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How website design impacts consumer purchase decision-making

A case study: Reviewing Metropolia University's
website design.

Metropolia University of Applied Sciences

International Business and Logistics

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Abstract

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The purpose of the thesis was to investigate the key website design factors affecting consumers' buying behaviour. With the widespread usage of the Internet, many retailers shifted their business towards e-commerce for online buying and selling. Therefore, consumers are now becoming selective in using websites because of the easy availability of numerous online shopping websites. Hence, to be successful in online business, this study focuses on website design characteristics that are promising in identifying consumers' needs, requirements, and attitudes towards purchasing online products and services.

The literature studied from academic books and online resources for the theoretical knowledge of the phenomena includes marketing, consumer buying behaviour, consumer decision-making process, digital marketing strategies, user-centered website design and design thinking process.

To explore the topic from a marketing perspective, a qualitative approach was used to conduct a case study reviewing Metropolia University's website design. The qualitative research data was collected from a depth interview with a professional website designer, designing semi-structured questions based on key website design elements that influence consumer's purchase intention.

The empirical research data collected from the interview has been carefully examined and the result revealed effective website visual, interactive, navigational, and informational design that has a significant impact on consumer's online shopping activities.

Based on the information gathered from the literature review, the research findings were compared in a real-life context to finally conclude how website designers and developers could implement key features for designing attractive websites.

As this study utilized some limitations while analyzing research data, the author provides recommendations for future academic researchers and website designers to further study and minimize the negative impacts of website design elements.

Keywords: Marketing, consumer buying behaviour, website design, design thinking

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1 Introduction

The digital media landscape has undergone tremendous changes from the mid-90s until the present day. For the past two decades, most companies have conducted their business communication through the virtually ubiquitous World Wide Web, where a major goal is, 'to create an attractive presence that meets their business objectives' (Udo & Marquis, 2002). Perhaps, some companies focus on marketing strategies reinforcing positive impressions and might be forgiven if their websites are slightly outdated or imperfect. However, today the growth of online business has raised the bar for the design of commercial websites as a result of constantly shifting market conditions and user needs (Xuan, 2022).

Recent statistics from Forbes (2023) show that 57% of users are less likely to recommend an online business with a poorly designed website since they have experienced dissatisfaction. In the competitive online landscape, this poses a significant challenge for online business growth and badly impacts overall performance. To raise awareness and expand knowledge on earlier research about website design factors that affect consumers' purchase decisions, the author justified this thesis question.

Throughout the years, consumers are increasingly depending on online shopping and making purchase decisions. In this case, a customer's psychological factor and trust in a product or business can influence purchase intention. Therefore, having a well-structured website design is crucial for attracting potential customers and making a positive impact on website performance. Hence, the thesis purpose is to build a theoretical framework based on academic resources to explore the key website design factors that influence consumers' purchase decision-making.

According to this conceptual framework, the author aims to do research in a qualitative approach supported by a single case study reviewing Metropolia University's website design. Data was collected from an in-depth interview for analysis and interpretation of the key research findings. To provide a better understanding of the phenomenon, the thesis task is divided into two sections as follows:

1. Analysing the impacts of company's website design on consumer buying behaviour: A case study of reviewing Metropolia University's website design
2. Evaluating interview data with design thinking approaches in website design practice.

The objective of the thesis is to academically elaborate the case study in research results section about Metropolia University's website usability, key website design factors that influence consumer purchase intention, customers decision making process, design thinking approaches for website designer. Regarding this stated objective and research question, this study also has some limitations while interpreting the results. However, the final section provides recommendations for future website designers, web developers and marketing strategists to adopt the knowledge gained from the research outcomes.

2 Literature review

2.1 Introduction

To understand the impact of website design on the consumer decision-making process, it is necessary to review all the theoretical aspects of marketing and the framework of the topic.

The first part of the literature will define the theory of marketing, customer-driven marketing strategies, consumer buying behaviour and the new age of digital marketing.

The second part has an in-depth understanding of website design and design thinking approach. And the third part has covered the framework of user interface (UI) design.

Lastly, the literature review will focus on the impacts of the design thinking approach on consumer purchase decision-making.

2.2 Marketing

Today, marketing should not be understood in the old sense of "telling and selling" but in the new sense of satisfying the customer's need. Kotler and Armstrong (2010) define 'Marketing' as a process by which companies create value for customers and build strong customer relationships to capture value from customers in return. Companies generally establish a marketing department to affect every aspect of the customer experience, meaning that marketers must properly manage all possible touch points and involve in management activities. In recent years, marketing management has changed significantly as a result of major societal forces that have created new opportunities and challenges. Therefore, companies seek new ways to achieve marketing excellence. Kotler proposes five concepts in the marketing planning process in which companies can choose to conduct their business.

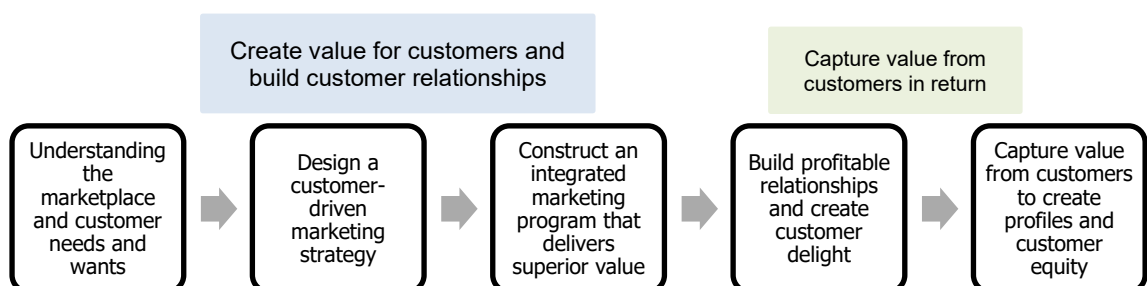


Figure 1. A simple Model of Marketing Process. (Source: Kotler and Armstrong, 2010)

This figure represents, in the first four steps, marketers understand consumers' needs and wants, create customer value, and build strong relationships with customers. In the final step, the companies get rewards in the form of sales, profits, and long-term customer equity. So, the most basic concept underlying marketing is that of designing a winning marketing strategy and constructing marketing programs.

2.2.1 Customer- driven Marketing strategies

To assure business progress and existence in today's competitive marketplace, marketers should be able to research and obtain data about consumer demand. Customer-driven marketing strategy begins with selecting which customers to serve and deciding on a value proposition which best serves the targeted customers. A company's value proposition is the set of benefits or values it promises to deliver to consumers to satisfy their needs (Kotler and Armstrong, 2010).

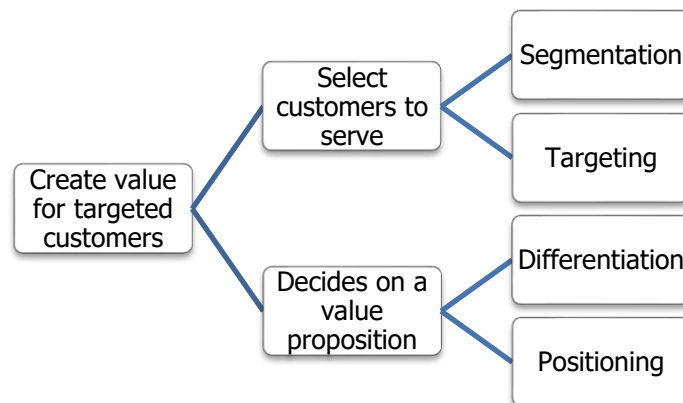


Figure 2. Designing a customer-driven marketing strategy (Source: Kotler and Armstrong, 2010)

As shown in Figure 2, the first two steps involved selecting customers that it will serve. Market segmentation involves dividing a market into smaller groups with distinct needs, characteristics, or behaviour that might require separate marketing strategies or marketing mixes. Many companies now move their ordinary businesses to the Internet and provide their customers with online services. Therefore, website designers who worked for these companies to prepare their websites should know who is going to use the products (website). In the last two steps, the company decides how the firm intends to create value for target customers. Business products, services or websites often fail

because designers have a lack of understanding of their target group of users and difficulty in implementing a value model in their everyday practice. Thus, dissatisfied users switch to other companies websites. As websites become a company's primary interface and communication portal with consumers, so designers must be careful to set the right level of expectations to attract enough users.

2.2.2 Consumer needs

Marketing itself is of little value without creating value for its customers. In today's online marketplace, Companies need to understand customers' needs, wants, and demands. Abraham H. Maslow (1943) arranged a hierarchy of human needs.

