

Exploring Persuasive Technology to Enhance Delivery of Professional Services

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Abstract

In this paper we aim to explore Persuasive Technology in depth and how it will enhance the delivery of professional services. A computer is a device that can be programmed to carry out and process a number of arithmetic and logical operations. Computers as Technology have changed from normal usage to become persuaders that focuses on how to design interactive services and technologies to sway people's attitude and support positive in their behavior. They can be persistence, can use many modalities, allows for anonymity, and has the ability to be almost everywhere. Besides, due to these mentioned reasons, technology can gain a competitive advantage in persuasion and various types of tools like reduction, tailoring, tunneling, suggestion, and condition; that make computers an effective persuasive tool. Moreover, there are a number of principles that are adopted by computers to enhance persuasion through connectivity and mobility including: mobile-marriage, information quality, social facilitation and competition. Professional Service (PS) is a unique function performed by independent contractors or consultants whose occupation is the rendering of such services. Professional services are delivered through expert, skilled, and knowledgeable individuals from different fields, locally and globally. The persuasive technology can assists in enhancing the delivery of professional services to clients or customers. Understanding the market and individual needs of technology. Numbers of recommendations were suggested that would assist in enhancing the delivery of Professional Services through persuasive technology.

Key Words: Persuasive, Professional, Service, Service delivery, Technology.

1. Introduction

Technology is created to ensure the users' behavior change through social influence and persuasion rather than coercion. Regularly, these technologies are used in military training, religion, sales, management, politics, public health, and diplomacy. Potentially, these technologies are applicable in areas of interaction between human-computer and human-human. The focus of research on persuasive technology is on a computer and interactive technologies, which includes video games, Internet services, desktop computers, and mobile services. However, this builds and incorporates methods, theories, and results of human-computer interaction, rhetoric, and experimental psychology (Mintz&Aagaard, 2012). The persuasive technologies' design is often perceived as a given design case with intent.

2. Literature Review

Initially, computers were designed for data handling through storing, calculating, and retrieval, but not for purposes of persuading. However, in the digital age, when computers moved to desktops from research labs, it became persuasive in everyday life (Verbeek, 2009). In the presence of the Internet, there was web sites' proliferation designed to motivate and persuade people to change their behavior and attitudes towards certain aspects. Computing technology has a competitive advantage in persuasion because:

It is more persistent, that human can't be as persistent as machines. Computers run around the clock in active efforts to persuade without getting tired, discouraged, or frustrated. Allows for anonymity, they allow a user to maintain a level of privacy that prevents the collection of identifying information such as the IP address while surfing on the web. These anonymity services are provided by either commercial company driven by subscription fees, noncommercial organizations profiting from advertising, or home-brewed services through open source anonymous tools. Anonymity technologies have been used for criminal purposes as well as legitimate purpose.

It can use many modalities, where information cannot be the only factor that influence people, but by how it's presented. To persuade, computers can present data and graphics, rich audio and video, animation, simulation, or hyperlinked content (King *et al.*, 1991). Computer software can scale, to grow quickly when demand increases. If a human persuader is effective, it is difficult to scale the experience so that it reaches a huge number of people around the world quickly. By contrast, when it comes to software-based experiences, especially those delivered over the Internet, the ability to scale is relatively easy. You can replicate and distribute persuasive technology experiences that work just like the original. Computers can be omnipresent, that having the ability to be almost everywhere. When interactive computing systems are embedded in everyday objects and environments, they can occur at the right time and place, giving them greater persuasive power.

Services can be defined in a broad and diverse range of products characterized by intangibility, inseparability of production and consumption, difficulty of standardization and perishability (Hill & Neely, 1988). There have been various studies and attempts to define and categorize services. Services may be divided into different categories: professional services such as management consultancy, legal and accounting; and other services such as secretarial and cleaning (West, 1997). Normal services generally are less expensive and less risky. However, it is much risky and costly to purchase professional services but with higher profit opportunities.

