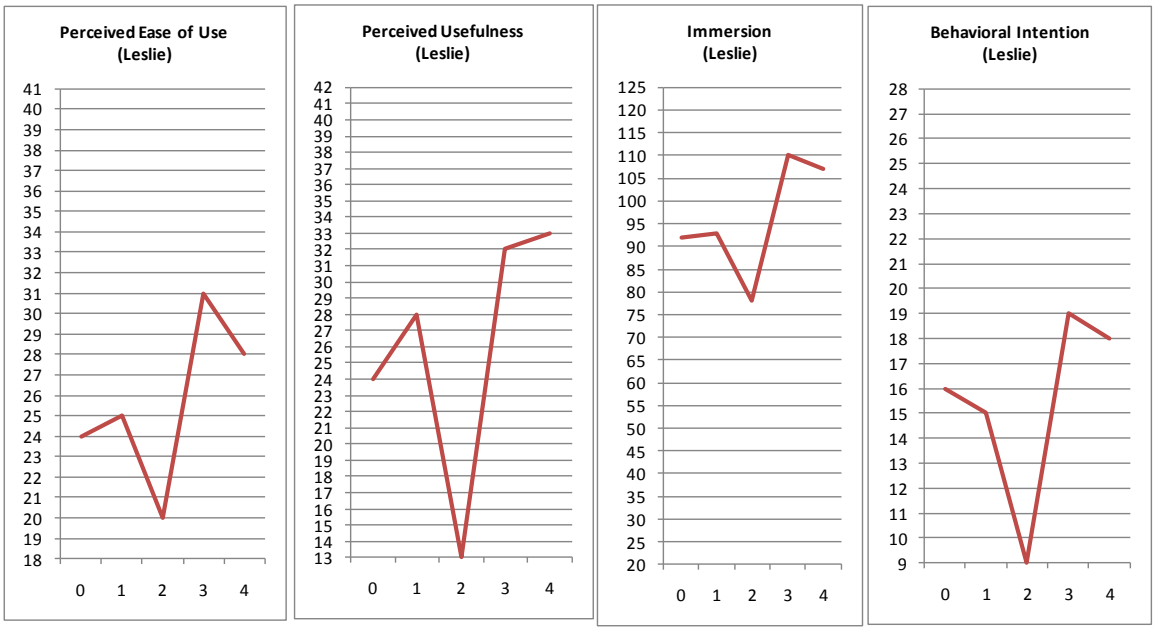


Figure 4.7: Case 2 - Greatest Consistency with Behavioral Intention

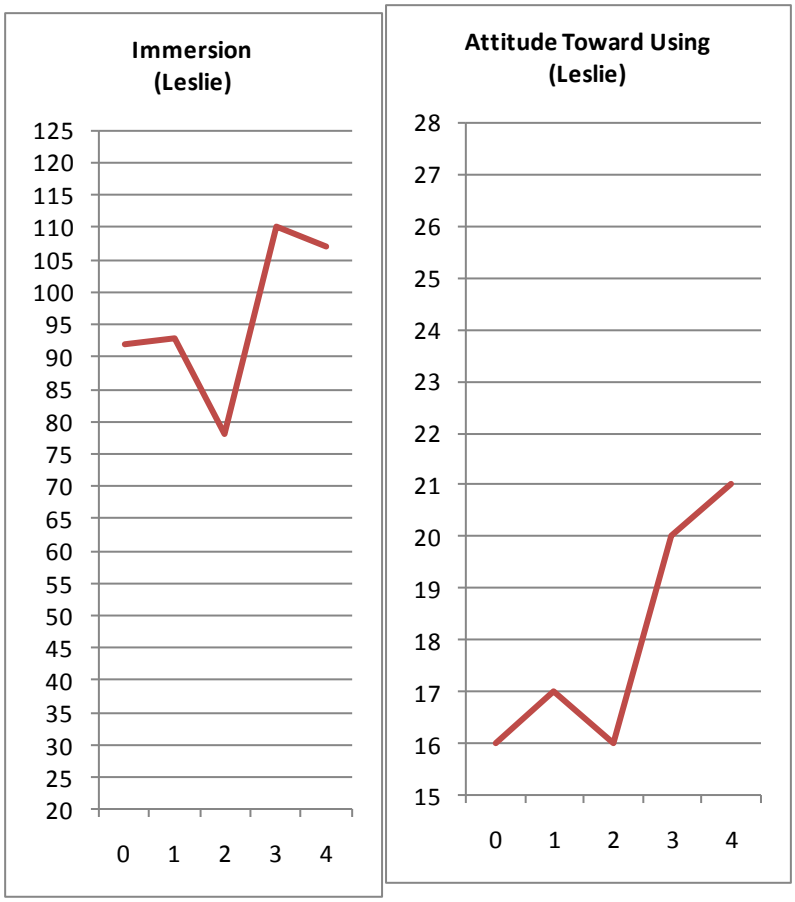


Figure 4.8: Case 2 - Greatest Consistency with Attitude Toward Using

Case 3 – Dell Choovio

Dell's graphs as seen in Figure 4.9 show a unique story in that her attitude before beginning the classes as shown by her baseline results were met but never increased or decreased. Her attitude remained constant whereas her behavioral intention decreased on week two and three and then remained the same on week four. Thus, this represents another case of somewhat consistency between attitude and intention.

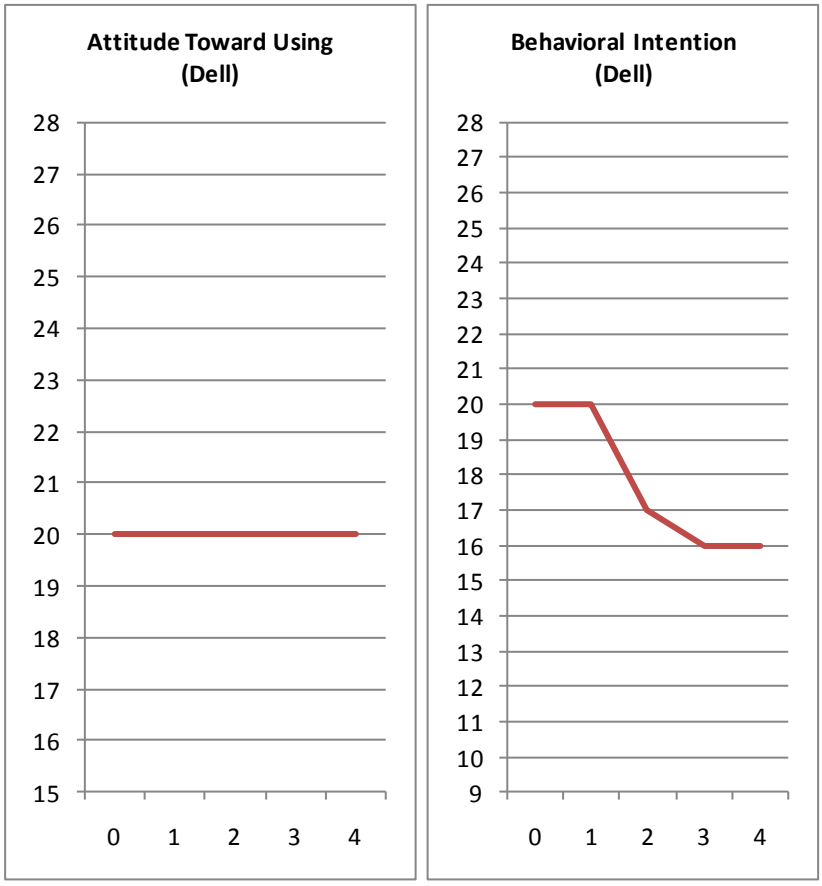


Figure 4.9: Case 3 - Attitude Toward Using and Behavioral Intention Graphs

When examining Dell's three constructs of PEOU, PU and immersion as seen in Figure 4.10 it became clear that each construct had a uniquely different consistency with this case. While talking about her experiences during class with the researcher Dell said that *she wanted to meet people and the social aspect of SL was important to her. She hoped to find a way to make new friends to travel with.*

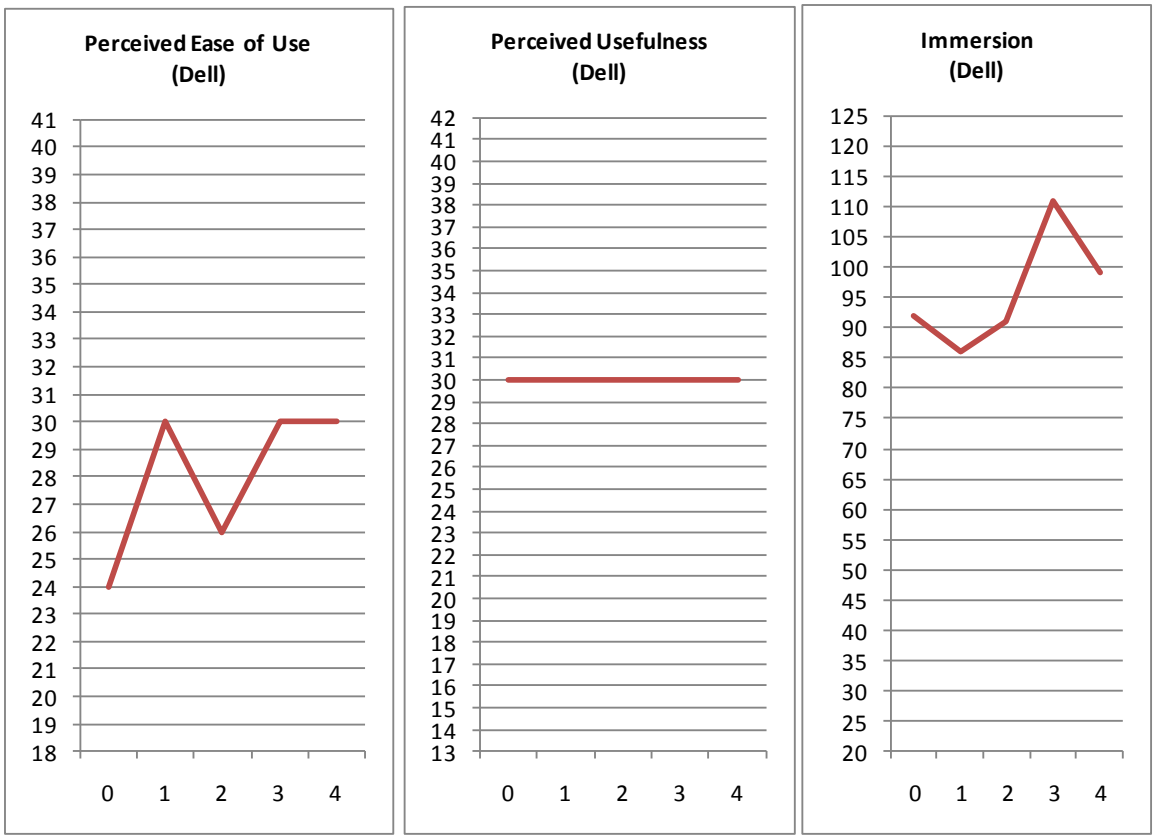


Figure 4.10: Case 3 - PEOU, PU, and Immersion Graphs

However, as seen in Figure 4.11 perceived usefulness was a consistent reflection of attitude for Dell.

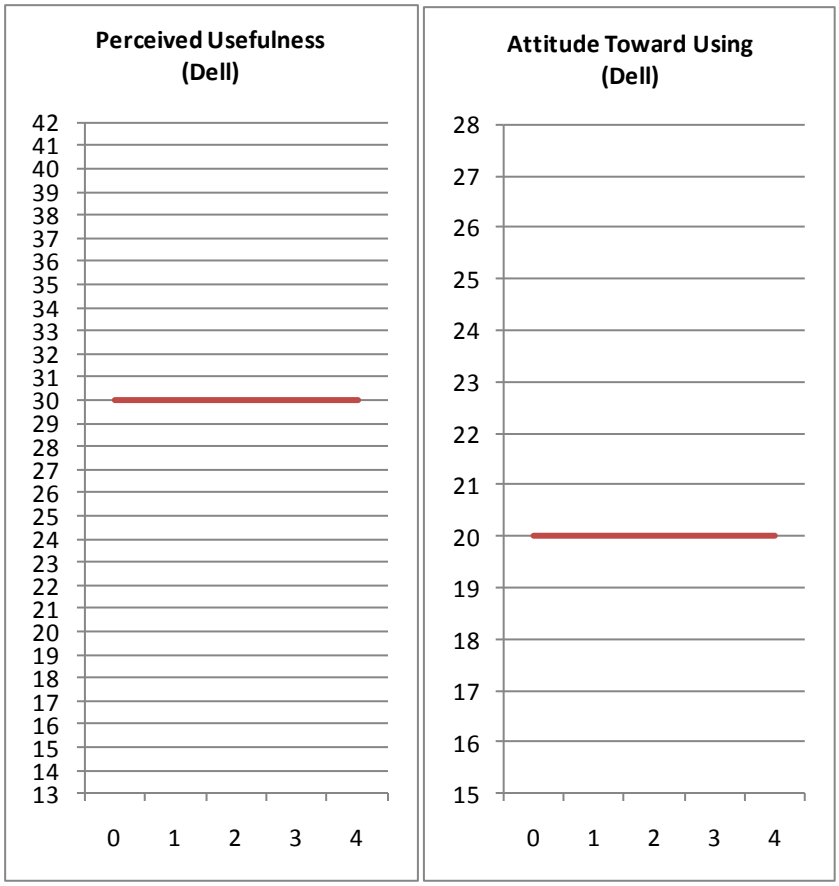


Figure 4.11: Case 3 - Greatest Consistency with Attitude Toward Using

Case 4 – Gilda Goldshark

Gilda only had scale date for three weeks due to an illness. Figure 4.12 shows that Gilda's baseline to the end of week one increased for both attitude and intention. Gilda's intention remained flat for the next two weeks but her attitude increased and then dropped. Thus, according to the graphs Gilda's attitude and intention were not the same and inconsistent.