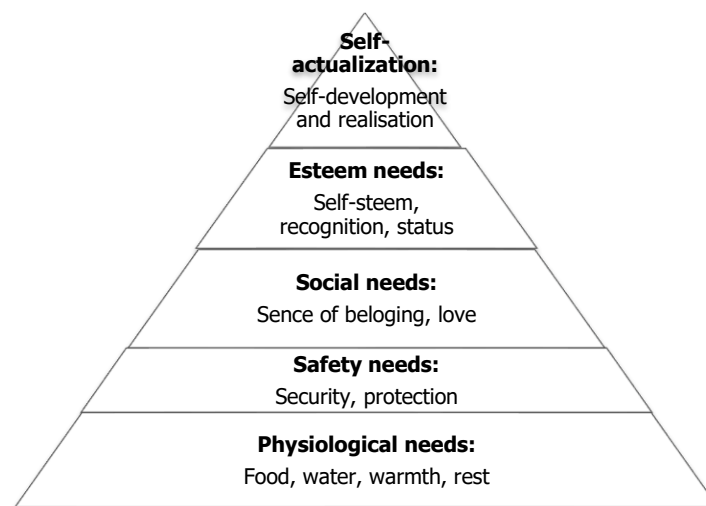


Figure 3. Maslow's hierarchy of needs. (Source: A. H. Maslow, Motivation and Personality)

Maslow's Theory of the model explains how people get motivated by particular needs at particular times. The lower stages of the Pyramid have basic and highest priority needs that are essential for survival. Meanwhile, the higher stages of self-esteem and self-actualization are essential for emotional well-being. Thomas Lockwood (2010) states a catchy phrase from Marty Neumeier: "Seek customers' experiences that rivet the mind and run away with the heart." Thus, customer loyalty and authentic user interaction design in a business website help build enduring relationships with customers.

2.2.3 Consumer buying behaviour

Kotler and Keller (2009) define Consumer buying behaviour as a study of how individuals, groups and organizations select, buy, use, and dispose of goods, and services to satisfy

their needs and wants. A research report has shown that there are around 6.6 billion people who annually consume an estimated \$65 trillion worth of goods and services (Kotler and Armstrong, 2010). Consumers around the world are very diverse to choose products, services, or companies according to their age, income, educational level, and tastes. The focal point of the marketer's effort is to figure out the stimulus-response model of buyer behaviour.

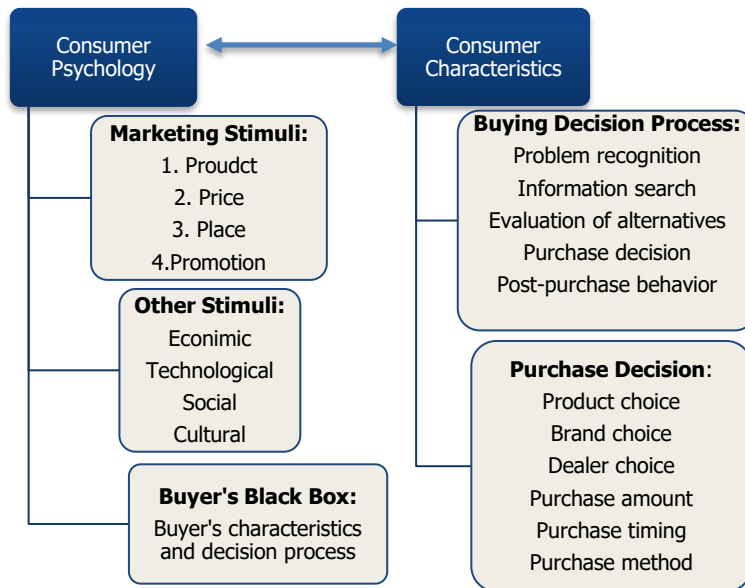


Figure 4. Model of Consumer Buying Behaviour (Source: Kotler and Armstrong, 2010)

This Figure shows marketing and other stimuli enter into the buyer's "black box". Kotler and Armstrong (2010) draw attention to the factor that Cultural and social influences on motivations, beliefs, and attitudes lie deep within buying behaviour. Consumer characteristics as a personal factor influence buying behaviour which are age, life cycle, personality, occupation, and economic circumstances. Companies are often quite well-versed in the measurement of the human factor in their business (demographics, habits, and segmentation) but are lacking often in a deep understanding of consumers (Lockwood, 2010). Therefore, website designers need to research in great detail user characteristics as they affect buying behaviour and the buyer decision process.

2.2.4 Consumer Decision Process

The buying process starts long before the actual purchase has been made by the customer and continues long after. The result might be a decision "not to buy". Therefore, marketers must focus on the entire buying process, not just the purchase

decision. The overall buyer decision process consists of five stages (Kotler and Armstrong, 2010).



Figure 5. Buyer Decision Process (Source: Kotler and Armstrong, 2010)

The figure shows all the considerations when a consumer faces a complex purchase situation or a new product. In the case of regular buying, the consumer often skips or reverses some of the stages. Perhaps, today, a website has become a type of interactive user interface. When consumers recognised their needs, they can often be aroused to seek information about the product on the webpage. If the website of a company is poorly designed is frustrating for the end user to navigate through the website. Thus, consumers often switch to competitors' websites and make a purchase decision by evaluating the brands in their choice set. In the final stage of the buyer decision process, consumers act based on satisfaction or dissatisfaction. Kotler and Keller (2009) state that Consumers are constructive decision-makers and are subject to many contextual influences. However, in the production and consumption cycle, it is increasingly important to acknowledge the relationship between the designers and the users in how they interact with a website.

2.3 The evolution of Digital Marketing

The internet and digital media have transformed traditional marketing and business since the first website (<http://info.cern.ch>) went live in 1991. There are over one billion people around the world using the internet regularly to find products, online services, and entertainment. Chaffey and Ellis-Chadwick (2012) define digital marketing as the application of the Internet and related digital technologies in conjunction with traditional communications to achieve marketing objectives. In practice, digital marketing has four foundations of the delivery mix, which include search, social, email, and mobile.



Figure 6. The four foundations of digital marketing delivery mix integrated with core website strategies. (Source: Zahay, 2015)

The figure illustrates that effective web design is the central element of digital marketing, from which companies develop their strategies for other digital platforms. However, web page designing is critical in terms of a website being found on the internet. As technology was changing, so was the way marketers were thinking about digital marketing strategies (Zahay, 2015). Thus, it has been a clear evolution since the early days of the internet has changed in terms of new technologies.

2.3.1 Technology behind Digital Marketing

Several technologies together have facilitated the rise of digital marketing. Technologies that will be addressed in digital marketing are the Internet, browsers, wide spreading computing, and database technology (Zahay, 2015).

First and foremost, the Internet made the technology widely available to most consumers. Internet World (2014) states that it has taken less than 20 years for the Internet to reach 40 per cent of the world's population. The practice of Technologies in digital marketing has different forms of online company presence, such as company websites, social media company pages, search engine marketing, online advertising, and email marketing. Despite the move to other marketing, the website is still often the destination of the company's marketing campaign. To gain a target audience, the company can put on their website address into the company's own social media accounts to refer customers, which will create website traffic and continue ongoing interactions with them. Then the website becomes a company's primary interface to their customer. Indeed, for e-commerce companies, the site is the company (Nielsen, 2000).

For example, Amazon.com was first developed as an online firm and had an excellent database management system of their customers' online preferences. Whereas, offline booksellers including Barnes and Nobel, and the now defunct Borders, struggled to differentiate themselves in the marketplace and many ultimately failed (Zahay, 2015). So, a marketing program that essentially involves processing data and analysing "customer-centric" website design can facilitate customer relationships.

2.3.2 Customer-centered websites

As technology has developed, so are websites have evolved from the early basic 'brochure style' to static websites which are now much more interactive with each customer (Bax, Meyer and Wilkins, 2013). A website serves as the virtual storefront of a business. It is where customers can learn more about the products or services being offered, make purchases, and interact with the brand. In online marketing, a website is an essential tool for building brand awareness, generating leads, and converting visitors into customers. Customer relationship management relies deeply on businesses that have shifted from a product-centric to a customer-centric focus. To raise the usability of a website, businesses need to set objectives about the five major groups of customer lifecycle including prospects, responders, new customers, repeat customers and former customers. In addition to having clearly defined business strategic goals, developing a website requires user research including demographic, behavioural, and psychographic information, personas, user needs and desires.

2.4 Website Design

Over the past several years, the internet has changed the business pattern and how customers leverage the features of the Internet to make purchasing decisions. Company websites can have features that provide the best product choices, availability, and convenience without the limitation in time and space. In the mid-1990s, many businesses implemented websites that were poorly designed and lacked the essential features necessary to make them useful. More recently, websites are very much a type of interactive user interface, and increasingly, more people rely on the web to do business, correspond, collaborate, do research, and much more. Web usability specialists are trained to seek out the problems in business websites that cause frustrating, confusing, and generally unusable to real users. To accomplish the goal, Pearrow (2007) stated that usability specialists as website designers examine the existing systems, investigate

users' specific needs, document their findings, and practise the design principles at each step along the way.

2.4.1 Web design elements and practices

Website usability has gone from a fairly esoteric discipline to a valuable part of the design process, at least in the sphere of large companies that rely heavily upon web presence in their business model (Pearrow, 2007). Three main factors in website design are including navigation design, information design and visual design which mostly influence consumers' purchase intention. Information design is used to customize the product or service information while navigation design is about the plan used to access the different sections of a website. Visual design deals with balance, emotional request, aesthetics, and graphic unity of the web page consisting of colour, shapes, fonts, and photographs. As Chiasson and Gutwin (2005b) state, "Any successful product will need to be adapted to the particular needs of its users, including modes of communication, input methods, tasks and appearance." For example, a web page may have a reading problem by not considering the visual acuity, cognitive features, and educational levels of older adult users (Greger et al., 2002; Zajicek, 2001). To design a simple and concise website, users can be roughly categorized as children, young and old people their age (Demir, Karakaya, Tosun, 2012)

2.4.2 Human-centered approaches in web design

Design thinking is essentially a human-centred innovation process that emphasizes observation, collaboration, fast learning, visualization of ideas, rapid concept prototyping, and concurrent business analysis, which ultimately influences innovation and business strategy (Lockwood, 2010). To raise the usability of a website it is crucial to have a well-designed interface that should include human-computer interaction rules for users to reach information and other benefits.