Firms that provide professional services employ a very high percentage of professionals possessing expertise developed through formal higher education and exercise judgment in delivering the service. Professional service providers are dependent on their ability to attract, mobilize, develop and transform the knowledge of the highly educated employees to create value for their customers (Løwendahlet *et al.*, 2001).

3. Persuasive Technology

There are many definitions for Persuasive Technology one that refers to a stimulating interdisciplinary field of research, which focuses on how to design interactive services and technologies to influence attitudes of people and support positive change in their behavior. Also, persuasion has meant, human communication designed to influence the autonomous judgments and actions of others (Simons *et al.*, 2001). The era of persuasive technology is mostly applicable professionally as computers have taken over the persuasion roles that were originally held by some professionals, such as doctors, therapists, and teachers among others. In the late 90s, the Internet emergence led to various people creating and embracing persuasive technology (Verbeek, 2009).

Currently, the most persuasive technologies existing are the websites. Consider Amazon.com, which persuades individuals to buy more products in addition to the processing of orders. This is affected through offering users' suggestions based on their gathered preference and feedback from other previous customers. Other websites include Iwon.com, which persuades visitors through their awards, prizes, and default search engine. Also Classmates.com, which helps in re-uniting people. Over the recent decade, there has been an expansion of persuasive technology in the professional field beyond its primary locations, such as sales, marketing, and advertising. Teams at work are motivated to meet deadlines and set goals. Most companies have websites where they interact with their customers by providing updated information and seek feedback from their clients. Persuasive technology can be a breakthrough if utilized effectively; otherwise, it can be a source of disaster given the fact that it appeals to the emotions of individuals and their inner feelings.

This implies that caution should be exercised in ensuring that no calamity befalls. In persuading and motivating people, any mistake can lead to the opposite, which is discouragement. In conclusion, Persuasive technology is a double edge sword that can build or destroy a society (Anthes, 2000).

4. Persuasive Tools and Principles

There are several types of tools that make computers as an effective persuasive tool. This includes Reduction; using computing technology to reduce complex behavior to simple tasks increases the benefit or cost ratio of behavior and influences users to perform the behavior. Tunneling, using computing technology to guide users through a process or experience provides opportunities to persuade along the way. Tailoring, this is persuasion through customization. Information provided by computing technology will be more persuasive if it is tailored to the individual's needs, interests, personality, usage context, or other factors relevant to the individual. Suggestion, occur at the right time. A computing technology will have greater persuasive power if it offers suggestions in opportune moments. For the technology to be successful, the suggested action must be compelling and timely enough that you implement it. Condition, which is reinforcing target behaviors. Computing technology can use positive reinforcement to shape complex behavior or transform existing behaviors into habits.

As persuasive media through social actors, computers adopt principles of similarity, attractiveness, reciprocity, and praise in executing its persuasive powers. Computers enhance persuasion through connectivity and mobility by adopting the following principles. The mobile marriage principle; where the design of mobile applications is to persuade individuals, and to embrace an intense positive relationship between the product and the user. The information quality principle that allows computing technology to convey updated, well-coordinated, and relevant information with immense potential to foster behavior or attitude change. The social facilitation principle allows individuals to execute a target behavior that is well learned when they are aware they are under the computing technology observation. The competition principle motivates users of computing technology to adopt a target behavior or attitude by leveraging the natural drive of human beings to compete.

5. The Functional Triad Framework

There are three ways to explain the functional triad of technologies in their persuasive roles. These include the role of technology as medium, as a tool and as social actors (Fogg, 2003).