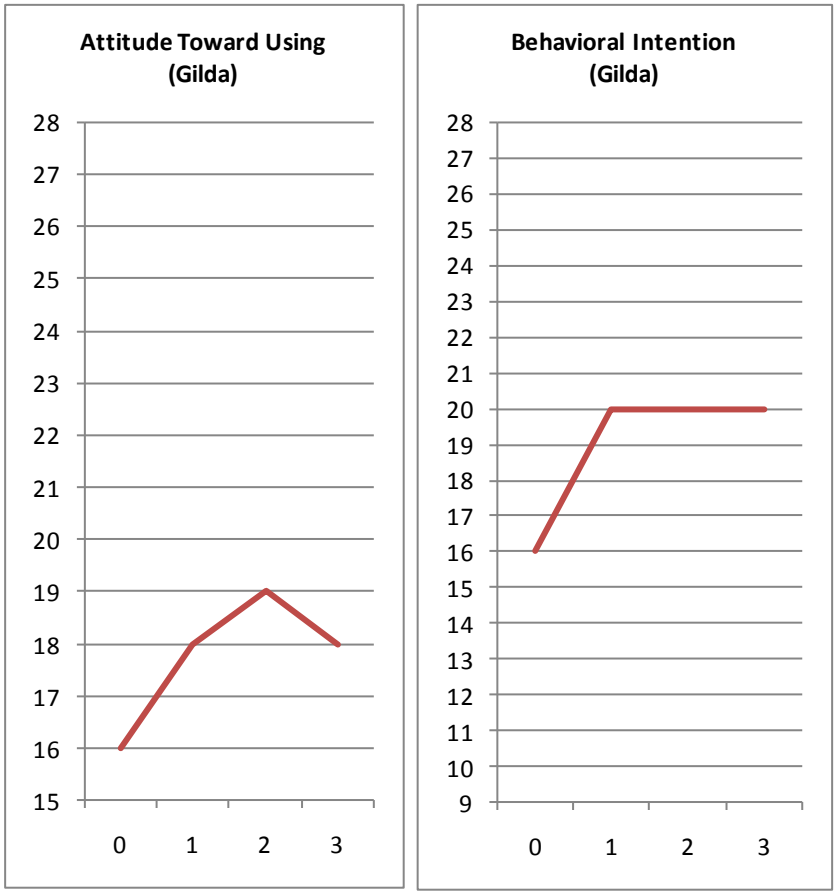


Figure 4.12: Case 4 - Attitude Toward Using and Behavioral Intention Graphs

The three constructs of PEOU, PU, and immersion were uniquely different (Figure 4.13). During week two there was not enough class time for Gilda to experience the guided tour on the butterfly. Therefore, she did not experience the technology problems with lag as the other cases did. She was the most aggressive case when it came to exploring the islands. When the instructor talked with her during her exploration she indicated that she had a background in education and said *"this is the way the children do, the way they learn, so I want to learn all I can about SL so I want to see and touch and experience everything I can."*

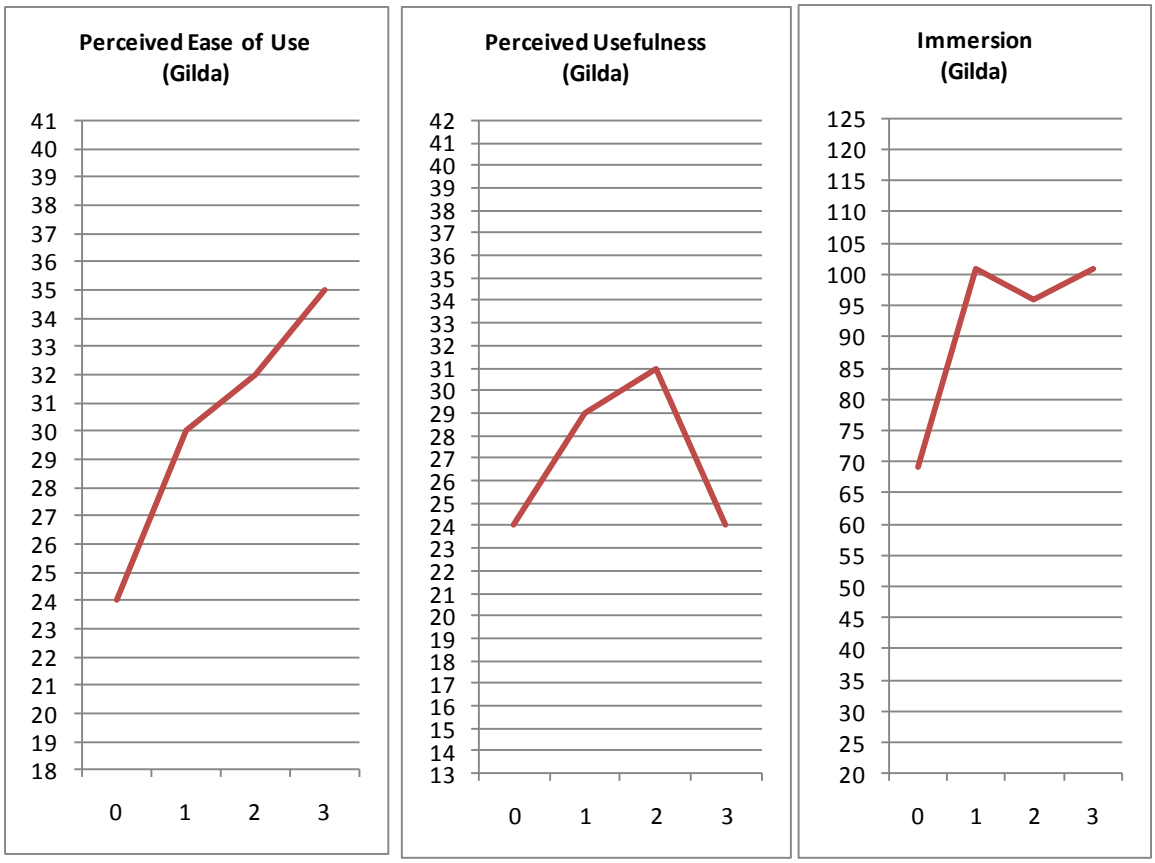


Figure 4.13: Case 4 - PEOU, PU, and Immersion Graphs

Gilda wanted to change her avatar's clothing and hairstyles constantly. She said that was one of the most fun things for her while in SL. She really seemed to enjoy talking to other avatars and would share anything she thought was interesting with the other cases. She was an innovator and leader for the research group.

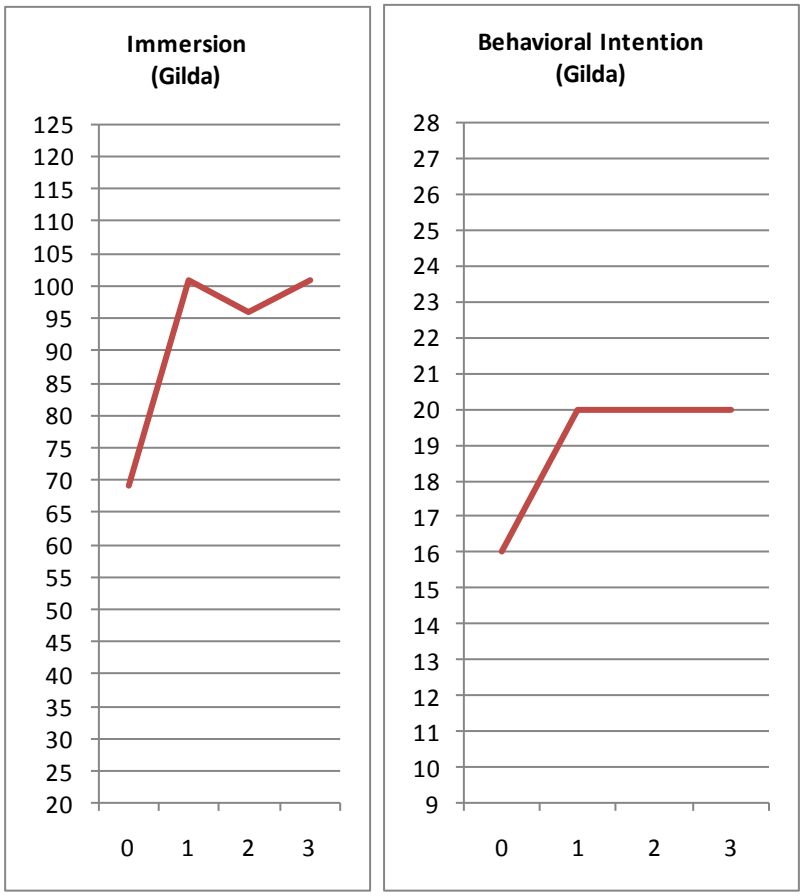


Figure 4.14: Case 4 - Greatest Consistency with Behavioral Intention

Figure 4.15 shows the graphs for perceived usefulness and attitude.

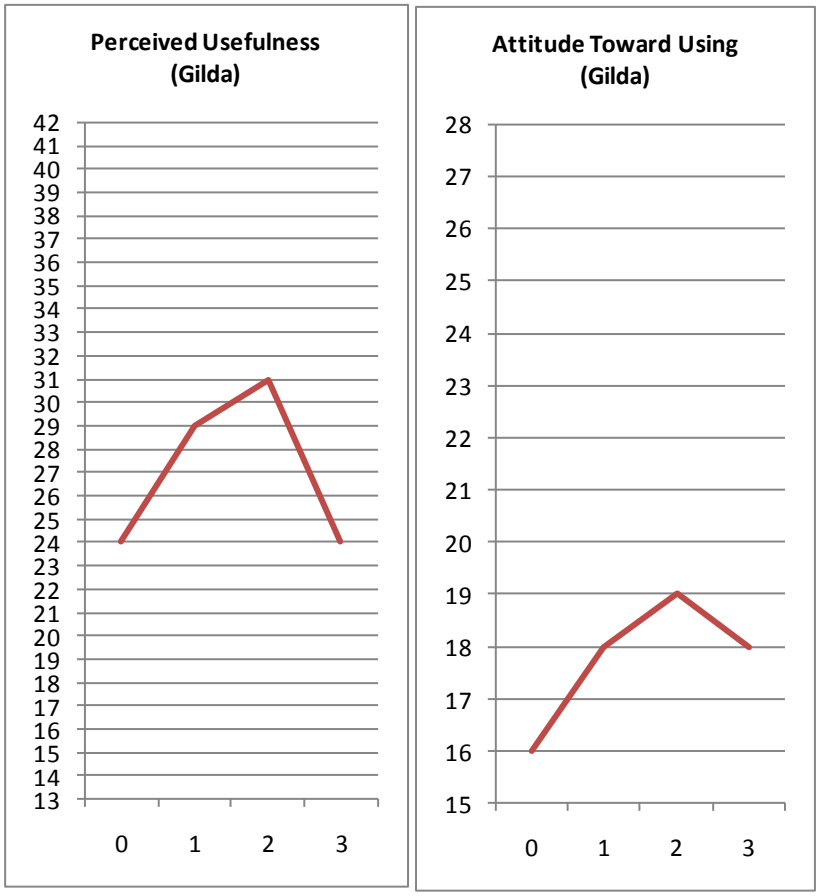


Figure 4.15: Case 4 - Greatest Consistency with Attitude Toward Using

Case 5 – Faith Foodiboo

Faith's graphs shown in Figure 4.16 show that attitude and intention are somewhat consistent. From her baseline to week one both attitude and intention moved in a positive direction. Week two attitude stayed the same but intention dropped. Week three showed more inconsistencies when attitude moved in a negative direction while intention moved in a positive direction. Week four both attitude and intention behaved the same as they both took downturns.