Donald Norman and Stephen Draper 1986 proposed the term "User-Centered Design (UCD)" with the study titled "User-Centered System Design: New perspectives on Human-Computer Interaction." The UCD is a philosophy that puts the "user needs" at the centre of the design process instead of technology.

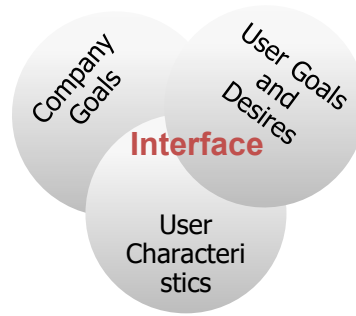


Figure 7. User- Centered Design Process. (Source: Demir, et al., 2012)

As shown in the figure, the process of UCD starts before the development of the actual interface with a definition of companies goals, user characteristics and the participation of real users in prototyping and usability testing processes (Lazar, 2001; Hackos & Redish, 1998; Rubin, 1994).

2.4.3 Web Usability

Investing money in mere technology is not enough to be successful in today's business world. Many companies are finding models and infrastructures that were successful in the past are now too rigid to face new challenges. The simple idea here is that no product, website, or software system matters at all unless there are users to use it. As mentioned previously, the term usability testing and human factors in design thinking should start early in the web development process. Mark Pearrow (2007) defines the term usability as:

"Usability is the broad discipline of applying sound scientific observation, measurement, and design principles to the creation and maintenance of websites to bring about the greatest ease of use, ease of learnability, amount of usefulness, and least amount of discomfort for the humans who have to use the system."

Throughout the usability testing process, UCD specialists technically gathered feedback from the real users who interact with the system and elicit empirically what needs to be changed. Becker and Mottay (2001) presented a model of usability assessment to identify the key factors including page layout, navigation, design consistency, information content (text, image), performance, customer service, reliability, and

security. However, all these factors are included in the final user interface (UI) design of a website.

2.5 Design Thinking approach

Design thinking has become the new buzzword in the business and management literature. The design researcher Lucy Kimbell presents a helpful model that identifies the concept of design thinking approaches.

| | Design thinking as a cognitive style | Design thinking as a general theory of design | Design thinking as an organizational resource |
|---|--|--|---|
| Focus | Individual designers, especially experts | Design as a field or discipline | Businesses and other organizations in need of innovation |
| Design's purpose | Problem-solving | Taming wicked problems | Innovation |
| Key concepts | Design ability as a form of intelligence; reflection-in-action, abductive thinking | Design has no special subject matter of its own | Visualisation, prototyping, empathy, integrative thinking, abductive thinking |
| Nature of design problems | Design problems are ill-structured, problem and solution co-evolve | Design problems are wicked problems | Organizational problems are design problems. |
| Sites of design expertise and activity | Traditional design disciplines | Four orders of design | Any context from health care to access to clean water. |

Table 1. Lucy Kimbell's model of design thinking approach. (Source: Engholm and Folkmann)

The table represents Kimbell's model that defines three specific approaches to design thinking presented in three columns. In the first column, 'Design thinking is defined as a cognitive style' that focuses on the designer's particular competencies, ways of working and thinking. The second column represents reflections that have been part of design research since design became a scientific discipline during the 1990s. The third and last column in the model represents a more recent management or business-oriented practical approach to design thinking. The focus is typically on 'designerly thinking' and the benefit of this cognitive style is that through practice designers acquire knowledge on conceptualising and materialising specific solutions for website development.

2.5.1 Design Thinking Process

The design process is best described metaphorically as a system of spaces rather than a predefined series of orderly steps (Tim Brown, 2008).

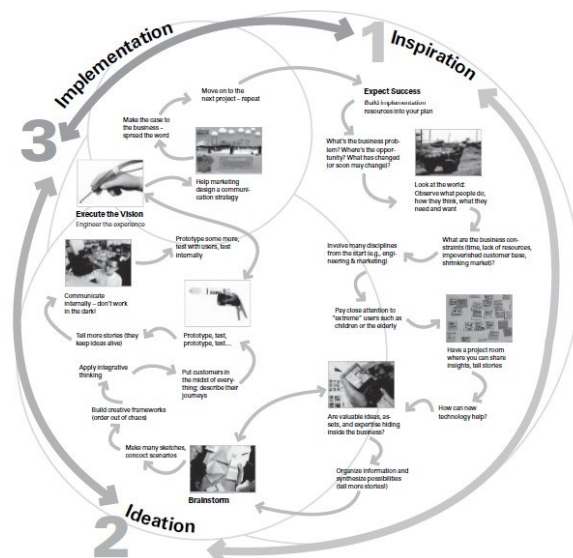


Figure 8. Design Thinking- A cyclical process of the three spaces of innovation. (Source: IDEO & Tim Brown, Design Thinking in Harvard Business Review, 2008)

Brown described the spaces as follows: (1) Inspiration- for the circumstances (problems, opportunities) that motivates the search for solutions; (2) Ideation-for the process of brainstorming, developing, and prototype testing for problem-solving and (3) Implementation- for executing the path to market design as a communication strategy.

2.5.2 The principals of Design Thinking

The chief executive of IDEO (2008) in the book "HBR'S 10 Must Reads: On Design Thinking" Tim Brown described design thinking principles as a part of the innovation process.

Begin at the beginning: Involve design thinkers at the very start of the innovation process before any direction has been set.

Take a human-centred approach: Along with business and technology considerations, innovation should factor in human behaviour, needs, and preferences.

Try early and often: Create an expectation of rapid experimentation and prototyping. Encourage teams to create a prototype in the first week of a project.

Seek outside help: Expand the innovation ecosystem by looking for opportunities to co-create with customers and consumers.

Blend big and small projects: Manage a portfolio of innovation that stretches from shorter-term incremental ideas to longer-term revolutionary ones.

Budget to the pace of innovation: Design thinking happens quickly, yet the route to market can be unpredictable. Be prepared to rethink about funding approach as projects proceed and teams learn more about opportunities.

Find talent in any way you can: People with more-conventional design backgrounds can push solutions far beyond expectations. It may be possible to train non-designers with the right attributes to excel in design thinking roles.

Design for the cycle: In many businesses, people move every 12 to 18 months. But design projects may take longer than that. Plan assignments so that design thinkers go from inspiration to ideation to implementation. Experiencing the full cycle builds better judgement and creates great long-term benefits for the organization.

2.5.3 Strategic Design Thinking for websites

Design thinking is always most effective when it successfully connects strategic planning with the execution of products, services, and communication. The value of design thinking has typically been recognised mainly from industrial design practice in operations and product development. An organization typically has strategic planning or goal at every level of its hierarchy. These goals are embodied in different forms of content, applications, or features of a website design. Information products such as websites are tools that help the organization accomplish their goals. So, the starting point for designers is to understand the business goal as the mission statement or vision statement if it exists. For example, Google states the following succinctly on its website:

"Google's mission is to organize the world's information and make it universally accessible and useful" (Pearrow, 2007).

Based on the holistic design ideal, businesses should aim to integrate design consistently and completely across the value chain, customer touchpoints and for all their stakeholders.

2.5.4 Design Thinking criticism

Design thinking is a fundamentally creative process that is driven by specific problems and yields effective solutions.

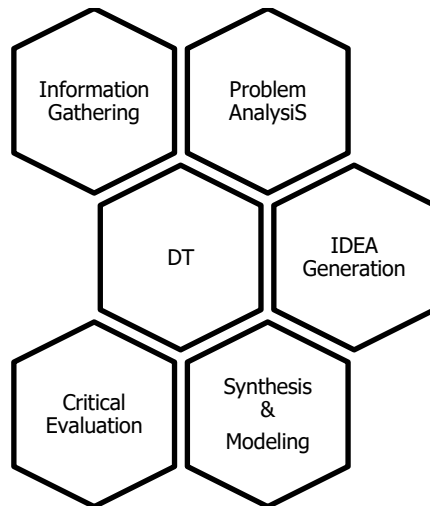


Figure 9. The fundamental building blocks of design thinking (DT) that together form a "loop". (Source: Pressman., A. 2019)

This diagram is intended to underscore the nonlinear nature of design thinking, and how the blocks may be interconnected. Madlen Simon described the feedback on critical evaluation that conversation and critiques help design thinkers to personally reflect on the process. The last component of the loop is a unique attribute of design thinking that embrace pragmatic and appropriate feedback on business website design or prototypes from stakeholders, peers, experts, or specialists relevant to the work in shaping the outcome. However, changing or adjusting in response to constructive criticism does not have to be seen as a compromise, but something that makes a design more sensitive or responsive to the particular issue.