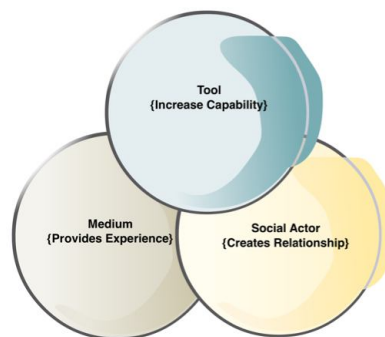


Figure 1. The Functional Triad Framework: Computing technologies persuade in different ways, depending on their functional roles

5.1. Technology as Medium

The role of computers has grown over the past years with an increase in its networking and processing power. The computer operates as a medium in two distinct categories: sensory and symbolic. As a symbolic medium, computer functions by use of symbols including icons, graphics, charts, and texts to convey information. Alternatively, as a sensory medium, computers relay sensory information through touch sensations, audio, or video. This category consists of a variety of computer simulations like a virtual environment and virtual reality. Computers influence people through its primary functions as a sensory and symbolic medium given its unique capabilities to persuade or motivate through provision of interactive experience. As a medium, technology is persuasive in assisting people rehearse a certain behavior; allowing them to experience cause-effect relationships.

5.2. Technology as a Tool

A product of computing technologies act as tools, which increases and enhance is the capability and capacity of individuals and other devices. The persuasion role of a tool includes leading of human beings through a process; making it easier to perform a target behavior; and motivates through measurements or calculation performance.

5.3. Technology as Social Actors

Another functional triad of technology, in this case computer is the role they play as living entities or social actors. While using interactive technology, people respond to it like a living being. In the mid 90s, there were digital pets like Tamagotchis, whose owners interacted with as though they were alive. Tamagotchis' popularity demonstrated that people are capable of responding to technologies in a similar way they do to living creatures. In addition, individuals respond to computers as if they are social actors in various ways. This includes their language used in their operation like sleep, die, or wake up. With or without meaning to, most human beings usually treat and handle computing products as if they are in some way alive. Technology creates a relationship with people as a social actor. It can persuade individuals by rewarding them with positive feedback, social support and modeling a target attitude or behavior.

6. Professional Services

Professional service includes a range of different occupations that provide support to all sizes of businesses in all sectors. People working in professional service provide specialist advice to their customers. This includes things like providing tax advice, supporting a company with accounting or providing business advice. The kinds of services provided mean that the professional services sector helps to improve productivity and growth across the economy.

Professionals offer their clients an advanced, knowledge-based expertise (Greenwood & Empson, 2003), and the relationships these professionals create with their clients are the medium through which they impart this expertise to solve their clients' problems (Reihlen & Apel, 2007). The company may require the specialized service for a short amount of time, and the time for acquiring the professional and the long-term costs may not make it feasible for the company. Other reasons for recruiting professional service instead of using in-house resources is to have an out-of-the-box opinion and outlook of the problem, which will also lead to a non-conventional solution, ultimately benefitting the company. These are among many other vital reasons for acquiring professional outsourced service instead of in sourcing.

7. Persuasive Technology to Enhance Professional Services Delivery

Persuasive technology has currently been adopted in all aspects of life, especially in the delivery of desired professional services. Most companies and business are seeking ways of embracing this technology in order to have a competitive edge over their competitors. In the service industry, the interaction of customers is extremely essential as customer satisfaction determines the success of business. This implies that business must appeal to the need of the customers and reach out to them. This involves persuasion and hence the need for persuasive computing technology (Ai Cheoet *et al.*, 2008).

Persuasive technology has been adopted in all aspects of life, especially in the delivery of desired professional services. Professional services are delivered to clients or customers through an on-going relationship in which professionals and their clients interact to develop a shared history of needs to solve their problems (Svensson, 2006). Professionals apply their knowledge to specific information about their clients' needs to deliver a quality service (Verma, 2000).

An improved client service is the driving force behind their adoption of these emerging technologies, along with improved productivity and profitability. Many firms still face challenges in leveraging technology effectively, despite its importance to their success. Firms need to continuously monitor to ensure they're keeping up with technology changes and investing in the right technology, at the right time, to help deliver the best results. Nowadays, firms are looking at technology in a brand new way - specifically, how it increases their relevance to their clients and strengthens those relationships (Eyden, 2012).