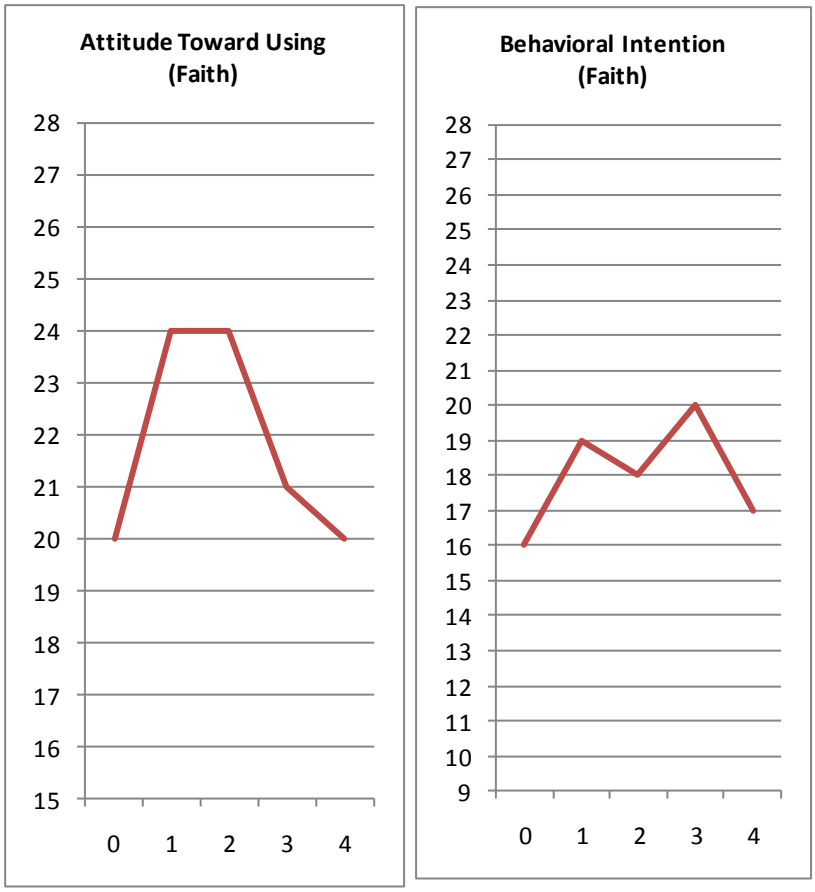


Figure 4.16: Case 5 - Attitude Toward Using and Behavioral Intention Graphs

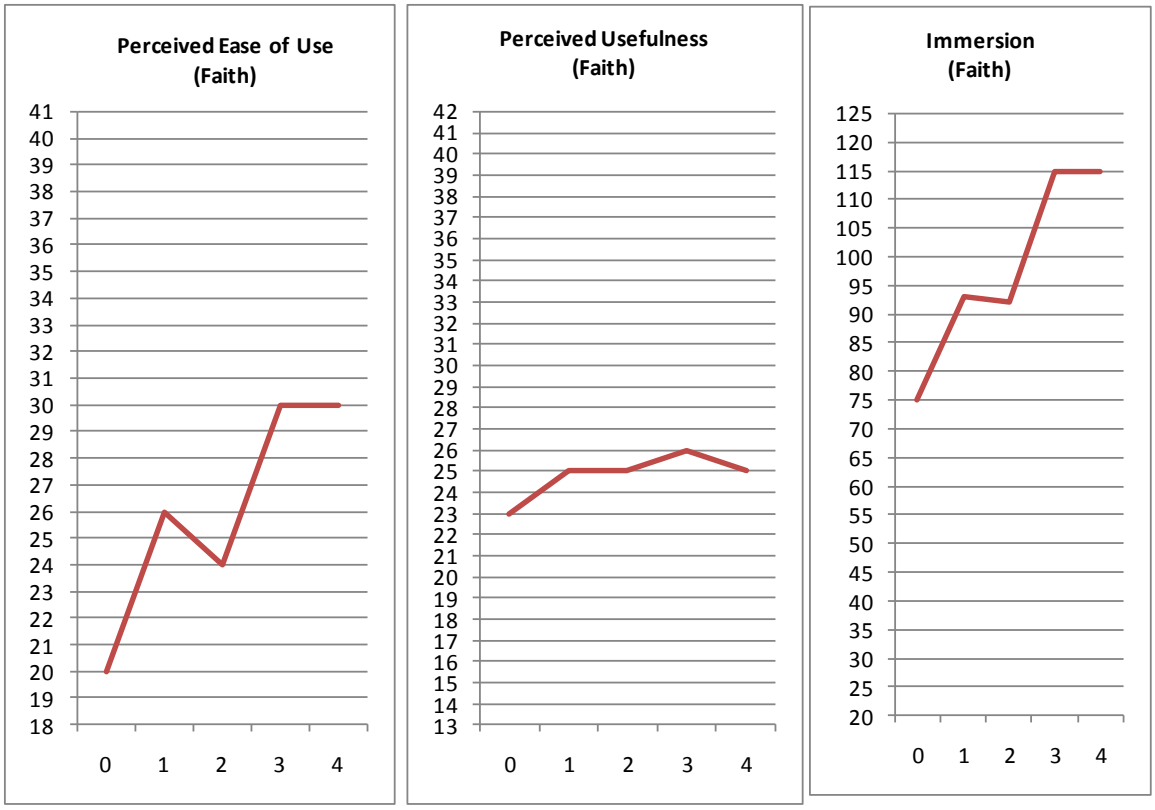


Figure 4.17: Case 5 - PEOU, PU, and Immersion Graphs

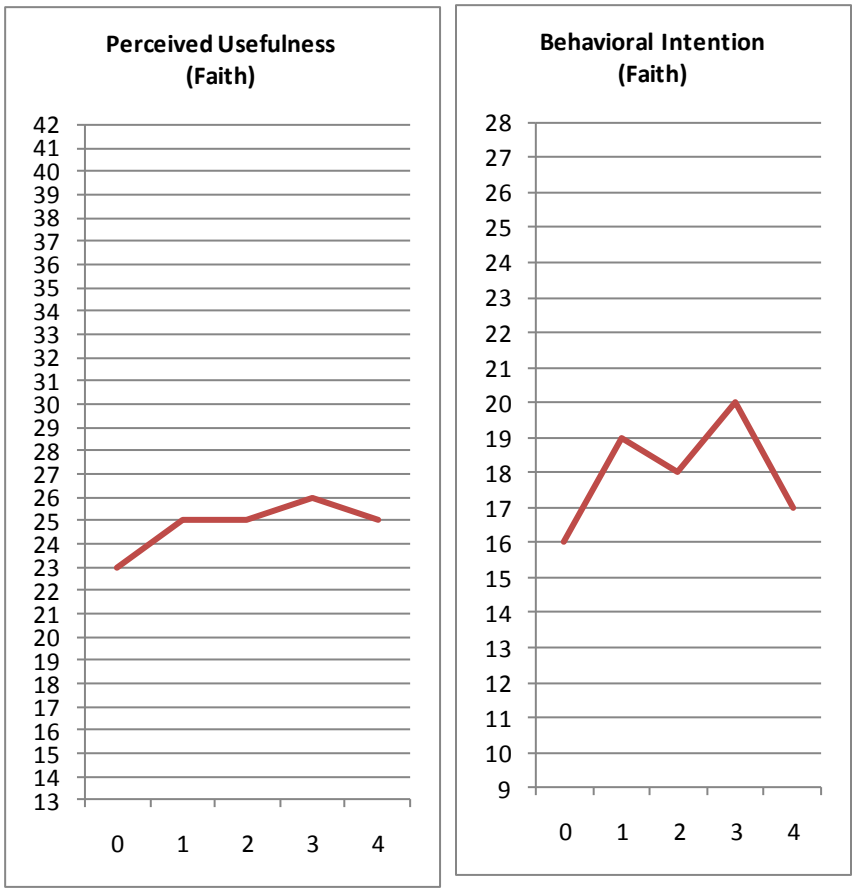


Figure 4.18: Case 5 - Greatest Consistency with Behavioral Intention

Case 6 – Valentine Chiwanga

Valentine's graphs as seen in Figure 4.19 show that there is consistency between attitude and intention. The baseline to the end of week one are different but all the other movements are the same. This was a unique case in that by the time this avatar showed up for the guided butterfly ride on week two *she had already changed her avatars appearance and was thinner and more attractive.* The researcher had not given Valentine any instruction as to how to accomplish this task. When the researcher noticed this change Valentine said. "*she felt much better now that she had lost some weight.".* While

engaging in talk about with Valentine, *she shared that her boyfriend (real world) was upset with her for spending time in SL. He told her it was just a game and she should be spending her time better on other things. When she confronted him on this he told her it was a game and to talk to his son. His son works with computers so Valentine saw him as a knowledgeable source and asked him if he had heard of SL. The son said yes. So she asked him what was it and he stated that it was just a game that was all. From that point on she seemed to be in conflict due to enjoying engaging in SL but feeling that she was getting addicted to playing games and should not be doing that.*

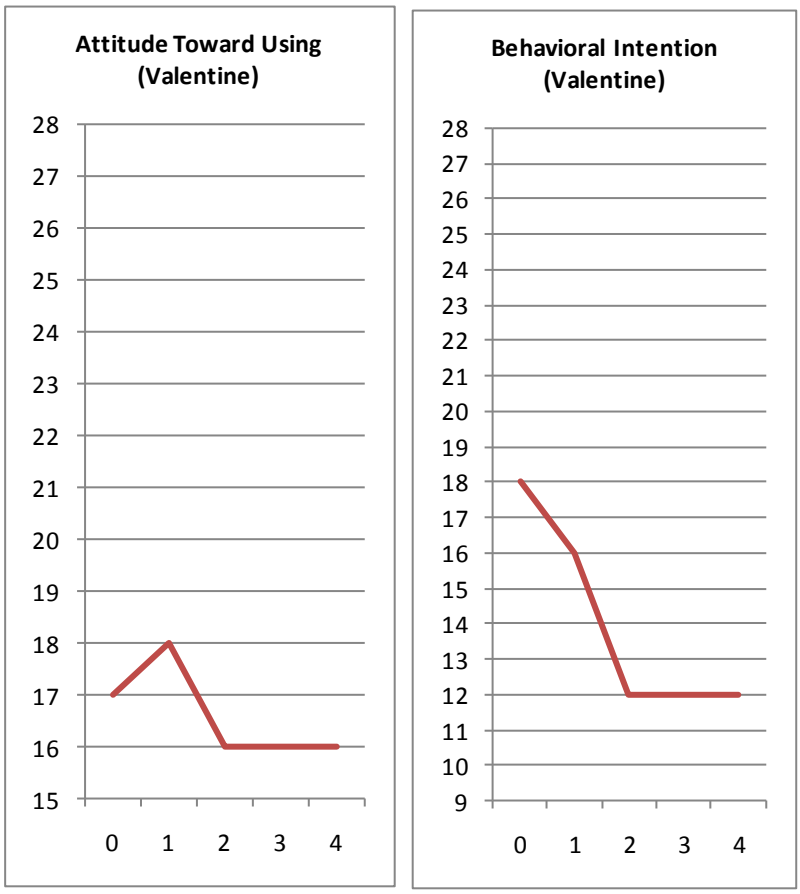


Figure 4.19: Case 6 - Attitude Toward Using and Behavioral Intention Graphs

Even with Valentine's boyfriend continued negative attitude toward her participating in SL the graphs in Figure 4.20 shows some increase in her perception of usefulness and a strong increase in immersion by the end of the study.

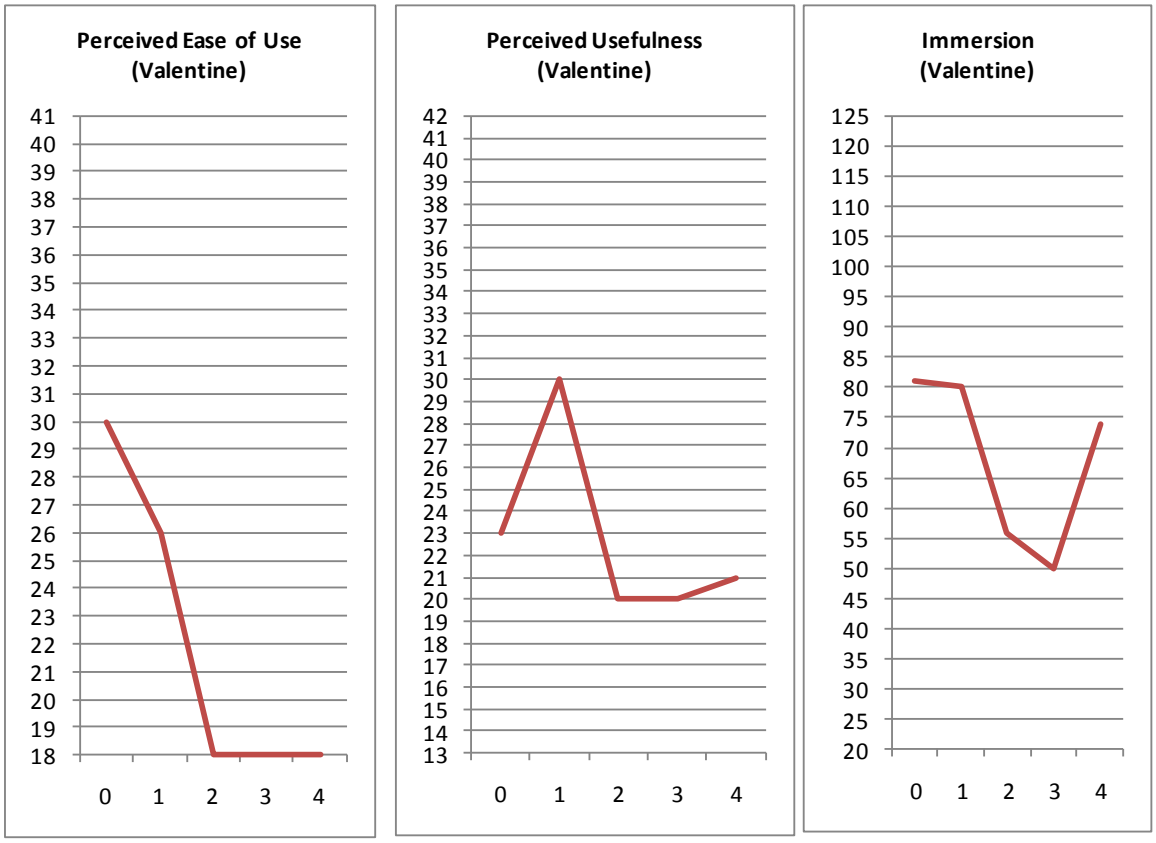


Figure 4.20: Case 6 - PEOU, PU, and Immersion Graphs

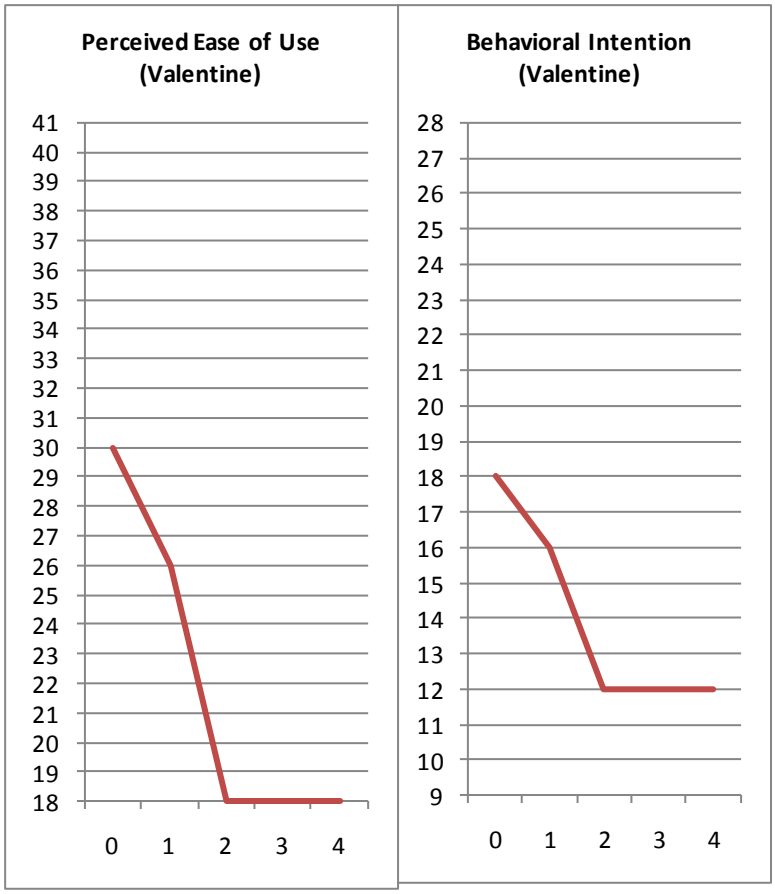


Figure 4.21: Case 6 - Greatest Consistency with Behavioral Intention

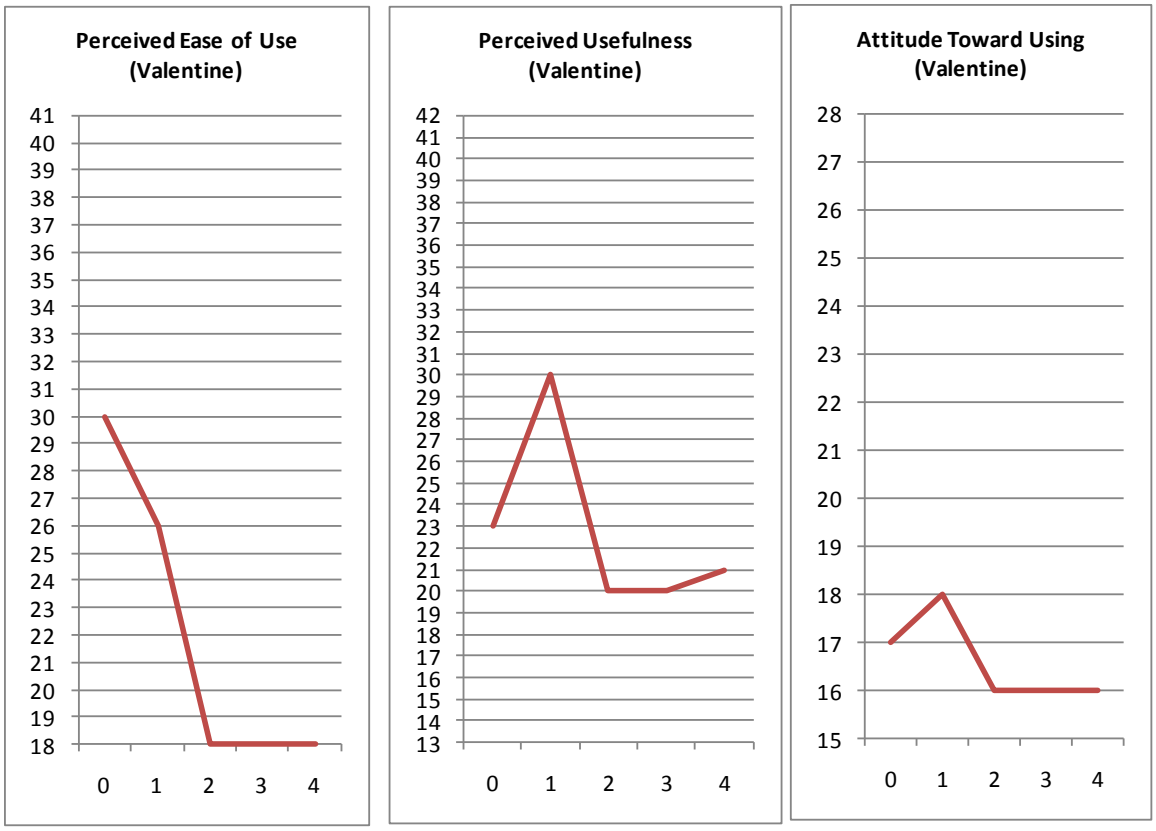


Figure 4.22: Case 6 - Greatest Consistency with Attitude Toward Using

Case 7 – Hotstuff Doghouse

The graphs for Hotstuff as seen in Figure 4.23 show attitude and intention to be somewhat consistent in their movement. The baseline through the end of week one were the same but the remainder of the weeks were different. On week two attitude went up while intention remained the same. Week three attitude and intention moved down while on week four attitudes went back upward while intention went further down.