User interface pioneer Bill Buxton in his book "Sketching User Experiences", describes the Apple iPod as the "overnight success" which took three years to happen. He documented many design changes to the device after its launch which were essential to its success. However, design experts can cultivate the habit of self-criticism in designing websites which can efficiently inspire new ideas or solutions.

2.6 User interface (UI) design

People are social beings, so it is important to determine how peoples' approaches and ways of thinking are significant while designing for them. In the human-computer context, interaction consists of three elements: Humans (users), devices (computers, mobiles, etc.), and tasks which the user wants to do by using the device. The interface is the primary way of the communication between product and the users (Demir, Karakaya & Tosun, 2012). Web usability guru Steve Krug (2014) documented a well-known fact about web use is that people tend to spend very little time reading most web pages, but they scan them, looking for eye-tracking words or phrases. So, the important way for web designers and usability professionals is to create clear visual hierarchies to make pages easy to grasp in a hurry.

2.6.1 The framework of UI design

The technology framework underlying today's website provides a platform that includes more than basic link and form-based interaction. The interactive element of a website includes content structure, navigation menu structure, site theme and page layout.

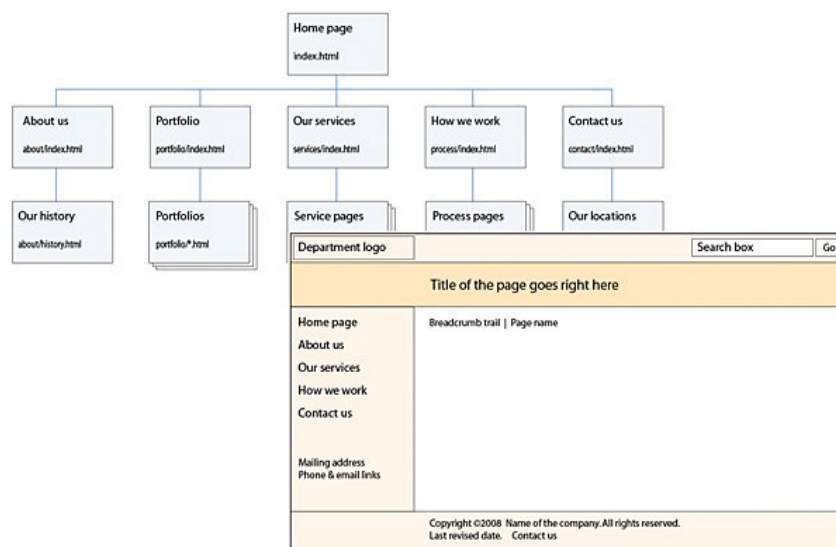


Figure 10. Simple site diagram and a page wireframe sketch. (Source: Lynch, P. J., et al., 2019)

The diagram shows a webpage sketch that the user interface design is responsible for the overall look and feel of the website. Because users have varying tolerances for complexity and distractions on web pages (Krug, 2014).

However, there are some effective ways to consider when designing for the visual interface design of a company website:

No dead-end page: Users mostly follow the subsection pages of a website rather than a home page or introductory site information. If the subsection pages did not contain links to the home page, users will be locked out from the rest of the site. A home page along with links back to the other sections is the hierarchy of a site. However, this can badly impact on users intention of visiting the website.

Direct access: Users of a site want to get information in the fewest possible way. In the face of limited time and attention, designing content should be just a click or two away from the main menu of the site.

Simplicity and consistency: As mentioned earlier, users are not impressed with the complexity, and unfamiliar design interface of a site, so they will quickly hit the 'back' button and move on to another website. Thus, the company lost potential customers lacking consistency and a clear appearance of the web page.

Integrity and stability: To convince users to become potential customers, businesses need to offer accurate and more reliable web design. The functional stability of an interactive website design helps inspire confidence in the user.

Web navigation: Most websites contained section pages linked to the home page and each has a unique URL. Navigation design is about providing a map describing the topography of the site, and systems of transport for moving from one location to another.

2.6.2 Mobile interface design

Mobile internet technology is one of the fastest growing and most exciting areas of modern computing and mass communications. Although smartphones and tablets provide so many things that only desktop computers could do just a few years ago, there are some cognitive constraints on mobile phone users' interaction. When iPhone and Android phones were introduced to the market, most web designers and interface experts advocated special mobile only-sites that were simplified versions of full "desktop" websites (Lynch, Horton and Marcotte, 2019). Users of a small screen mobile devices often have difficulties with a limited view of a page, and navigation remains critical to

interact with the site. Most web users have a smartphone as their primary computing device, so they want a full-user interactive website to go to when they are on the phone. As web designers are always struggling to make pages more visually interesting, if they do it correctly, there will be more users visiting the company website. Thus, smartphone users can become potential customers for long-term relationships with the company.

2.7 Web Analytics Tools

Web analytics is not possible without data. But many organizations fail to realise that they need different types of data to measure the performance of their website (Cutroni, 2010). Avinash Kaushik in his book *Web Analytics: An Hour a Day* (Wiley), defines web analytics as:

The analysis of qualitative and quantitative data from your website and the competition, to drive a continual improvement of the online experience that your customers and potential customers have, which translate into your desired outcomes (online and offline).

This definition contains three main tasks that every business must tackle in web analytics including measuring qualitative and quantitative data, continuously improving the website, and aligning the measurement strategy with business strategy. The web analytics tools such as Google Analytics, Omniture, Web Trends, and Yahoo generate data that identifies where website traffic comes from and what happened on a website.

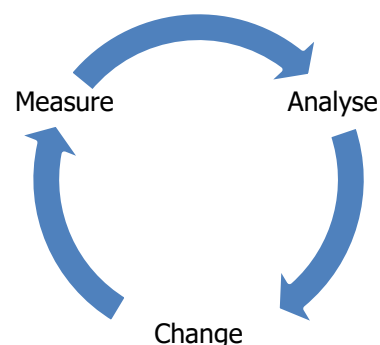


Figure 11. The web analytics process: measure, analyse, and change. (Source: Cutroni, J., 2010)

As the figure represents, the entire goal of web analytics is to increase desired business outcomes. This means measuring metrics must align with the business goals to analyse how users find the website and how well it performs to generate more traffic.

2.7.1 Performance measurement metrics

Andy Neely and co-workers of Cranfield School of Management's Centre for Business Performance have defined performance measurement as:

The process of quantifying the efficiency and effectiveness of past actions through acquisition, collation, sorting, analysis, interpretation, and the dimension of appropriate data (cited in Chaffey, 2012)

However, this definition now has extended to the process of analysis and action to drive business performance and returns. As there are too many metrics to measure business performance, to narrow it down into a specific segment such as digital marketers can apply the key efficiency measurements to acquire visitors to a website and convert visitors to outcomes or achieve repeat visitors. These measures also evaluate the volume, quality, and value of a website, and which sites referred the visitors (the reference). The quality of a website can be measured by calculating the ratio of conversion rate, bounce rates, cost-per-acquisition (CPA) or cost-per-sale (CPS). Once the customers are attracted to a website, their behaviour can be monitored by when they visit, how long they stay and their interaction with the site (Chaffey, 2012).

To measure the key ratios of a website, the measurement technique or formulas given by Dave Chaffey (2012) are as follows:

Bounce rate for different pages of a website (single page visitor)

Homepage views / all page views e.g., 20% = (2000/10,000)

Stickiness (visitor stays on site): page views/visitors sessions e.g., 2 = (10,000/5000)

Repeats: visitor sessions/visitors e.g., 20% = 1000 / 5000

However, for accessing the outcome of a website, conversion rate calculated on a wide scale, which indicates the percentage of website visitors particular outcome as follows:

Conversion rate, visitors to purchase = 2% (for example, 10,000 visitors, of which 200 make purchases)

Conversion rate, visitors to registration = 5% (for example, 10,000 visitors, of which 500 registered)

To redesign a website, tracking these key metrics is essential, but only depending on the site-specific metrics can lead to difficulties for any business performance. Nonetheless, with the best performance measurement tool, a business cannot identify users' attitudes, motives, and expectations. Therefore, relying solely on web metrics to understand users can be far more complicated in real-life situations. However, it is extremely important to measure good analytics data before planning a major site redesign or improvements ((Lynch & Horton, 2016).

3 Research methodology

Research is the process of collecting, analysing, and interpreting data to understand a phenomenon (Leedy & Ormrod, 2001). The author aims to conduct research in a qualitative approach conducting case studies and interviews regarding the 'design thinking approach' which is relevant to the way designers think in the context of consumer purchase decision-making process and marketing management.

3.1 Research design

A full justification of the overall research will occur as the research progresses from the early stages, but it is important to use appropriate literature to justify the research problem at an early stage (Francis, 1998). Research design is defined by Professor F. N. Kerlinger as "Research design is the plan, structure, and strategy of investigation concerned to obtain answers to research questions and to control variance." The research designs can be broadly classified into three categories namely exploratory, descriptive, and experimental research. The very first step in the continuous research process is an exploratory research study. As a preliminary phase, it helps in formulating the hypothesis for further research. Exploratory research is used to define research problems, unlike descriptive, experimental research which is used to find solutions to them (Sontakki, 2009).