In such interactions, various principles like accuracy of information, courtesy, credibility, reliability, timeliness should be adopted. A customer should be aware of what he or she needs and how to acquire it (Nakajima & Lehdonvirta, 2013). This helps in maintaining existing customers and attracting of new customers because the services offered will motivate and persuade individuals. In today's competitive communication marketplace, companies have an opportunity to build a sustainable competitive advantage through IT by rapidly assessing and exploiting new technologies. Accenture's IT Transformation solutions and services do more than just reduce IT costs, they help our clients align their IT investments with their strategic business imperatives, and can deliver improved IT return-on-investment through modern and cost-effective IT capabilities (Accenture, 2010).

There are many success factors to be able to deliver professional services for customers or clients. According to (De Brentani & Ragot, 1996), success factors of professional services such as; Product dominance and innovativeness: the extent to which a new professional service provides customers unique and superior to what is available in the marketplace.

A high level of product superiority or innovativeness requires that professional service firms promise and delivers excellent service outcomes, as well as a service experience, which is superior to what competitors provide. Furthermore, clients perceive these new professional services as unique because they are innovative; offer original benefits, and the provider are viewed as a leader in the field.

Client and marketing fit; continuously measures how well the new service fits with the client's needs as well as with the company's marketing resources and experiences. Customer participation; is a unique factor in its association with the professional services sector. Clients frequently form an essential part of the service offering, they provide the key information required to determine the nature of the service and often take an active part in its actual design and production. For professional service firms, therefore, it is clear that the customer consideration planning the right company-client relationship, ensuring excellent communication, and training frontline personnel in terms of communication and interaction skills becomes a key element in the new product success equation. Service expertise; deals with the use of highly specialized and trained personnel at the frontline and during assignments. In business-to-business services, such experts perform judgmental tasks and are actively involved in creating and producing the new service product. Professional-client relationships: they are the context for expert-based service delivery and are central to a professional service firm's success. These relationships are viewed as sources of competitive advantage for both the professional service provider and his or her firm (Sharma & Patterson, 2000).

8. Conclusion and Recommendations

Service industry is a sector that is customer oriented. Therefore, the service offered is very crucial especially to first time customers. In most cases, there are many providers of the same service; hence, the quality of the service offered becomes the distinguishing features. This includes mobile service providers, Internet service providers, electricity providers, and legal advice, water, and sewerage services among others. Communication is the key to a successful service delivery (Spahn, 2012).

Persuasive technology is very promising in this area because it changes the approach of both service providers and customers or clients in various issues. It is the key to the sustainability because it provides real time solutions and communication over business operations. Firms need to monitor technology changes and invest in right technology, at the right time. It allows individuals to embrace change and learn from one another. It requires patience before everyone can feel comfortable with the entire idea (Nakajima & Lehdonvirta, 2013).

To ensure that the organization will be able to identify, prepare for, and respond instantly to market or business changes by formalizing strategy-planning sessions with key members at a regular annual interval. Moreover, include milestone strategy sessions to set a longer-term vision. In addition, reassess the competitors, look beyond the market share leaders to understand how emerging providers are gaining presence. Prioritize investment to showcase new offerings (cloud, alternative delivery models) that will differentiate the value proposition and demonstrate proactive value appropriately to offerings and business models to respond and stay relevant. Also struggle to capitalize on the new technology forces while maintaining current labor-based businesses as clients slowly make the transition.

In order to progress the idea of persuasive technology, it is essential to conduct research in order to determine the best medium to use as a tool, because it must possess the three qualities of being a suitable medium, acting as social actors, and being a tool that can be effectively used. However, it is crucial to know the target audience and whether or not the channel employed is effective for the target medium and for the intended information being relayed.

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