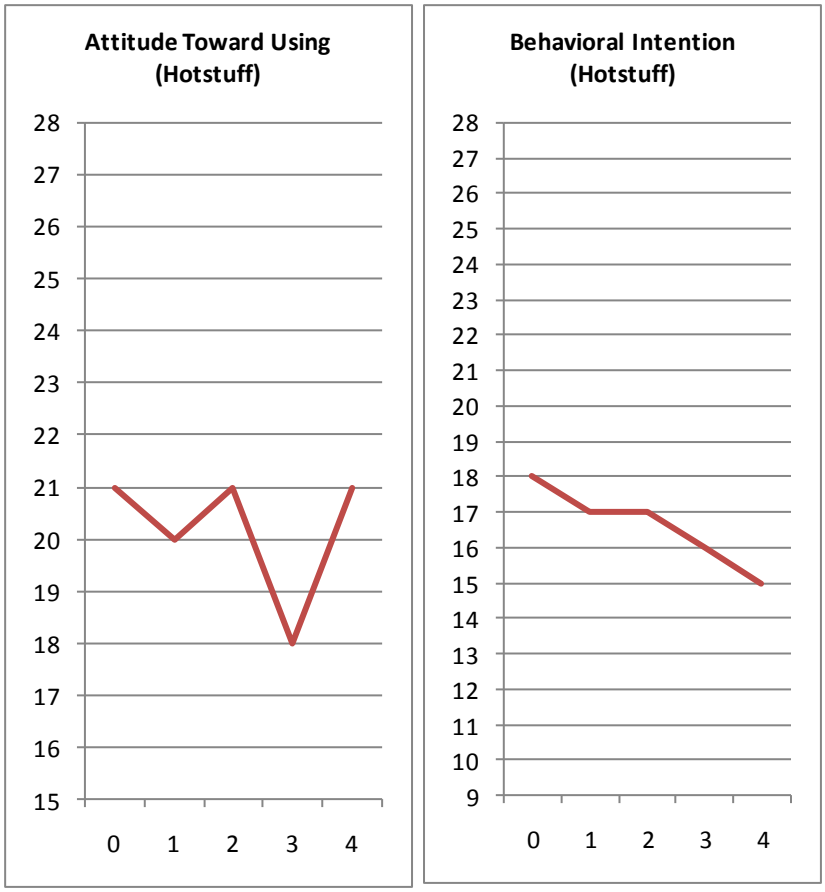


Figure 4.23: Case 7 - Attitude Toward Using and Behavioral Intention Graphs

Hotstuff expressed to the researcher that she has had a lot of experience with video gaming. *She immediately felt that as a game SL was not as good as others she had played. As a virtual tourist in the context of a SL destination she did not like the fact that so many of the female avatars were making what she considered sexual advances toward her. By the beginning of the second week she asked the researcher if she could help her get on some different clothing so that it might help her not look provocative in hopes of discourage lesbians from approaching her. The researcher gave her a Clemson t-shirt which satisfied her request. She constantly reminded the other participants that they really had no idea who was behind the avatars that were not a part of our research study.*

She stated that they could be any kind of psychos and not to trust them even if they looked harmless.

This case had a very sharp reflection of perceived ease of use the first week when she was mainly interacting only with people from our research group. Immersion was rising steadily until the week she was required to interact with strangers for her weekly activity. Once on her own to do as she please immersion rose again in week four (Figure 4.24).

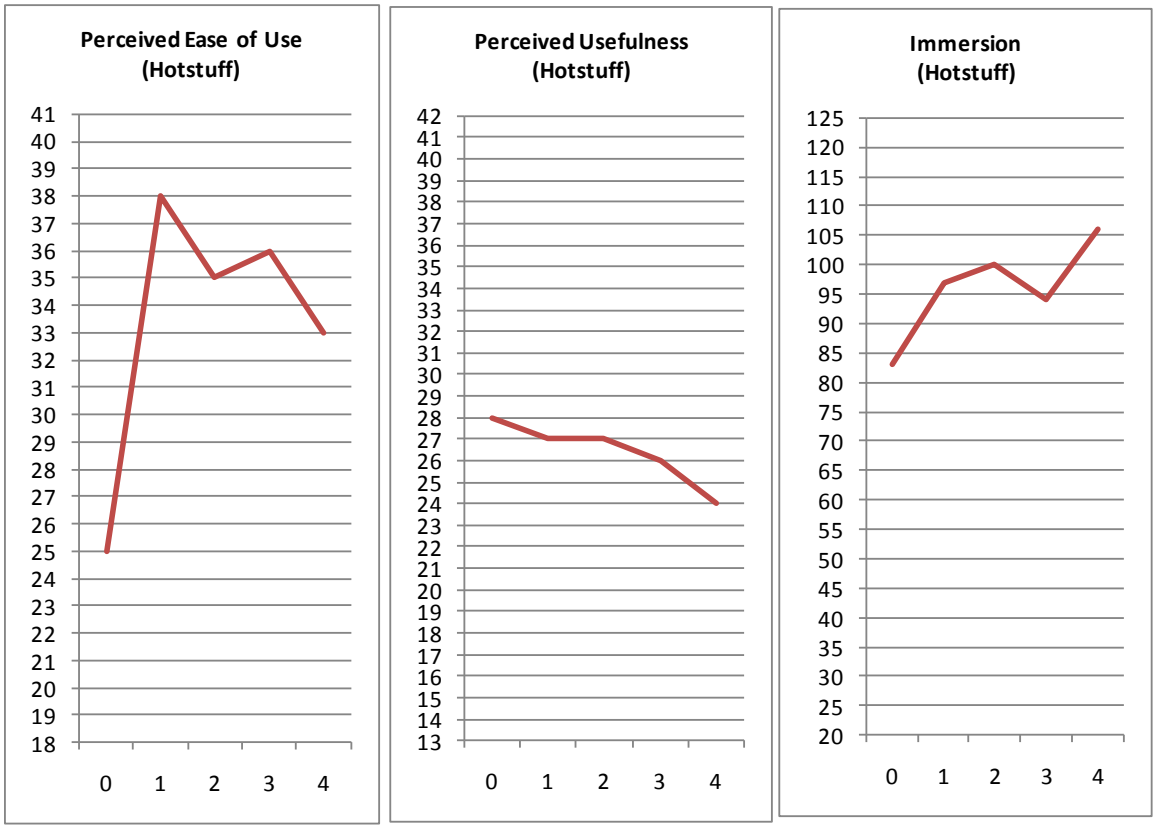


Figure 4.24: Case 7 - PEOU, PU, and Immersion Graphs

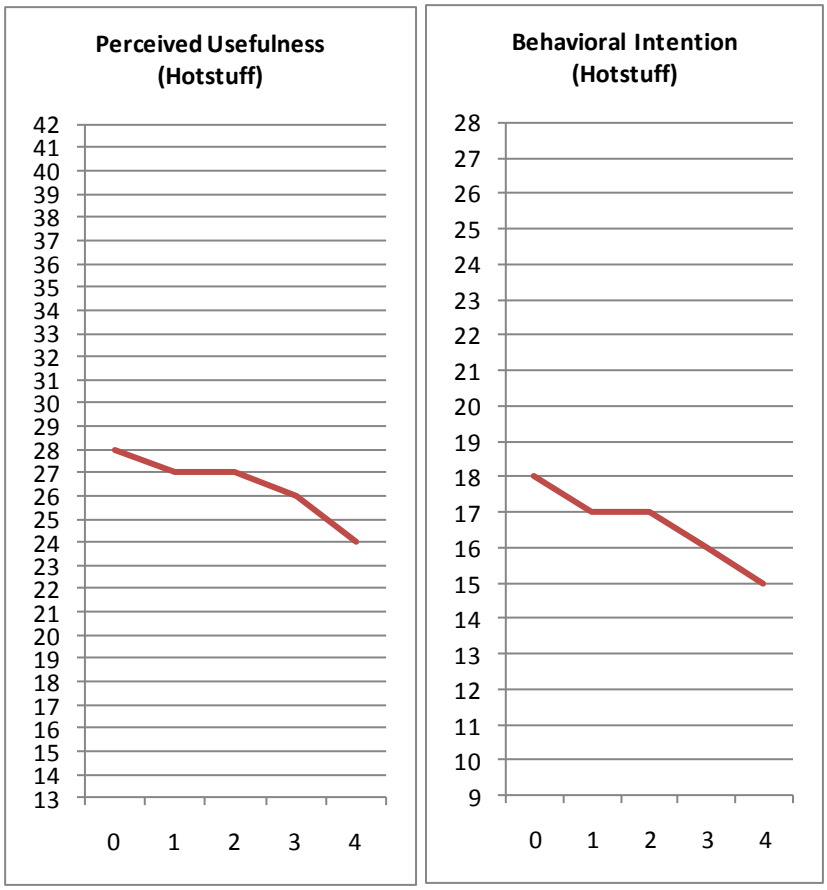


Figure 4.25: Case 7 - Greatest Consistency with Behavioral Intention

Case 8 – Duchess Waffle

Duchess's graphs as seen in Figure 4.26 do not reflect consistent movement between attitude and intention. On week one the baseline to the end of class shows no change in attitude but a sharp positive incline for intention. On week two attitude took a sharp turn up but intention remained the same as before. On week three attitude turned down but intention still remained the same. On week four when attitude turned back up intention went down.

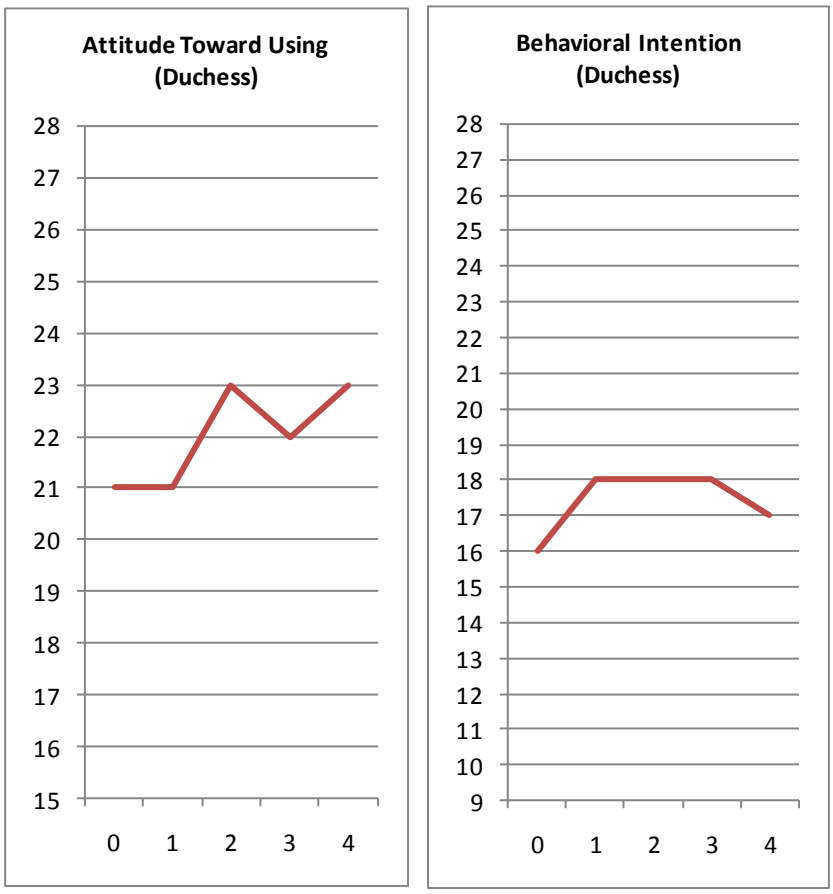


Figure 4.26: Case 8 - Attitude Toward Using and Behavioral Intention Graphs

Duchess's graphs for PEOU, PU, and immersion as seen in Figure 4.27 are similar but immersion was more pronounced. *Duchess classified herself as a technophobe in that she did not have much experience and did not know how well she would be able to grasp this new technology. She stated that she really had wanted the class to last longer than four weeks and was very focused on learning and doing everything correctly.*