There are numerous ways of collecting data to respond to the particular research question or problem. In empirical research, data is a broad term, so researchers typically subdivide data into three types quantitative, qualitative, and mixed methods. To anticipate the types of data, Creswell (2002) noted that quantitative research is the

process of collecting, analysing, interpreting, and writing the results of a study, whereas qualitative research is the approach to data collection, analysis, and report writing differing from the quantitative approaches and mixed methods approach combining both research studies to respond to a problem or question.

As the research topic seeks to examine data that involve contact with people and field settings, while quantitative search often disengages the researcher from the people and field of research (Guba and Lincoln, 1994; Silverman, 2000). Thus, in the scope of this research question, data from exploratory studies tend to be qualitatively supported by case studies to formulate the problem for further study of customer needs, buying behaviour and decision-making process.

Secondly, the author aims to conduct individual depth interviews with a design expert to explore the real-life situation of a company on how effectively they design websites to attract potential target consumers. In the case of studies, the richness of the phenomenon and the extensiveness of the real-life context requires case study investigators to cope with a technically distinctive situation as there will be many variables of interest than main data points (Yin, 2009).

Therefore, to conduct the case study with data collection from an individual dept interview, the research question is now divided into two sections as follows:

1. Analysing the impacts of a company's website design on consumer buying behaviour: A case study of reviewing Metropolia university's website design
2. Evaluating interview data with design thinking approaches in website design practice.

3.2 Qualitative research

As an integral component of the research study, qualitative data is open-ended and valuable for the in-depth understanding of how and why questions concerning the phenomena in the marketing domain and consumer contexts (Carson et al., 2001). Alan Wilson (2006) defined qualitative research as:

"Qualitative research is undertaken using an unstructured research approach with a small number of carefully selected individuals to produce non-quantifiable insights into behaviour, motivations and attitudes."

During the development stage, qualitative research enables 'the creatives' from an advertising agency to understand consumer perceptions of a product field, consumer segments, dimensions that differentiate brands and the decision-making process. There is a wide range of techniques available for conducting qualitative research in marketing management settings.

| Techniques/methods | Uses |
|---|--|
| Participant observation/contributions | as specific research techniques; |
| Content analysis (of printed materials/ company materials) | |
| Small surveys, used qualitatively | useful on their own but better when combined with other methods |
| Conversational analysis | only focus on what people say, what can be observed, or what has been written |
| Observation | |
| <i>More comprehensive/holistic methodologies</i> | comprehensive methodologies; allow for gathering wide range of data: allow for observation, what people say, written materials, documentary evidence; and over time, not one-off, time-specific approach |
| In-depth/convergent interviews/focus groups | |
| Action research and learning | |
| Grounded theory | |
| Ethnographic studies | |
| Case studies | |

Figure 12. Qualitative techniques and methods, their purpose in use. (Source: Carson et al., 2001)

For this research investigation, the case study method will benefit from the prior development of the theoretical propositions to guide data collection and analysis. As relation to website design, which is the backbone of the thesis, the author choose qualitative in-depth interview as data collection method over other procedures involved in qualitative research. An interview that conducted face-to face in which the subject matter of the interview is explored in detail using an unstructured and flexible approach is called Individual depth interview (Wilson, 2019). To examine the theories from earlier literature and support the case study, the author will develop the research process through interviewing a website designing expert as a data collection method.

3.3 Case Study

A case study begins with the research questions to be addressed and the development of a case study design. The initial study question may have reflected one orientation but as the case study proceeds, the evidence begins to address different research questions which is one of the largest criticisms of case studies (Yin, 2009). To avoid such unsuspected slippage; the investigator focuses on the subunit by dividing the research question into two larger units of analysis. Yin's (2003: 13-14) descriptive definition of a case study is:

A case study is an empirical inquiry that investigates a contemporary phenomenon within its real-life context, especially when the boundaries between the object of study and context are not evident.

With a single-case (holistic) design, the author aimed to review a university's website design since many students each year apply for higher education and to investigate the "website design elements" that influence user's behavioural context.

The reason for choosing this case topic is to explore the university website usability as addressed in section 2.4.3. There is a wide range of information published on the university webpage about different degree programmes to attract prospective students for applying each academic year. If the university website structure is poorly designed, insufficient educational information and performance issues are found that had a bad impact on student's perceived usability of the website. Therefore, the author will provide a descriptive elaboration of the complex and broad topic and narrow it down to gain in-depth insights into the phenomena.

3.4 Company Introduction and the sample

Metropolia University of Applied Sciences is a higher education institution based in Finland. As the largest university in Finland, the institution offers education to future professionals in the field of Business, Culture, Health Care, Social Services, and Technology within a community of 16,200 students and more than 1,000 experts (Metropolia, 2020). What Metropolia aim is, to build a sustainable future together with people by implementing new ideas and innovations for creating insight, expertise and well-being. To succeed in its aim, Metropolia University provides educational content and valuable information regarding online admission dates, degree programmes,

announcements, financial reports, contact information, and student services through its website. The university website information is provided both in Finnish and English language to target a large number of international students. In this digital age of the online system, the university website is the ultimate information gateway for a large portion of the world's population. Metropolia identifies their target audience from the viewpoint of their satisfaction with the performance and website usability to update its services over time. As an open university, there is a wide range of users including students, lecturers, staff members, stakeholders and other people around the world visit the website to access the information and services. Hence, many exchange students every year who get easy access to the information from the University's website come to study at Metropolia University.

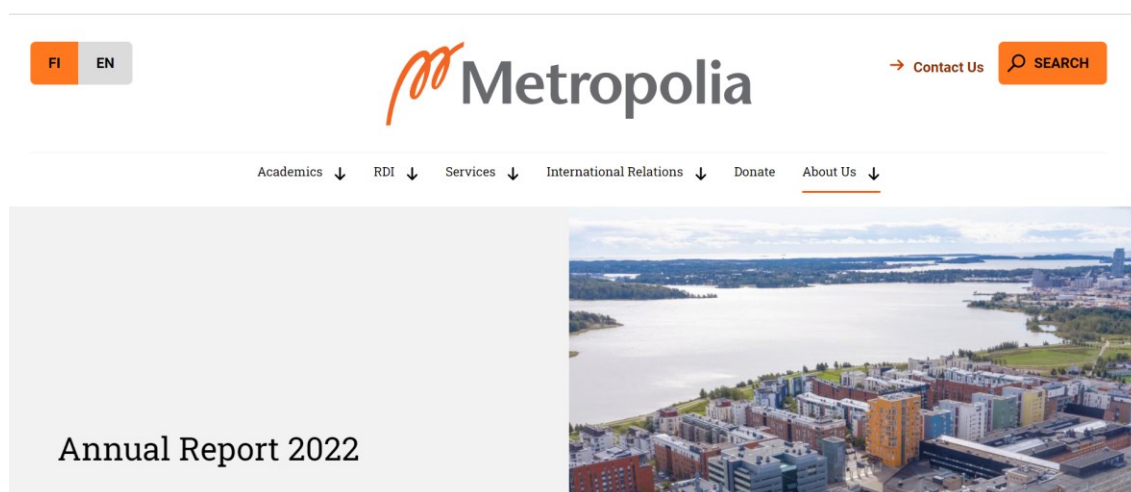


Figure 13. The website layout of Metropolia University of Applied Sciences (Source: Metropolia, 2020)

According to the annual report of 2022, in a joint application, Metropolia became the most popular university of applied sciences in Finland, with 9,927 applicants putting Metropolia as their first choice. In terms of the first-choice application, Metropolia was recorded as the sixth most attractive university of applied sciences in Finland (Metropolia annual report, 2022). However, concerning the case company Metropolia, the author will closely review the university website design as the sample of the case study. The case study objectives will be further discussed in the research outcomes aligned with the literature review on effective website design elements and customer decision-making processes.

3.5 Data collection method

As a source of the case study evidence, data for this thesis were collected from well-informed interviewees since the case topic was related to human affairs or behavioural events (Yin, 2009).

According to the research design, the author interviewed a website design expert at a reputed software development company based in Europe. As there are different types of interview categories to select, it depends on the aims and objectives of the research topic. The interview with an individual website design expertise is logical in this exploratory research objective to obtain a deeper understanding of website design features that influence consumers' buying behaviour and decision-making in real life context. The flexibility and time management of this depth interview approach are apart from other types of interviews, and it is also evolutionary in nature (Wilson, 2006).

Individual in-depth interviews are conducted face-to-face, in which the subject matter of the interview is explored within a list of questions that can be structured or semi-structured and a flexible approach (Wilson, 2006). However, this interview was conducted on a virtual platform due to the geographic distance between the interviewer and the participant. The interview was held in the English language since the mother tongue of both sides were different.

In the beginning, the interviewer had a list of semi-structured and generally open-ended questions added to the appendix which were intended to elicit views and opinions from the participant (Creswell, 2014). During the interview process, the interviewer collected qualitative documents (notes, audio records, website address) for further study, preparing and analysing data. As the interview progressed, both participants of the interview had a natural conversation with a flexible approach to explore further the case topic and subject matter of the research objectives. The interviewer had a basic checklist before preparing the interview questions to remind her of the key areas covered in the earlier literature review that needs in-depth probing.