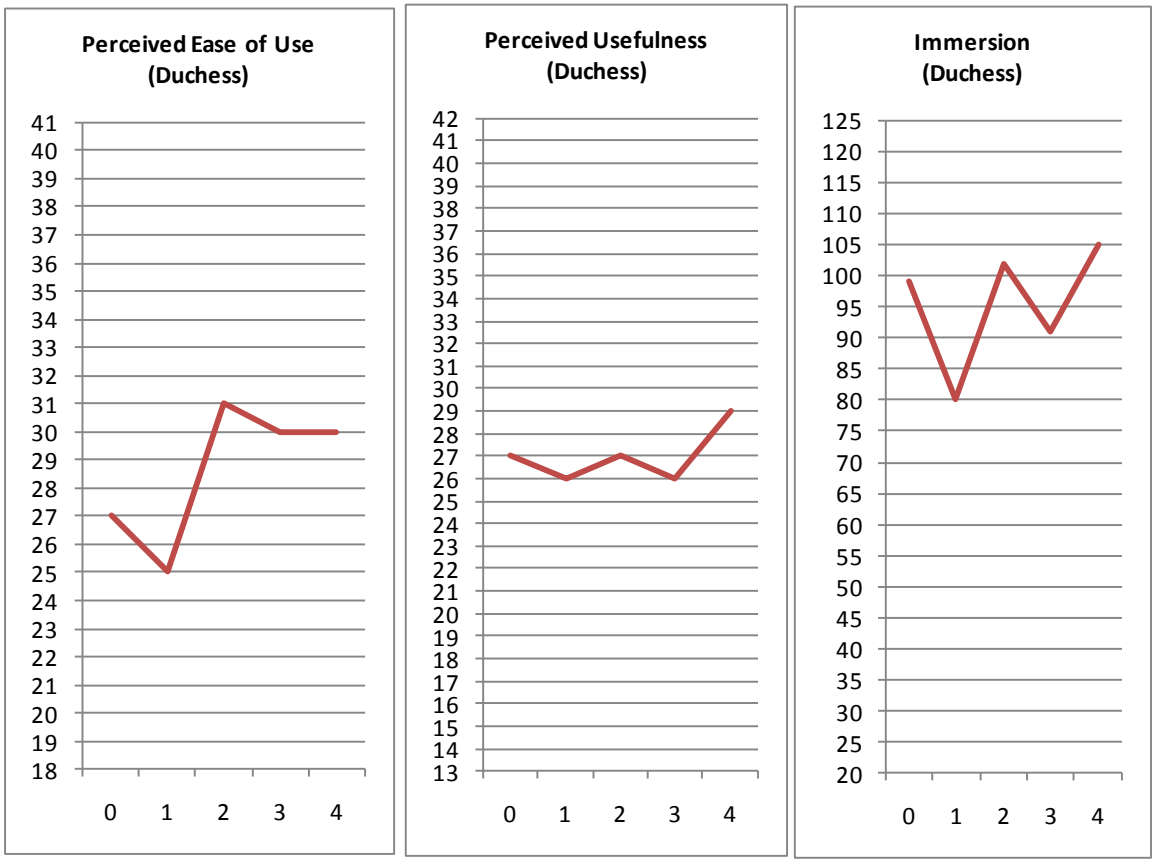


Figure 4.27: Case 8 - PEOU, PU, and Immersion Graphs

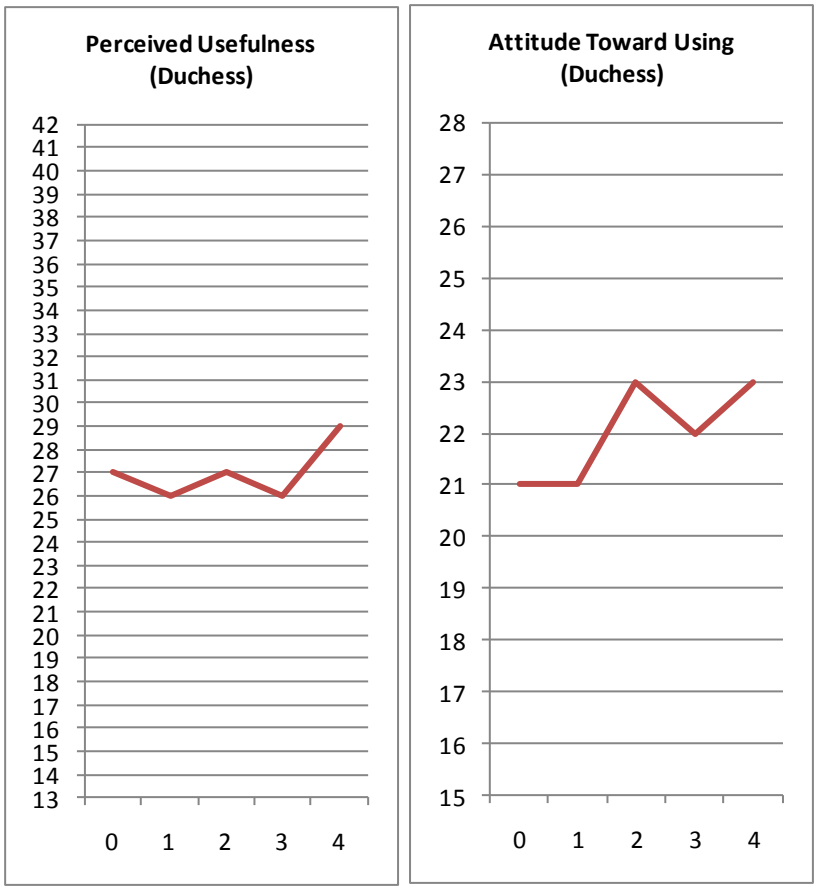


Figure 4.28: Case 8 - Greatest Consistency with Attitude Toward Using

Case 9 – Lapis Bluebird

Lapis's graphs as seen in Figure 4.29 showed consistency between attitude toward using and behavior intention of all the cases. When attitude went up so did intention but when attitude went down so did intention. Only during week three did attitude go up and intention stays the same. *This case did not own a personal computer and had never operated a personal computer prior to the start of this research study. The researcher was misled during her enrollment for the course and was surprised to find that she had no computer keyboarding experience since she had said she had basic keyboard experience when signing on of the research study. Lapis explained that she had keyboard experience with a typewriter. The researcher was concerned that she might not move along with the others in the research group because of her lack of experience and terminology. Lapis did just as well as the other participants in the study. This fact provides valuable information as to how all healthy older adults could respond to the technology even when they have no previous computer experience.*

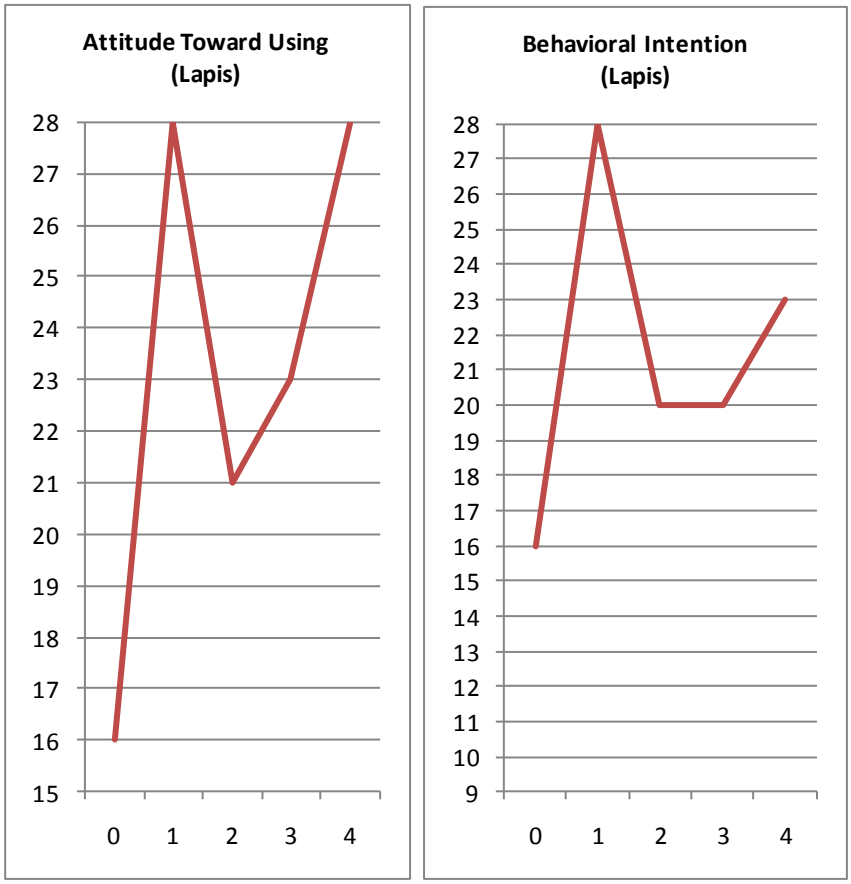


Figure 4.29: Case 9 - Attitude Toward Using and Behavioral Intention Graphs

Lapis graphs as seen in Figure 4.30 for the constructs of PEOU, PU, and immersion have the some of the biggest swings overall of all the other cases.

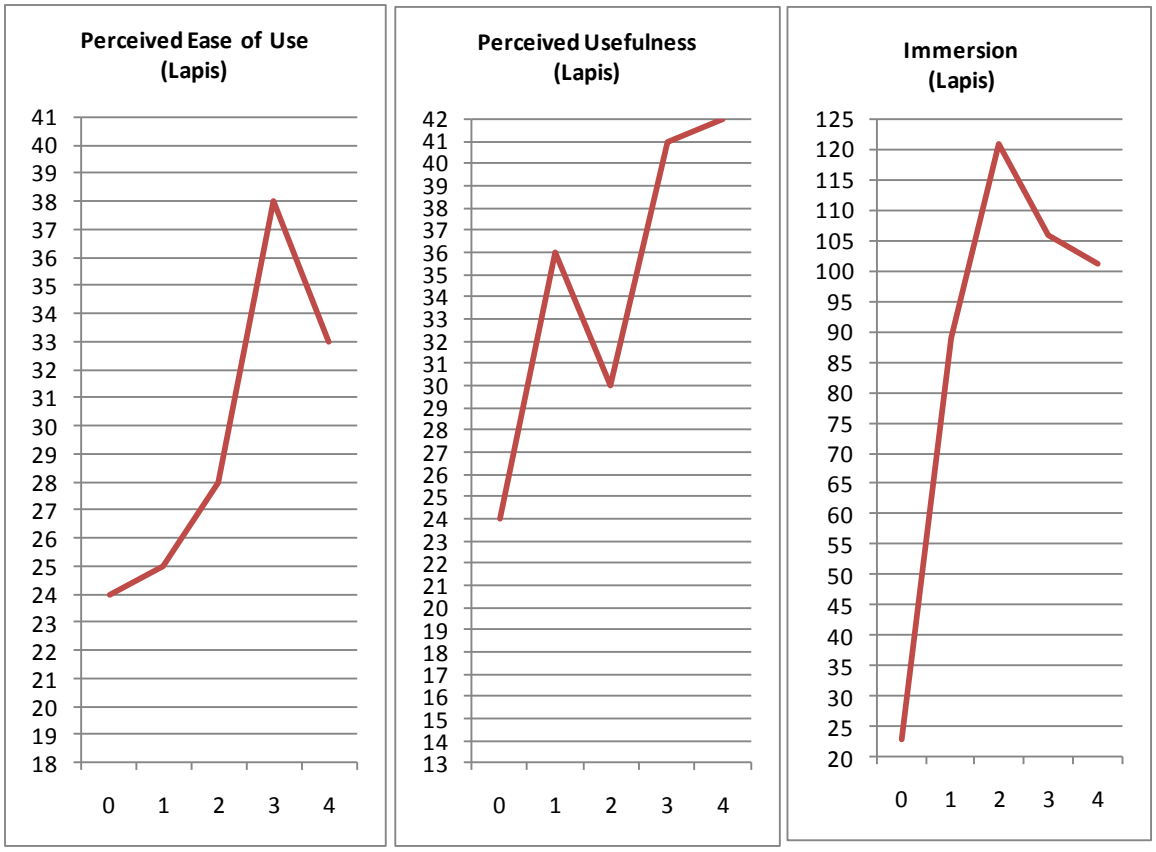


Figure 4.30: Case 9 - PEOU, PU, and Immersion Graphs

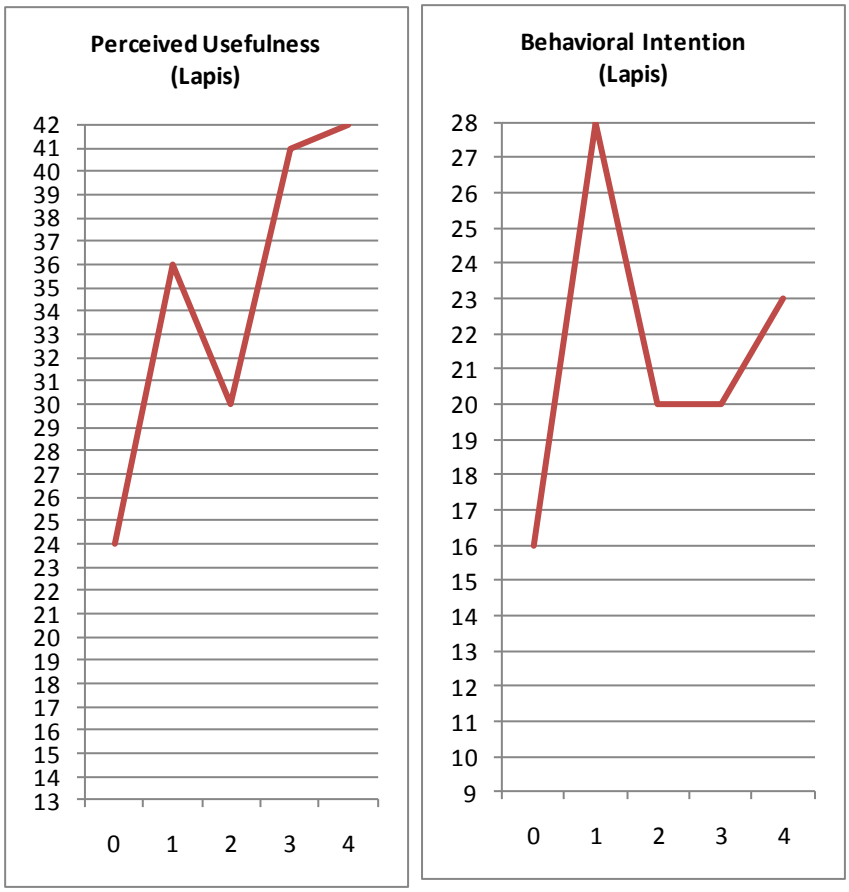


Figure 4.31: Case 9 - Greatest Consistency with Behavioral Intention

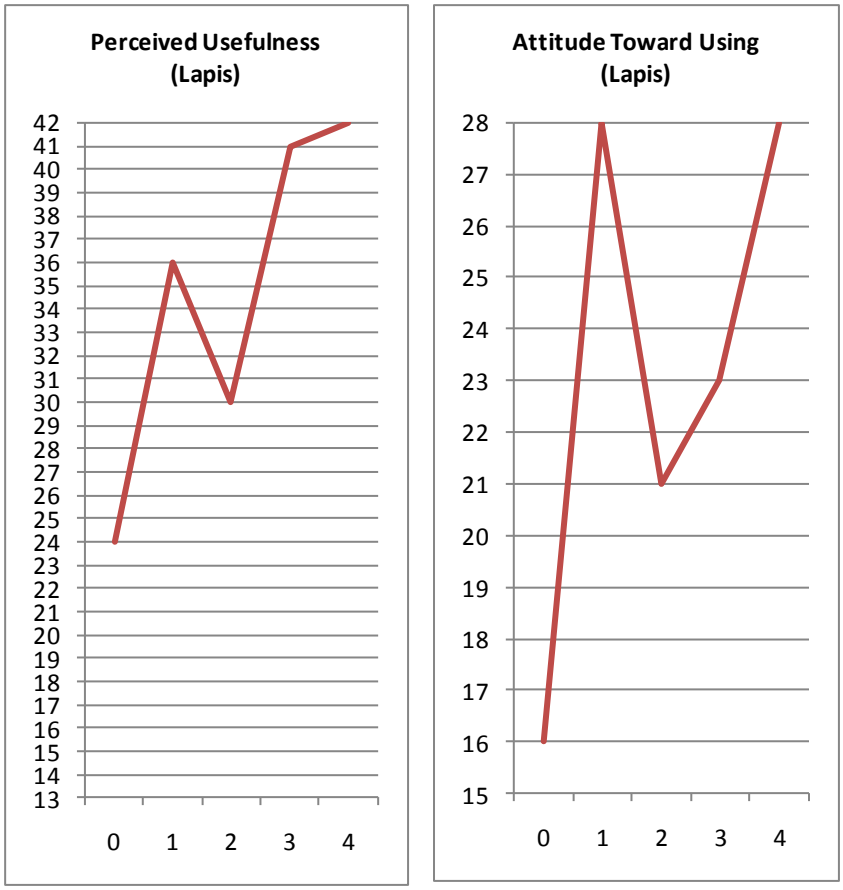


Figure 4.32: Case 9 - Greatest Consistency with Attitude Toward Using

Case 10 – Boof Difference

Boof's graphs as seen in Figure 4.33 show inconsistency between the weekly results for attitude and intention. From the baseline to the end of week one attitude remained the same but intention went up. On week two both attitude and intention did remain the same but on week three attitude went down while intention still remained the same. Week four attitude went up while intention went in the opposite direction. *Boof revealed during the first class to the instructor that he had never used a personal computer but had been a programmer for years on a large computer system for a*

manufacturing company before retirement. Boof did not expect to have any problems as he was expecting personal computers to like the large system with terminals that he had used in his employment. Personal computers are very different from minis and mainframe computer systems. Boof struggled more with the technology than anyone else in the study but his attitude was great. Boof was the only male in the study. The week that the assignment required him to find a stranger outside of our research group to talk with he had a lot of difficulty. The reason appeared to be that other avatars were very cautious about telling him much because he was male. There appeared to be trust issues with his aggressive but not rude approach to female avatars not a part of our research group. He was a bit frustrated that people would just not trust him and talk and tell him anything since he was so willing to be open with them.

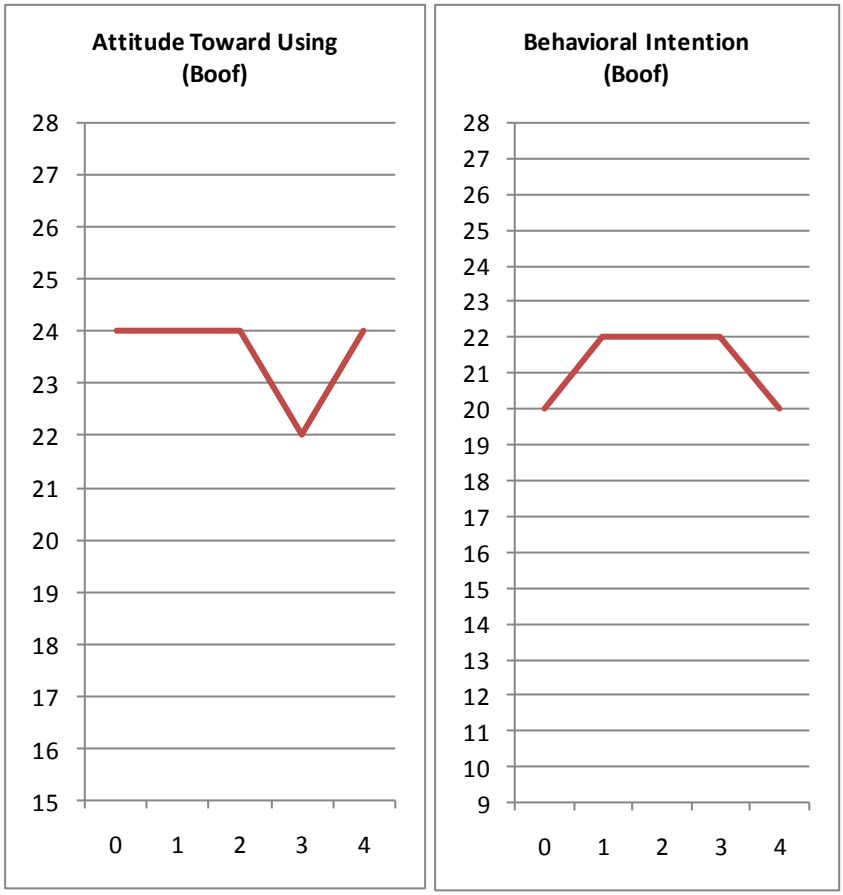


Figure 4.33: Case 10 - Attitude Toward Using and Behavioral Intention Graphs

The graphs seen in Figure 4.34 for the constructs of PEOU, PU, and immersion show that it was week four before Boof really started feeling as if he was getting control of the technology. *Boof sat beside Lapis in the computer lab and knew she had no experience with computers of any kind. When she was grasping SL quickly it seemed to put additional pressure on him that he was possibly behind.*

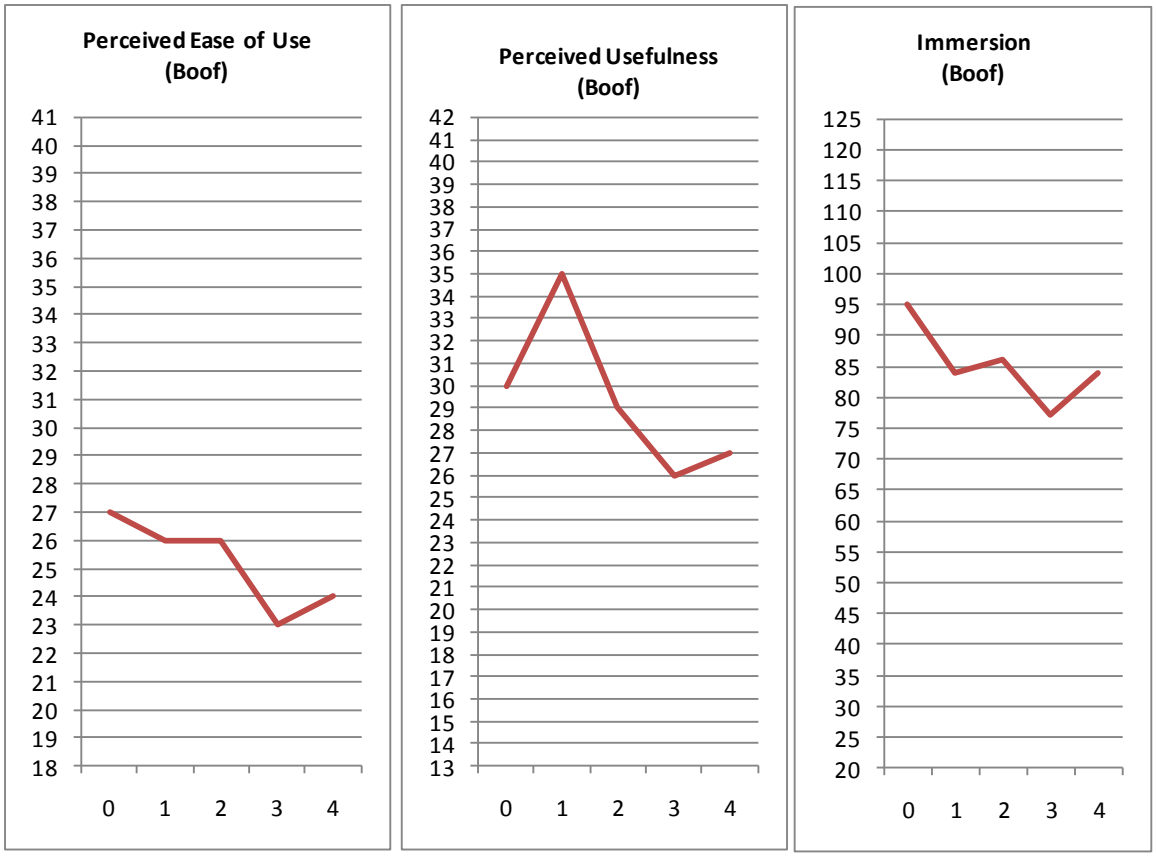


Figure 4.34: Case 10 - PEOU, PU, and Immersion Graphs

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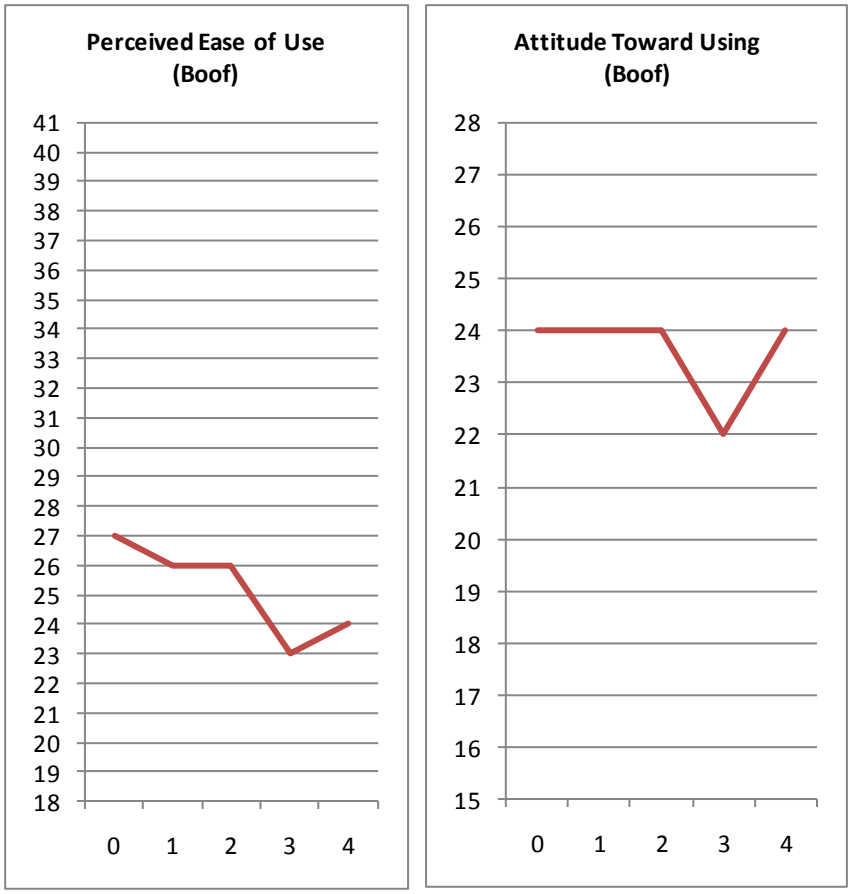

Figure 4.35: Case 10 - Greatest Consistency with Attitude Toward Using

REFERENCES

Administration on Aging (AoA), (2009). Retrieved from http://www.aoa.gov on September 30, 2009.

Ajzen, I. & Fishbein, M. (1977). "Attitude-Behavior Relations: A Theoretical Analysis and Review of Empirical Research," Psychological Bulletin, 84, 1977, pp. 888-918.

Alba, J., Lynch, J., Weitz, B., Janiszewski, C., Lutz, R., Sawyer, A., & Wood, S. (1997). Interactive Home Shopping: Consumer, Retailer, and Manufacturer Incentives to Participate in Electronic Marketplaces," Journal of Marketing (61:3), 1997, pp. 38-53.

Ananth, M., DeMicco, F. J., Moreo, P. J., & Howey, R. M. (1992). Marketplace Lodging Needs of Mature Travelers. *Cornell Hotel and Restaurant Administration Quarterly, 33*(4), 12.

Assael, H. (1981). Consumer Behavior and Marketing Action. Boston: Kent.
(1992). Consumer Behavior and Marketing Action. 4th ed. New York: PWS-Kent.

Aktinson, P., & Hammersley (1998). Ethnography and Participant Observation. In N.K. Denzin & Y.S. Lincoln (Eds.), Strategies of Qualitative Inquiry (pp. 110-136). Thousand Oaks, CA: Sage Publications.

Au, W. J. (2008). *The making of Second Life*. New York: HarperCollins.

Badinelli, K., Davis, N. & Gustin, L. (1991). Senior traveler study: America's mature market not content to while away their days. *Hotel & Motel Management*, 206(15), 31-34.

Bakardjieva, M. and R. Smith (2001) 'The Internet in Everyday Life', *New Media & Society* 3(1): 67–83.

Baloglu, S., & Shoemaker, S. (2001). Prediction of senior travelers' motorcoach use from demographic, psychological, and psychographic characteristics. *Journal of Travel Research, 40*(1), 12.

Bates, R., Istance, H. O., & Vickers, S. (2008). Gaze interaction with virtual on-line communities: leveling the playing field for disabled users. In P. Langdon, J. Clarkson, & P. Robinson (Eds.), Designing inclusive futures (pp. 149–162). London: Springer.

Batra, R., J. G. Myers, and D. A. Aaker (1995). Advertising Management. 5th ed. Upper Saddle River, NJ: Prentice Hall.

Beerli, A., and J. D. Martín (2004). "Factors Influencing Destination Image." Annals of Tourism Research, 31 (3): 657–681.

Behar, R. (1996). *The vulnerable observer: Anthropology that breaks your heart*. Boston: Beacon.

Bendixen, M. T. (1993). "Advertising Effects and Effectiveness." *European Journal of Marketing*, 27 (10): 19-32.

Bentley, R. B. (1996). Information technology and tourism: An update. *Tourism Management*, 17(2), 141-144.

Berger, H., Dittenbach, M., Merkl, D., Bogdanovych, A., Simoff, S., & Sierra, C. (2007). Opening new dimensions for e-tourism. Virtual Reality, 11(2–3), 75–87.

Biswas, A. & Krishnan, R. (2004). The Internet's impact on marketing: Introduction to the JBR special issue on "Marketing on the Web – behavioral, strategy, and practices and public policy", *Journal of Business Research*, 57, 681-584.

Botha, C., Crompton, J. L., & Kim, S. (1999). Developing a Revised Competitive Position for Sun/Lost City, South Africa. Journal *of Travel Research*, 37, 341-352.

Bourlakis, M., Papagiannidis, S. & Li, F. (2009). Retail spatial evolution: paving the way from traditional to metaverse retailing. Electronic Commerce Research, 9 135-148.

Brown, E., Cairns, P. (2004). A grounded investigation of game immersion. *ACM Press*, 1279–1300.