Checklist Key point

- | | |
|-----------|--|
| 1. | Customer-driven marketing strategy in practise |
| 2. | Key elements of website design that influence consumers buying behaviour |

| | |
|----|--|
| 3. | Design thinking approaches for user-centered website design (design thinking practise or experience to share) |
| 4. | User interactive website design |
| 5. | Website usability |
| 6. | Extra information / documents / website links (regarding the issue) |

Table 2. Interview checklist before preparing questions.

One of the advantages of this checklist is to create awareness for the interviewer in terms of covering the main concepts of the research. In some situations, the interviewer asked the respondent about the facts or such events of a matter as well as his opinions and posed to get his insights. As a website designer, the respondent had four years of experience in building professional websites for their clients. Therefore, he shared his working experience in designing interactive websites that create value for their users. Even with the line of inquiry about such events or explaining how they occurred, the interviewee's response is subject to the common problems of bias, poor recall, and inaccurate articulation (Yin, 2009). Hence, the interview process takes a longer time than usual and lasts up to a maximum of 60 minutes to cover all the listed questions. At the last moment, it is worthwhile for the interviewer to ask any final comment the interviewee would like to share.

However, it is at this point that the interview questions of the case study research involved a detailed description of data to prepare for conceptual analysing.

3.6 Qualitative Data Analysis

The analysis involves the process of breaking data down into smaller units to reveal their characteristic elements and structure (Dey, 1993:30, cited in Gray, 2018). While interviewing, a wide range of qualitative data was gathered that needed to be structured and interpreted what the data provides in terms of the research objectives. Therefore, a general procedure is followed to give concrete illustrations of the data analysis and interpretation.

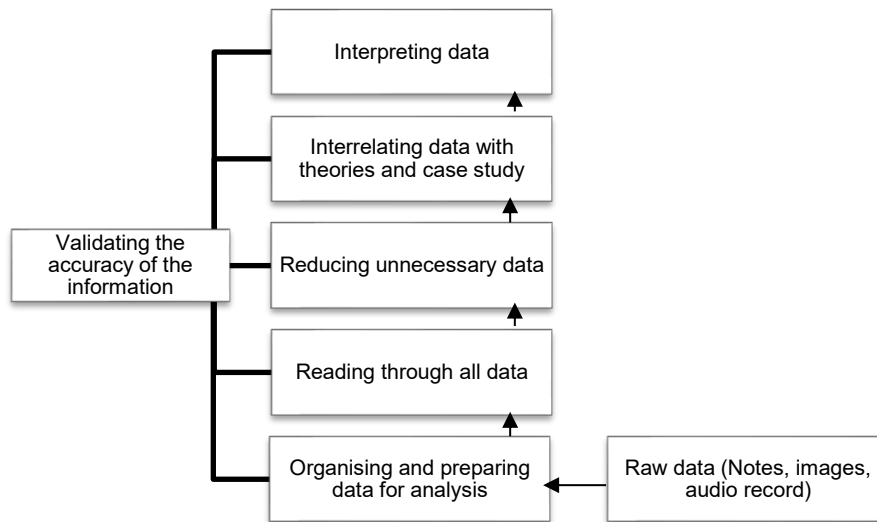


Figure 14. The process of Qualitative Data Analysis (Source: Creswell, 2014)

This figure shows a hierarchical approach to the data analysis process starting with the raw data from the bottom line to the top.

Step 1. Data preparation

In the first phase, data was collected from the interviewee through video calls with an audio recording that involves transcribing the conversation, sorting notes, and visual materials, highlighting the visual expressions and tones of voice used when certain points were discussed. While the data was being processed, the researcher arranged the output data by structuring and ordering with the research objectives (Wilson, 2006).

Step 2. Reading through all data

The first step provides a general sense of the overall interview data to observe and study for use in the research results. To ensure the accuracy of interview data, the researcher thoroughly read and looked for the visual materials on what was the narrative passage to convey the usefulness of the information. However, it is worth mentioning that certain points from the respondent's answers reflect the case topic and theoretical framework of how website design elements affect consumers' online buying behaviour and decision-making that would be presented in the research results.

Step 3. Reducing unnecessary data

The objective of the interview technique was to allow the respondent to describe their views in the 'could you please tell me about...' approach with his own words. Concerning

the probing questions, the respondent was flexible to cover a wide area of key concepts or events. In some dynamic interactive situations, the respondent can talk about his experience or 'work-life story' while probing into the research topic due to the open-ended nature of in-depth interview protocol (Carson et al, 2001). Therefore, unnecessary information including open-ended questions to maintain interview flow which were beyond the research objectives have been removed. The respondent's bias of recalling '(long pause...hmm)' made the interview process lengthy. To minimize the groundless data, the researcher edited the transcript and recovered the interviewer's bias of mixing open-ended and main questions. At this point, the final transcript was sent to the interviewee to follow up on some points that were not clear since the spoken and written language may vary due to the common bias of interviewing.

Step 4: Interrelating data with theories and case study

During the data processing step, the researcher already advanced to sketch the ideas and interconnect the themes with the single case study of reviewing university website design with the theoretical framework of the thesis. To convey the descriptive information from the interview, the researcher conceptualized similar categories for instance, 'how user interactive website design features can influence consumers buying decision making' positioning it with the theoretical model of section 2.2.4 will be represented as research results.

Step 5: Interpreting data

The final step in data analysing involves interpretation in qualitative research of the findings or results that capture the essence of the idea brought to the study from the earlier literature review and the case study. Moreover, the researcher will describe how the narrative outcome of the data analysis can be compared with theories at the end of the study. Thus, interpretation in qualitative research can take various forms to be adapted for different types of research design (Creswell, 2014).

Validity & reliability

Qualitative validity defines the researcher's inquiry for the accuracy of the findings by employing certain procedures, while qualitative reliability indicates the researcher's approach is consistent across different researchers and projects (Gibbs, 2007, cited in Creswell, 2014). While examining the responses from the interviewee, the researcher

clarifies the bias by self-reflection as an open and honest narrative that the source of the data is reliable from the company website directly. Based on the research findings, validity is one of the strengths to determine whether the findings are accurate from the standpoint of the researcher, the participant, or the readers (Creswell & Miller, 2000). Nevertheless, the researcher also doubled check the final transcript with the interviewee to ensure the accuracy of the information.

4 Research results

At the end of this qualitative research, the narrative outcome of the whole case study undertaking an interview as a source of the findings will be compared with the general literature on the topic.

As a result, the researcher will interpret the understanding of website design elements that affect consumer's attitudes, behaviour and decision-making will be presented for future development of the research issue.

4.1 Metropolia University's website design review

Metropolia University of Applied Sciences is a higher education institution based in Finland. The university provides educational information and online study services through its official web page. The case study addressed the overall information about the company and their target audience in section 3.4. However, the researcher reviewed the overall university website from a user's perspective and accessed different web pages linked to the homepage, read some of the contents, and navigate through the homepage.

As this research results, the author will evaluate the university's website usability, customer-driven website design elements, design thinking approaches and consumer decision-making process supported by the theories covered in the literature and qualitative research data.

4.2 The usability of Metropolia University's website

There are numerous studies conducted on website usability since the business's main objective is gaining potential users for the website. A model of usability assessment by Becker and Mottay (2001) was identified in the previous section 2.4.3 that includes page

layout, navigation, design consistency, information content (text, image), performance, customer service, reliability, and security are the key factors to analyse a website's usability. While reviewing Metropolia University's website, the researcher discovered all of these features were designed properly which is satisfactory for users to visit the website again. Besides that, the interviewee's answer on website usability was "We design what our users prefer to" which was explained as collecting feedback from the users on how they interact with the system, helps them to develop their work. However, it is suggested for future website designers and web developers implement this type of assessment for usability testing and improve website design accordingly.

4.3 Customer-driven website design elements

The most typical target audience of Metropolia University is the prospective students and other segment audience segments who visit the website to access information. The students specifically who are seeking information about degree programmes to get admission are the potential customers of the university.

To successfully engage with the customers, the business need to put its customer experience first and ensure their needs to fulfil. In section 2.2.2 of consumer needs, the aspects of emotional well-being were noted in Maslow's hierarchy of needs on how consumer emotions are associated with a product. Therefore, the educational website should use student's design preferences to increase satisfaction with website usability which will drive students to choose the university for higher education. Likewise, a website with inappropriate labelling of navigation, poor content quality and difficult design fails to satisfy the student's needs and thus leaves the website with no interest to return. Concerning this website design, the researcher asked probe question to the respondent if they have any current website design problems to solve. As a website design professional, the respondent pointed out, "information, navigation, interactive and visual components" are the main website design elements that need to fix for their client's website. These website design elements are also indicated in the earlier literature (section 2.4.1) that is structured below along with their impacts on consumers' behavioural context.

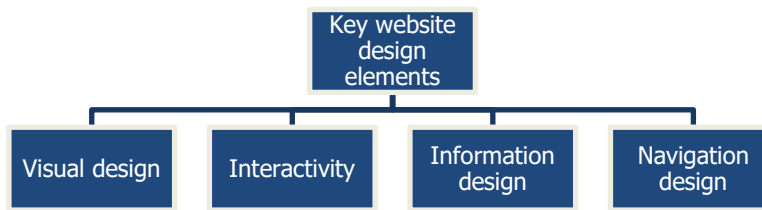


Figure 15. Key website design elements that influence consumer buying behaviour

Visual Design

The consistency, aesthetic, and attractiveness of a website's appearance including images, fonts, colours, shapes, and layout are considered visual design. As suggested by the respondent, it is a key component to significantly increase users' excitement and emotions while interacting with the site. According to a model of consumer buying behaviour discussed in section 2.2.3, designers should not neglect aesthetic design (colour, typography) as it has a psychological impact on consumers buying behaviour.