Buhalis, D (1998). Strategic use of information technologies in the tourism industries. *Tourism Management*, 19(5) 409-421.

Buhalis D., Licata M.C. (2002). The future eTourism intermediaries. *Tourism Management*, 23 (3), pp. 207-220

Buhalis, D., & Law, R. (2008). Progress in information technology and tourism management: 20 years on and 10 years after the Internet andt he state of eTourism research. *Tourism Management*, 29(4), 609–623.

Burke, J. F., and R. Gitelson (1990). "Conversion Studies: Assumptions, Applications, Accuracy, and Abuse." *Journal of Travel Research*, 28 (3): 46-51.

Burke, R. R. (2002). Technology and the Customer Interface: What Consumers Want in the Physical and Virtual Store, *Journal of the Academy of Marketing Science*, 30(4), 411-432.

Campbell, D. T. and J. C. Stanley (1963). *Experimental and Quasi-Experimental Designs for Research*. Chicago, Rand McNally.

Cano, V., & Prentice, R. (1998). Opportunities for endearment to place through electronic 'visiting': WWW homepages and the tourism promotion of Scotland. *Tourism Management*, 19(1), 67-73.

Carroll, B. & Siguaw, J. (2003). *Evolution in electronic distribution: effects on hotels and intermediaries*. Cornell University, Ithaca, New York: The Center for Hospitality Research at Cornell University.

Castronova, E. (2005). *Synthetic worlds: the business and culture of online games*. Chicago: University of Chicago Press.

Cheong, R. (1995). The virtual threat to travel and tourism. *Tourism Management*, 16(6), 417–422.

Cho, Y., Wang, Y., & Fesenmaier, D. (2002). Searching for Experiences: The Web-Based Virtual Tour in Tourism Marketing. *Journal of Travel & Tourism Marketing*, *12*(4), 1-17.

Chung, T., & Law, R. (2003). Developing a performance indicator for hotel Web sites. *International Journal of Hospitality Management*, 22, 119-125.

Clemons, E. K., Hann, I. H., & Hitt, L. M. (2002). Price dispersion and differentiation in online travel: an empirical investigation, *Management Science*, 48(4), 534-550.

Cohen-Hattab, K., and J. Kerber (2004). "Literature, Cultural Identity and the Limits of Authenticity: A Composite Approach." International Journal of Tourism Research, 6 (2): 57–73.

Connolly, D. J., Olsen, M. D., & Moore, R. G. (1998). The Internet as a distribution channel. *The Cornell Hotel and Restaurant Administration Quarterly*, 39(4), 42-54.

Cook, R. A., Yale, L. J., & Marqua, J. J. (2006). *Tourism: The business of Travel.* 3rd ed. Pearson Prentice Hall, Upper Saddle River, New Jersey.

Creswell, J. W. (1994). *Research Design: Qualitative and quantitative approaches.* Thousand Oaks, CA: Sage

Creswell, J. W. (1998). *Qualitative inquiry and research design: Choosing among five traditions.* Thousand Oaks, CA: Sage

Creswell, J. W. (2003). *Research design: Qualitative, quantitative and mixed method approaches*. (2nd ed.). Thousand Oaks, CA: Sage.

Creswell, J., Clark, V., Gutann, M., & Hanson, W. (2003). Advanced mixed methods research designs. *Handbook of mixed methods in social and behavioral research* (pp. 209-224). Thousand Oaks, CA: Sage Publications.

Crompton, J. L. (1979). Motivation for Pleasure Vacation. *Annals of Tourism Research,* 6,408-424.

Czaja, S. J., Fisk, A. D., Hertzog, C., Rogers, W. A., Charmess, N., Nair, S. N. & Sharit, J. (2006). Factors predicting the use of technology: findings from the Center for Research and Education on Aging and Technology Enhancement (CREATE). *Psychology & Aging*. 21(2), 333-353.

Czaja, S. J. & Lee, C. C. (2003). The Impact of the Internet on Older Adults. In N. Charness, & K. W. Schaie (EDs.), *Impact of Technology on Successful Aging* (pp. 113-133). New York: Springer Series Societal Impact on Aging.

Dann, G. M. S. (1977). Anomie, Ego-enhancement and Tourism. *Annals of Tourism Research,* 4(4), 184-189.

Dann, G. (2001). Senior tourism and quality of life. *Journal of Hospitality & Leisure Marketing*, 9(1/2), 5-19.

Davis, F. D. (1986). A Technology Acceptance Model for Emper4ically Testing New End-User Infromation Systems: Theory and Results, *MIT Sloan School of Management*, Cambridge, MA: MIT Sloan School of Management.

Davis, F. D. (1989). "Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information Technology," *MIS Quarterly*, 13, 1989, pp. 319-340.

Davis, F.D., Bagozzi, R. P., & Warshaw, P.R. (1989). User Acceptance of computer Technology: a Comparison of Two Theoretical Models, *Management Science*, 35, 982-1003.

Davis, F.D. (1993). User acceptance of Information System Technology: system Characteristics, User Perceptions and Behavioral Impacts. *International Journal Man-Machine Studies, Academic Press Limited*, 38, 475-487.

Davis, F.D., Venkatesh, V. (1996). A critical assessment of potential measurement biases in the technology acceptance mode: three experiments, *International Journal Human – Computer Studies*, 45, 19-45.

Decrop, A., & Snelders, D. (2004). A grounded typology of vacation decision-making, *Tourism Management*, 31(4), 1008-1030.

Denzin, N.K. and Y. S. Lincoln. (Eds.) (1994). Handbook of Qualitative Research. Thousand Oaks: Sage Publications

Denzin, N. K., & Lincoln, Y. S. (Eds.). (1998). *Strategies of qualitative inquiry*. Thousand Oaks, CA: SAGE Publications.

Denzin, N. K., & Lincoln, Y. (2000). *Handbook of Qualitative Research*. (2nd ed). Thousand Oaks, CA: Sage

Dholakia, R. R., & Chiang, K. P. (2003). Shoppers in cyberspace: are they from Venus or Mars and does it matter? *Journal of Consumer Psychology* 13(1/2), 171-176.

Doolin, B., Burgess, L., & Cooper, J. (2002). Evaluating the use of the Web for tourism marketing: a case study from New Zealand. *Tourism Management*, 23(5), 557–561.

Faranda,W. T. & Schmidt, S. L. (1999). Segmentation and the senior traveler: Implications for today's and tomorrow's aging consumer. *Journal of Travel and Tourism Marketing*, 8, 3-27.

Filipczak, B.(1998). Old Dogs, New Tricks. *Training*, 35(5), 50-55.

Fishbein, M. & Ajzen, I. (1975). Belief, Attitude, Intention and Behavior: An Introduction To Theory and Research, Reading, MA: Addison-Wesley.

Fleischer, A. & Pizam, A. (2002). Tourism constr4aints among Israeli seniors. *Annals of Tourism Research*, 29(1), 106-123.

Fondness, D. & Murray, B. (1999). A Model of Tourism Information Search Behavior. *Journal of Travel Research*, 37, 220-230.

Fotakis, T., & Economides, A. A. (2008). Art, science/technology and history museums on the web. International Journal of Digital Culture and Electronic Tourism, 1(1), 37–63.

Fridgen, J. D. (1984). "Environmental Psychology and Tourism." Annals of Tourism Research, 11 (1): 19–39.

Fu, Y.-Y. & Parks, S. C. (2001). The Relationship between Restaurant Service Quality and Consumer Loyalty among the Elderly *Journal of Hospitality & Tourism Research 25*(3), 320-326.

Gahtani, S. (2001). The Applicability of TAM Outside North America: An Empirical Test in the United Kingdom, *Information Resources Management Journal*, 26-35.

Ga¨rtner, M., Seidel, I., & Berger, H. (2008). Agent mediated trading in a 3D e-tourism environment. In 10th International Conference on Electronic Commerce Innsbruck, Austria. New York: ACM Press.

Gartner, W. C. (1993). "Image Formation Process." Journal of Travel and Tourism Marketing, 2 (2/3): 191–215.

Gartner (2009). Gartner Newsroom. Retrieved on September 30, 2009 from http://www.gartner.com/it/pag.jsp?id=503861.

George, D., & Mallery, P. (2003). *SPSS for Windows.* Boston , MA: Allyn and Bacon.

Gilbert, D., & Powell-Perry, J. (2002). Exploring developments in web based relationship marketing within the hotel industry. *Journal of Hospitality & Leisure Marketing*, 9(3/4), 141–159.

Glesne, C, & Peshkin, A. (1992). Becoming qualitative researchers: An introduction. White Plains, NY: Longman.

Glesne, C. (1999). Becoming qualitative researchers: An introduction (2nd ed.). New York: Addison Wesley Longman, Inc.

Godbey, G. (1997). Leisure and leisure services in the 21st century. State College, PA: Venture Publishing, Inc.

Gratzer, M., Werthner, H., & Winiwarter, W. (2004). Electronic business in tourism. International Journal of Electronic Business, 2(5), 450–459.

Gretzel, U., Yuan, Y., & Fesenmaier, D. (2000, November). Preparing for the New Economy: Advertising Strategies and Change in Destination Marketing Organizations. Journal of Travel Research, 39(2), 146.

Grodsky, T., & Gilbert, G. C. (1998). Seniors travel the information superhighway. *Parks & Recreation*, 33(6), 70-74.

Gursoy, D., & Umbreit, W. T. (2004). Tourist information search behavior: cross-cultural comparison of European Union member states, *International Journal of Hospitality Management*, 23, 55-70.

Hammersley, M. & Atkinson, P. (1983). Ethnography: Principles and practice. London & New York: Routledge.

Hammersley, M.,&Atkinson, P. (1995). Recording and organizing data. In M.Hammersly, & P. Atkinson (Eds.), Ethnography (2nd ed., pp. 175–204). New York, NY: Routledge.

Hanson, W., Creswell, J., Piano Clark, Y., Petska, K., & Creswell, D. (2005, April). Mixed Methods Research Designs in Counseling Psychology. *Journal of Counseling Psychology, 52*(2), 224-235.

Harssel, J. V. (1995). The senior travel market: distinct, diverse, demanding. In W. F. Theobald (Eds.) *Global tourism: the next decade*. Oxford: Butterworth-Heinemann Ltd.

Harteveldt, H. H. (2007). Trends 2007: Travel eCommerce: Upselling Will Drive Technology Initiatives In eCommerce And Customer Service: Forrester Research.

Haywood, N., & Cairns, P. (2005). Engagement with an interactive museum exhibit. In: *Proceedings of HCI*, 1, Springer-Verleg.

Heckhausen, H. (1980). *Motivation and Action.* New York, NY: Springer-Verlag.

Hemp, P. (2006). Avatar-based marketing. *Harvard Business Review*, 86(6), 48-57.

Henderson, K. A. (1991). *Dimensions of choice: A qualitative approach to recreation, parks, and leisure research*. State College, PA: Venture.

Hobson, J. S. P., & Williams, A. P. (1995). Virtual reality: a new horizon for the Tourism industry. *Journal of Vacation Marketing*, 1(2), 125–136.

Hoffman, D. L., & Novak, T. P. (1996). Marketing in hypermedia computer-mediated environments: Conceptual foundations. *Journal of Marketing*, 60, 50-68.

Horneman, L., Carter, R. W., Wei, S. & Ruys, H. (2002). Profiling the senior traveler: An Australian perspective. Journal of Travel Research, 41, 23-37.

House, E. R. (1994). Integrating the quantitative and qualitative. In C. S. Reichardt & S. F. Rallis (Eds.), *The qualitative-quantitative debate: New perspectives* (pp. 13-22). San Francisco: Jossey-Bass.

Howe, K. R. (1988). Against the quantitative-qualitative incompatibility thesis or dogmas die hard. *Educational Researcher, 17* (1), 10-16.

Hsu, C. H. C. (2000). Determinants of Mature Travelers' Motorcoach Tour Satisfaction and Brand Loyalty. *Journal of Hospitality & Tourism Research, 24*(2), 223-238.

Hsu, C. H. C., Cai, L. A., & Wong, K. K. F. (2006). A model of senior tourism motivations--Anecdotes from Beijing and Shanghai. *Tourism Management, In Press, Corrected Proof*, 1363.

Huang, L. & Tsai, H.-T. (2003). The study of senior traveler behavior in Taiwan. *Tourism Management, 24*(5), 561-574.

Huang, M. (2003). Pausal behavior of end-users in online searching. *Information Processing and Mangement,* 39, 425-444.

Huberman, A. M., & Miles, M. B. (Eds.). (2002). The qualitative researcher's companion. Thousand Oaks, CA: Sage Publications.

Hughes, G. (1998) 'Tourism and the Semiological Realization of Space', in G. Ringer (ed.) *Destinations: Cultural Landscapes of Tourism*, pp. 17–32. London: Routledge.

Iso-Ahola, S. E. (1982). Towards a Social Psychology Theory of Tourism Motivation. *Annals of Tourism Research,* 9(2), 256-262.

Jang, S.C.S. & Wu, C.-M. E. (2006). Seniors' travel, motivation and the influential factors: An examination of Taiwanese seniors. *Tourism Management, 27*, 306-316

Javalgi, R. G., Thomas, E. G., & Rao, S. R. (1992). Consumer behavior in the U.S. pleasure travel marketplace: An analysis of senior and nonsenior travelers. *Journal of Travel Research, 31*(2), 14.

Jeong, M., & Lamber, C. U. (2001). Adaptation of an information quality framework to measure customers' behavioral intentions to use lodging web sites. *International Journal of Hospitality Management*, 20, 129-146.

Jeong, M., Oh, H., & Gregoire, M. (2003). Conceptualizing Web site quality and its consequences in the lodging industry. *International Journal of Hospitality Management*, 22, 161-175.

Kasavana, L. K., Knuston, B. J., & Polonowski, S. J. (1997). Netlurking: The future of hospitality Internet marketing. *Journal of Hospitality and Leisure Marketing*. 5(1), 31-44.

Kim, W. G., Lee, C., & Hiemstra, S. J. (2004). Effects of an online virtual community on customer loyalty and travel product purchases. *Tourism Management,* 25(3), 343-355.

Kim, H., and S. L. Richardson (2003). "Motion Picture Impacts on Destination Image." Annals of Tourism Research, 30 (1): 216–237.

Knoblauch, H. (2005). Focused ethnography [Electronic version]. *Forum: Qualitative Social Research, 6.* Retrieved August 31, 2009, from http://www.qualitative-research.net/fqs-texte/3-05/05-3-44e.htm.

Kokolosalakis, C., Bagnall, G., Selby, M., & Burns, S. (2006). Place image and urban regeneration in Liverpool. *International Journal of Consumer Studies*, 30, 389-397.

Krugman, H. E. (1969). "The Impact of Television Advertising: Learning without Involvement." *Public Opinion Quarterly,* 29: 349-56.

Kuo, F. Y., Chu, T. H., Hsu, M. H., & Hsieh, H. S. (2003). An investigation of effort-accuracy trade-off and the impact of self-efficacy on Web searching behaviors. *Decision Support Systems,* 10645, 1-12.

Lam, J.C.Y. & Lee, M.K.O. (2006). Digital inclusiveness - Longitudinal study of internet adoption by older adults. *Journal of Management Information Systems*, 22 (4). 177-206.

Law, R., & Leung, R. (2000). A study of airlines online reservation services on the Internet, *Journal of Travel Research*. 39, 202-211.

Law, R., Leung, R., & Buhalis, D. (2009). Information technology applications in hospitality and tourism: a review of publications form 2005 to 2007. *Journal of Travel & Tourism Marketing,* 26(5/6), 599-623.

Law. R., & Jogaratnam. G. (2005). A study of hotel information technology application. *International Journal of Contemporary Hospitality Management,*17(2), 170-180.

Lawrence-Lightfoot, S., & Davis, J. H. (1997). *The art and science of portraiture*, San Francisco, CA: Jossey-Bass Publishers.

Leavengood, L. B. (2001). Older People and Internet Use. *Generations*, 25(3), 69-71.

Lee, K. S. & Gretzel, U. (2006). Consumer Generated Media. White Paper. College Station, TX: Laboratory for Intelligent Systems in Tourism.

Lee, O., & Oh, J. (2007). The impact of virtual reality functions of a hotel website on travel anxiety. *Cyberpsychology & Behavior*, 10(4), 584–586.

Lieux, E. M., Weaver, P. A., & McCleary, K. W. (1994). Lodging preferences of the senior tourism market. *Annals of Tourism Research, 21*(4), 712-728.

Lincoln, Y. S., & Guba, E. G. (1985). Naturalistic inquiry. Thousand Oaks, CA: Sage.

Linden Lab (2009). Retrieved from http//blog.secondlife.com/2009/01/15/q42008/#more-3487.

Magala, S. J. (2001). Under Construction (Identities, Communities and Visual Overkill) (ERIM Report Series: Research in Management). Rotterdam: Erasmus Research Institute of Management.

Martin, J. (2008). Consume Code: Use-Value, Exchange-Value, and the Role of Virtual Goods in Second Life, *Journal of Virtual Worlds Research*, 1(2).

MacInnes, I. (2006). Property rights, legal issues, and business models in virtual world communities, *Electronic Commerce Research*, 6, 39-56.

Maslow, A. H. (1954). *Motivation and Personality.* New York, NY: Harper & Row.

McDougall, L. (1998). *Aging Baby Boomers and What it Means for Domestic Travel in the 21st Century.* http://www.statcan.ca/english/freepub/87-003-XIE/0039887-003-XIE.pdf

McLemore, C., & Mitchell, N. (2000). The 1999 Arkansas Internet conversion study. *Newsletter of the Travel and Tourism Research Association, Spring*, 4-5.

McWilliams, G. E., and J. L. Crompton (1997). "An Expanded Framework for Measuring the Effectiveness of Destination Advertising." *Tourism Management*, 18 (3): 127-37.

Messmer, D. J., and R. R. Johnson (1993). "Inquiry Conversion and Travel Advertising Effectiveness." *Journal of Travel Research*, 31 (4): 14-21.

Merriam, S. B. (Ed.). (1998). Qualitative research and case study applications in education. San Francisco, CA: Jossey-Bass.

Merriam, S. B. (Ed.). (2002). Qualitative research in practice. San Francisco, CA: Jossey-Bass.

Milman, A. (1998). The impact of tourism and travel experience on senior travelers' psychological well-being. *Journal of Travel Research 37*(2), 166-170.

Mitham, N. (2008) KZero, Research and case studies in virtual worlds. Retrieved 8 September, 2009 from http://www.kzero.co.uk/blog?page id=2093.

Moisey, R. N. & Bichis, M. (1999). Psychographics of senior nature tourists: The Katy nature trail. *Tourism Recreation Research*, 24, 69-76.

Moran, S. J. (2004). Online travel buyers are divided as towhich type of site gets the sale – suppliers or online travel agency – PhoCusWright FYI. HospitalityNet, Retrieved on September 20, 2009 from: www.Hospitalitynet.org/news/4018754.print.

Morrison, A., & Harrison, A. (1998). From corner shop to electronic shopping mall? *Progress in tourism and Hospitality Research*, 4, 349-356.

Moschis, G., Curasi, C. F., & Bellenger, D. (2003). Restaurants-selection preferences of mature consumers. *Cornell Hotel and Restaurant Administration Quarterly, 44*(4), 51.

Mowforth, M. and I. Munt (1998) *Tourism and Sustainability*. London: Routledge.

Muecke, M. A. (1994). On the evaluation of ethnographics. In J. M. Morse (Ed), *Critical issues in qualitative research methods* (pp. 187-209). Thousand Oaks, CA: Sage.

Murphy, J., Olaru, D., Schegg, R., & Frey, S. (2003). The bandwagon effect: Swiss hotels Web sites and e-mail management, *The Cornell Hotel and Restaurant Administration Quarterly*, 44(1), 71-87.

Murphy, L., Mascardo, G., & Benckendorff, P. (2007). Exploring word-of-mouth influences on travel decisions: Friend and relatives vs. other travelers. *International Journal of Consumer Studies*, 31(5), 517-527.

Nelson, P. (1974). Advertising as Information. *Journal of Political Economy*, 83(3), 729-754.

Papagiannidis, S., Burlakis, M. & Li, F. (2008). Making Real Money in Virtual Worlds: MMORPGs and emerging business opportunities, challenges and ethical implications in metaverses. *Technological Forecasting and Social Change,* 75, 610-622.

Park, S. , Nah, F., DeWester, D., & Eschenbrenner, B. (2008). Virtual World Affordances: Enhancing Brand Value. *Journal of Virtual Worlds Research*. 1(2).

Patton, M. Q. (2002). Qualitative research and evaluation methods (3rd ed.). Thousand Oaks, CA: Sage.

Pearce, P. L. (1996). Recent Research in Tourists Behaviour. Asia *Pacific Journal of Tourism Research,* 1(1), 7-17.

Pearce, P. L. (2005). *Tourist Behavior: Themes and Conceptual Schemes,* Tonawanda, New York: Channel View Publications.

Petty, R. E., J. T. Cacioppo, and D. Schumann (1983). "Central and Peripheral Routes to Advertising Effectiveness: The Moderating Role of Involvement." *Journal of Consumer Research,* 10 (2): 135-46.

Pigram, J.J. and S. Wahab (1997) 'Sustainable Tourism in a Changing World', in S. Wahab and J.J. Pigram (eds) *Tourism, Development and Growth: the Challenge of Sustainability*, pp. 17–32. London: Routledge.

Prentice, R. (2006). Evocation and experiential seduction: updating choice-sets modeling. *Tourism Management*, 27, 1153-1170.

Price, J., & Starkov, M. (2003). Hoteliers are still behind the curve in online distribution. Hoteliers News Resource. Retrieved September 20, 2009 from: http//www.4hoteliers.com/4hots_fshw.php?mwi=108.

Prideaux, B. (2002). The cybertourist. In G. M. S. Dann (Ed.), The tourist as a metaphor of the social world (pp. 317–339). New York: CABI Publishing.

Reece, W. S. (2004). Are senior leisure travelers different? *Journal of Travel Research*, 43, 11- 18.

Reichardt, C. S. & Rallis, S. F. (1994). The relationship between the qualitative and quantitative research traditions. In C. S. Reichardt & S. F. Rallis (Eds.), *The qualitative-quantitative debate: New perspectives* (pp. 5-11). San Francisco: Jossey-Bass.

Richards,L. & Morse, J. M. (2007). *Readme first for a user's guide to qualitative methods*. (2nd ed). Thousand Oaks, CA: Sage.

Riley, R. W., & Van Doren, C. S. (1992). Movies as tourism promotion: a ''pull'' factor in a ''push'' location. Tourism Management, 13(3), 267–274.

Rogers, E. M. (1962). Diffusion of Innovations. New York, The Free Press.

Rogers, E. M. (1983). Diffusion of Innovations. New York, The Free Press.

Rogers, E. M. (1995). *Diffusion of innovations* (4th ed.). New York: Free Press.

Rogers, E. M. (2003). Diffusion Of Innovations. New York, The Free Press.

Rogers, E. M. (2004). "A Prospective and retrospective Look at the Diffusion Model." *Journal of Health Communications* 9: 13-19.

Rose, G., Khoo, H., & Straub, D. W. (1999). Current Technological Impediments To Business-To-Consumer Electronic Commerce. *Communications of the AIS*, 1(16).

Rosenfeld, J. P. (1986). Demographics on vacation. *American Demographics*, 8 (January), 38-41ff.

Sakai, M., Brown, J., & Mak, J. (2000). Population aging and Japanese international travel in the 21st century. *Journal of Travel Research, 38*(3), 212.

Scharz, J. (2006). Bold new opportunities in virtual worlds, *iMedia Connection*. Retrieved from http://www.imediaconnection.com/content/8605.asp.

Schwanen, T., & Kwan, M. (2008). The internet, mobile phone and space-time constraints. *Geoforum*, 39(3), 1362-1377.

Second Life (2009). Website www.secondlife.com.

Seidel, I., & Berger, H. (2007). Integrating electronic institutions with 3D virtual worlds. Proceedings of the 2007 IEEE/WIC/ACM International Conference on Intelligent Agent Technology (pp.481–484), Silicon Valley, California, 2–5 November.

Selwyn, N. (2004). The information aged; A qualitative study of older adults' use of information and communication technology. *Journal of Aging Studies*, 18(4), 369-384.

Sheldon, P. (1997) *Tourism Information Technology*. New York: CAB International.

Shim, S., Gehrt, K. C., & Siek, M. (2005). Attitude and Behavior Regarding Pleasure Travel among Mature Consumers: A Socialization Perspective *Journal of Travel & Tourism Marketing, 18*(2), 69-81.

Siegel, W., and W. Ziff-Levine (1990). "Evaluating Tourism Advertising Campaigns: Conversion vs. Advertising Tracking Studies." *Journal of Travel Research,* 28 (3): 51-55.

Sigala, M. (2007). "Web 2.0 in the tourism industry: A new tourism generation and anew e-business models". Travel daily News, March 05, 2007, www.travelDailyNews.com.

Sigara. M. (2007, Mar 5). WEB 2.0 in the tourism industry: A new tourism generation and new-e-business model. *Travel Daily News*. Retrieved from http://www.traveldailynews.com

Silberman, J., and M. Klock (1986). "Alternative to Conversion Studies for Measuring the Impact of Travel Ads." *Journal of Travel Research,* 24 (4): 12-16.

Snepenger, D., King, J., Marshall, E., &Uysal, M. (2006). Modeling Iso-Ahola's Motivation Theory in the Tourism Context. *Journal of Travel Research, 45*: 140-149.

Stake, R. E. (1994). Identification of the case. In N. K. Denzin & Y. S. Lincoln (Eds.), Handbook of qualitative research (pp. 236-247). Thousand Oaks, CA: Sage.

Stake, R. E. (1995). The art of case study research. Thousand Oaks, CA: Sage.

Stangl, B. and Weismayer, C. (2008). "Websites and Virtual Realities: a Useful Marketing Tool Combination? An Exploratory Investigation". *ENTER 2008;* Proceedings of the International Conference in Innsbruck, Austria ,141-151.

Straub, D., Neil, M., & Brenner, W. (1997). Testing the Technology Acceptance Model across Cultures: a three country study, *Information and Management* 33.

Strauss, A. & Corbin, J. (1998). *Basics of qualitative research: Techniques and procedures for developing grounded theory*. Thousand Oaks, CA: Sage.

Tashakkori, A., & Teddlie, C. (1998). *Mixed methodology: Combining qualitative and quantitative approaches*. Thousand Oaks, CA: Sage.

Thomas, S. (2003). Receiving mixed messages. *Travel Weekly*, October 27, p. 40.

Thomas,W., & Carey, S. (2005). Actual/virtual visits: what are the links? In J. Trant, & D. Bearman (Eds.), Museums and the web 2005: Proceedings, Toronto: Archives & museum informatics. http://www.archimuse.com/mw2005/papers/thomas/thomas.html. Accessed 22 .11.09.

Tierney, P. (2000). Internet-based evaluation of tourism Web site effectiveness: methodological issues and survey results. *Journal of Travel Research*, 39, 212-219.

Tooke, N., & Baker, M. (1996). Seeing is believing: the effect of film on visitor numbers to screened locations. *Tourism Management*, 17(2), 87–94.

Travel Industry Association of America (2004). *TIA shows continued growth in online travel bookers: nearly one-third book all their travel online.* Retrieved on September 20, 2009 from http://www.tia.org/Pres/pressrec. asp?Item=312.

Travel Industry Association of America (TIA) (2009). http://www.tia.org/Pres/pressrec Retrieved on September 30, 2009

Wacquant, L. (2004). Body and soul. New York: Oxford University Press.

Wan, C.-S., Tsaur, S.-H., Chiu, Y.-L., & Chiou, W.-B. (2007). Is the advertising effect of virtual experience always better or contingent on different travel destinations? *Information Technology & Tourism*, 9(1), 45–54.

Wang, Y., Yu, Q., & Fesenmaier, D. R. (2004). Towards understanding members' general participation in and active contribution to an online travel community. *Tourism Management*, 25(60, 709-722.

Weber, K., & Roehl, W. S. (1999). Profiling people searching for and purchasing travel products on the World Wide Web. *Journal of Travel Research*, 37, 291-298.

Williams, A. P., & Hobson, J. S. P. (1995). Virtual reality and tourism: fact or fantasy? *Tourism Management*, 16(6), 423–427.

Wilson, S. G., & Abel, I. (2002). So you want to get involved in E-commerce. *Industrial Marketing Management*, 31, 85-94.

Woodside, A. G. (1990). "Measuring Advertising Effectiveness in Destination Marketing Strategies." *Journal of Travel Research*, 29 (2): 3-8.

Woodside, A. G. (1996). Measuring the Effectiveness of Image and Linkage Advertising. Westport, CT: Quorum.

World Tourism Organization (1999) *Marketing Tourism Destinations Online: Strategies for the Information Age.* Madrid: WTO Business Council.

Yee, N. (2006). Motivations of play in online games. *Cyber Psychology and Behavior*, 9(6), 772-775.

Yesawich, Pepperdine, Brown, & Russell (2003). The e-volution of travel and tourism marketing. *Proceedings of the WTTC Conference*, May 2003.

Yin, R. K. (2003). *Case study research: Design and methods* (3rd ed.). Thousand Oaks, California: Sage Publications.

Zakour, A. B. (2004). Cultural Differences nd Information Technology Acceptance. *Proceedings of the 7th Annual Conference of the Southern Association for Information Systems,* 156-161