Colour: it helps users to memorize the labels, buttons, logos, and links of a website. The colour used in the university logo and web pages provides the user with the readability of the text and memorising the colour of the logo. This indicates that positive mood influences consumer behaviour. Furthermore, website designers should choose colours carefully according to their business goals.

Typography: the textual information that appears on the university website needs to attract the user's attention in a readable and comprehensive manner. The research data involves typography as a website design feature including size, spacing, colour, typeface, and alignment. According to the respondent, "the relevancy of the context, grammar and spelling, readability, and formatting greatly impacts consumer's attitudes, behaviour and satisfaction."

Interactive Design

Throughout the explanatory factor of the university website's case study analysing, the relationship between students and the educational institution can be strengthened if the website is easy to interact with. As a purpose of the case study research, the respondent was asked about the most challenging factor of user interactive website design today.

According to his experience, the main challenge is understanding target users, their needs and in which context they interact with the website (mobile, desktop, laptop, and tablet). However, it is worth pointing about the small-screen mobile device users discussed in section 2.6.2 about mobile interface design, often have difficulties with a limited view of a page, and navigation remains critical to interact with the site. Therefore, The features of interactivity should be implemented on the website including content quality, responsiveness, personalization, and web usability which leads towards consumer satisfaction within all devices.

Content Design

Content is the key element of a website which describes a product or service offering. The quality of content on a webpage needs to be accurate, relevant, and updated information on a product or service. According to the interview data, While designing a webpage, designers care about information design as it is related to product, service, payment, and vendors. All these aspects of information quality had an impact on consumers' trust and purchase intentions. Another concern related to information design was the content length which should be shorter to evade excessive scrolling. Especially in the case of mobile phone users who are shopping online, and the screen size is limited. Thus, the availability of necessary information, ease to understand, and accessibility can enhance consumers' decision-making and purchasing the product (Lin, 2007, cited in Hasan, 2016).

Navigation Design

The navigation design of a website is the structural layout of site pages and their content. The participant who was interviewed had experience with consumer feedback on navigating through website pages. As people search for important information on an educational site for their convenience so unnecessary screens, links, page loading speed, options or clicks can overwhelm them and thus leave the website immediately. Students who are already studying online at Metropolia University can prefer simple and direct navigation designs on websites to save time and access when they need it. Likewise, an unclear navigation design of a website loses users' trust, and they leave the site with no intention to return. Maintaining consistency between all web pages regarding their appearance and navigational system can help website designers to solve the problem.

With the tense competition in the marketplace, where a great number of higher education websites offer almost similar services to their target audience, so, this research study analysed key design factors for web designers to practise which greatly affect student's emotional states to stay on the website and thus make the decision for applying to the degree programme. Furthermore, the researcher has found this topic relevant to the earlier theoretical framework of website design (section 2.4) that influence consumer on their buying behavioural intentions (section 2.2.3). It is so, however, emphasized that designers of a website need to use these elements according to the segment audience.

4.4 Student's decision-making process

This section is comprised of Metropolia university's potential target audience as new applicants who apply for different degree programmes in higher educational institutions. To analyse the university's overall performance in recent years, the researcher found a statistic of the annual applicant report on Metropolia university's website which is presented below.

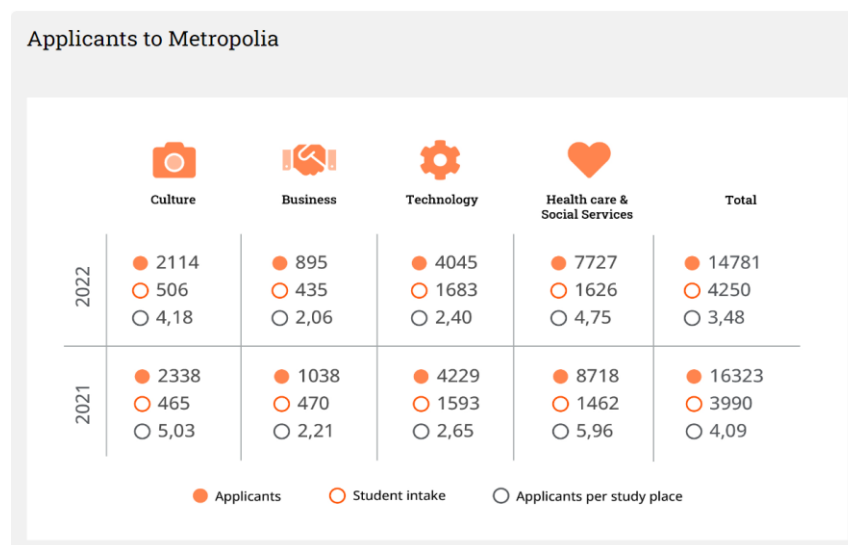


Figure 16. The annual report of Metropolia university's applicants between year 2021 and 2022 (source: Metropolia, 2020)

This figure represents the total number of applicants in 2022 has decreased compared to 2021. To analyse the fact, the researcher studied the theories previously discussed in section 2.7.1 on performance measurement metrics. As the theory stated key website measurement metrics for the website to analyse consumer engagement and website performance, therefore, the researcher reviewed Metropolia University's website performance on a software-based platform.

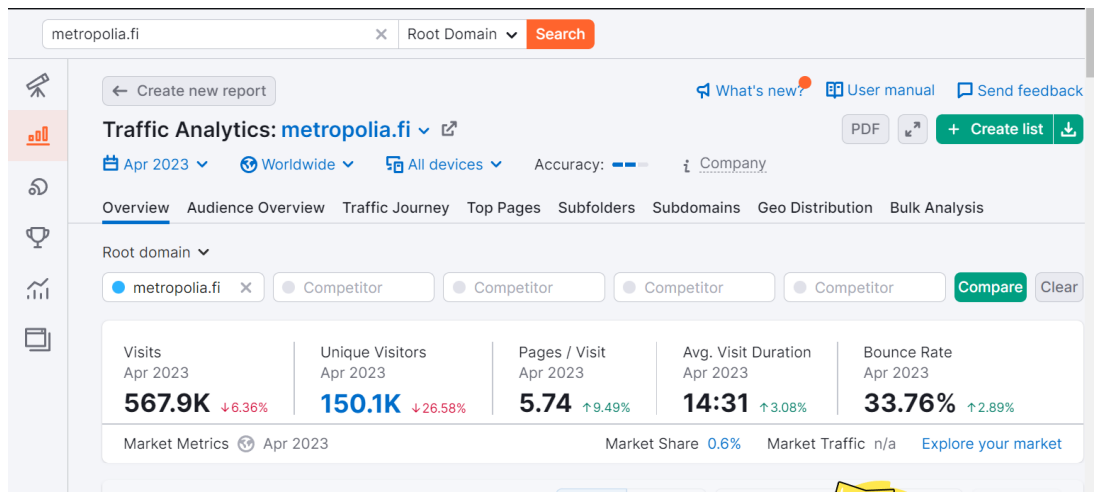


Figure 17. The performance metrics of Metropolia university's website. (Source: Semrush, 2023)

Based on the figure, recent statistics shows the visitors, and unique visitors of the university's website are 6.36% less and 26.58% less from April 2023 to till now. However, the statistics show that page visits of 9.49%, average visit duration of 3.08% and bounce rate of 33.76% are increasing from April 2023. The bounce rate below 40% is good as per the statistics and the overview of traffic analysis provided for this year 2023 is good as the author reviewed. Since, the overall performance of an educational institution depends on various factors including academic performance, market situation, financial offerings and how information is provided through the website. It is difficult to point out any particular fact depending on the situation. Hereby, the researcher reflects a model from section 2.2.4 on the consumer decision-making process to analyse the journey of applicants from visiting the website to admission.

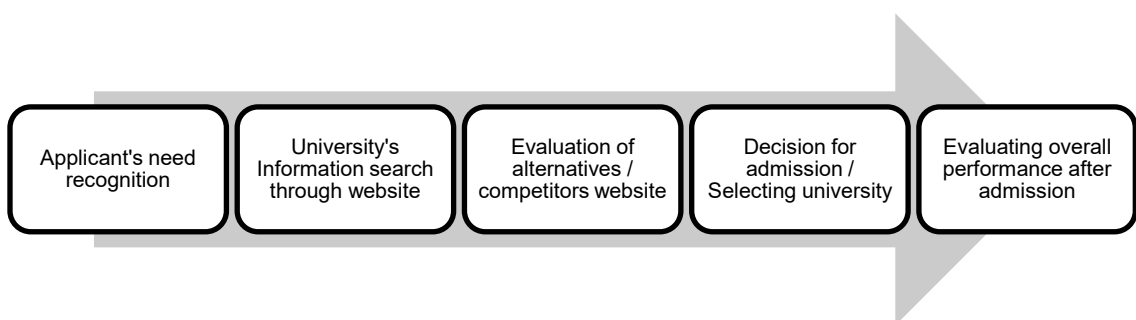


Figure 18. The journey of applicants from visiting the website to admission.

The figure shows the process of how an applicant interacts with a website to seek information and decide to get admission for studying. If the website does not provide information as suggested in section 4.3 about key website design elements, the

applicants will switch to another university's website. Thus, the marketing manager of Metropolia University can raise awareness of their target audience to design user interactive website design.

4.5 Design thinking approach for website designer

The theory of Tim Brown's three spaces including inspiration, ideation, and implementation of the design thinking process (section 2.5.1) reflects the research data collected from the respondent about their procedure to design a website. To make the website interface more appealing, the website designers and developers of Metropolia university may practise the design thinking approach while working on a project.

The respondent conceptualize a framework to create samples, evaluate the ideas and refine them before arriving at a final design decision to work on a website. During this design phase, they brainstorm design ideas and functionality to solve any identified problems. It is suggested by the respondent, using wireframes to present content and functionality in the shape of screen design at low cost, are easy to create and change, and most importantly test the task flow with more accuracy before handing it off to programmers.

The framework of user interface (UI) web design discussed in the literature (section 2.6.1) also provides a wireframe sketch of a web page for the design project. The initial wireframe could be a simple sketch on paper or a whiteboard to conceptualize the framework of the user interface and task flow. A list of standard elements of a web page wireframe might appear including organizational logo, site identity or titles, page title headlines, navigation, search form, link to a larger organization if it is a part, global navigation links for the site, page content, copyright statements, mailing address and contact information. When a coded website or web application is moved into development, changes to the user interface and task flows are more costly and less likely to be implemented. Therefore, the wireframe is the best practice for web designers or developers specially for complex design projects with many design cycles to distribute among the team.

5 Discussion

Expanding to the earlier literature, data collected from this research are the most visible and functional design elements of a website which were studied thoroughly and

hypothesized that the visual design, navigation, interactive and information design significantly impact consumers buying behaviour and decision-making. Through the website, both consumers and businesses communicate and share product or service-related information. Hence, the user interface of the website needs to be attractive, and interactive for the establishment of better relationships between consumers and retailers. Furthermore, the case study research outcomes of interactive website design are challenging today since the potential audience is not choosing to apply for the study programme, therefore, it is recommended to build a team of web designers with the right skill set for website design metrics and technical knowledge. As many designers could not decide whether to start from the ground up or use existing frameworks or templates. In addition, the research data did not provide any knowledge of the web analytic tools that the respondent was not well aware of. As a result, the performance of the overall business and marketing management of Metropolia University needs to take into consideration its website content quality to utilize its potential.

5.1 Limitations

This research study has several limitations that the author recognised while interpreting the results. First of all, collecting research data from the case study sample of Metropolia university's students' response and testing was not possible due to the time constraint. Nevertheless, the researcher finds it difficult to interpret the research findings about website design characteristics as they comprise multidimensional constructs. In this way, future research should examine website design attributes with more specificity so that the direction can build on a qualified sample of online consumer behaviour.

Secondly, the case study used the higher educational institutions as a company case to evaluate key design features of the website in terms of consumers buying behaviour. Thus, research at this point could not present better insights for other types of websites. For instance, e-commerce or commercial websites offering "product or service" are very sensitive to visual design including the text, image, colour and format of the obtained information such as cosmetics or fashion clothes. Thus, future research studies can explore the other types of website design characteristics to investigate consumers' online shopping behaviour.

Thirdly, the theoretical knowledge of the design thinking approach pointed out in the literature (section 2.5) is considered a critical challenge today for online companies. The

reason is, regarding design thinking concepts, where the interviewee pointed out that many website designers and developers are possibly not familiar with the term. The designers often don't know the target audience and their needs while designing a website. Further research is needed to set ground rules for designers to practise wireframing as a process to develop new ideas based on user-centred design principles.

Fourthly, the demographic factor of consumer behavioural context highlighted in the literature (section 2.2.3) remains uncategorized in the research case study due to exceeding with overall information. For instance, with demographic change, older people's specific features and problems have been disregarded in many usability studies, with a focus on younger users (Demir et al, 2012). Therefore, a wide range of problems encountered by elderly people while using websites including vision, hearing, memory, and dexterity. Thus, website designers who work for the company should know its target consumer group to improve design features to accommodate consumers' needs.

Lastly, the author's knowledge in the field of website design characteristics and consumer buying behavioural context is limited to preparing the research questions quite specifically. As a result, the research data collected from the interviewee was not enough to interpret the outcomes. However, the thesis topic is well-known to other researchers since there have been practising online business for years and competitiveness in the marketplace. So, there is a wide range of e-journals, academic textbooks, and other resources available to support the author in building a theoretical framework and interpreting the research data.

Furthermore, results attained from this research provides valuable insights for future website designing characteristics as they greatly impact consumers' attitude and purchase decision-making.

6 Conclusion

"Design needs to be plugged into human behaviour.

Design dissolves in behaviour."

_Naoto Fukasawa

At the beginning phase of the website design process, engaging with users is critical for a web development team in defining their needs and devising the solution. This research

phase is normally the most time-consuming phase for collecting feedback from consumers about their goals and behaviour. Therefore, time spent on explanatory research represents user-interactive website design elements for evaluating the University's website design process that impacts the final step of consumers' purchase decision-making.

For many designers and developers, they have a lack of concern about who are the users, why they visit your website, and what they hope to find from our website. Eventually, most of them rely merely on web measurement metrics to understand their target audience. In the end, even with the best web analytics tool, many things about the consumer's attitude, trust and expectation will remain unsolved. As a result, the website fails to gain potential consumers and, in some cases, the company blame their marketing strategy.

Whereas many factors affect consumers' attitudes and purchase intentions such as subjective norms, product or service-related issues, psychological factors, brand-related factors, and consumer experience. Thus, this research reflects the key identical factors of website design and customer decision process that has a great impact on consumers' online shopping behaviour. However, the case of Metropolia University's website design was reviewed carefully to interpret as the research results for web designers and developers who need to study the designing features that impact consumers to minimize the disturbance of interactivity with websites while using.

In the context of website designing elements, this research focuses mainly on interactivity that helps users to feel, they are part of the system, and this will increase user's beliefs towards the website. As the e-commerce trend is growing faster and raising the bar of website usability, so, in future, to tackle this phenomenon, educational websites need to investigate in-depth the impacts such as personalization, behavioural effects, responsiveness, security and privacy by conducting experiments on the apparel of website.

Moreover, this thesis provides a relevant theoretical framework on the literature and further explanatory research through a case study supported by interview data to elaborate the new approach of looking at website design attributes in the sense of marketing and consumer's behavioural context. Hereby, all the reliable academic

resources collected for this thesis to conceptualize the whole project will be effective for further study.

6.1 Recommendation

The main objective of this thesis was to raise awareness for website designers and online companies to understand the website design tactics that impact consumer buying behaviour. It is noted from the research result, there is a significant relationship between consumers' purchase decisions and the functionality of the website that including design elements dealings with the website usability, interactivity, and visual design. All these elements in their implications and wireframe sketch to web page design will raise a new agenda for future researchers.

For online companies and their marketing team in function, this thesis can be a source of theoretical knowledge and practise the outcome of the research as a basis to execute the valuable factors affecting consumer purchase decisions. However, this study has some methodological limitations since the case study used to review a university website and the data was collected from a depth interview instead of the target group of students who are studying at Metropolia. Thus, academic researchers examining similar topics in future should investigate these website design features more precisely and research on a large scale to validate the findings.

In the theoretical framework of this thesis, it is noteworthy that the design thinking process (IDEO) of Tim Brown, is a creative approach for web designers to adopt for ideation, design, and prototyping. Therefore, future research can represent this approach to raise awareness of website designing professionals for further solutions.

While an increasing number of online companies are providing almost similar products or services, it is important to utilize an effective marketing strategy to attract website visitors and convert them into repeat visitors through effective web design.

Finally, the author puts an effort to clarify the general understanding of the theoretical framework on consumer needs and behaviour in online shopping and interprets the research results with key website design characteristics for online marketing strategists, designers, developers, and business owners to acknowledge that.

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Interview Questions

Semi-structured (Total 19 questions) for the interviewee: Website designing expert

Date: 23 March 2023. Time: 17:00 pm

General information

1. Could you please introduce yourself?
2. What is your position in the company?
3. A very brief introduction about your company. (product or service offering, target audience, company website)

Marketing and Consumer Buying Behaviour

1. How marketing has changed or impacted your company today? / What is the marketing strategy of your company?
2. What are the factors affecting consumer buying behaviour in your company recently?
3. What influence do you believe website design has on consumer buying behaviour?
4. How your company manage to gain potential customers through website? What about the competitors? (As there are tons of websites providing same service)
5. Do your company get any feedback from customers visiting the website? (Positive or negative)

Website design and analytics

1. How much do your company aware of designing the website more user friendly?
2. What are the key elements do you think your company needs to solve any current problem on website?
3. In your opinion, what is the most challenging factors of user interactive website design nowadays?
4. Have you ever researched User interface / UI design on website and usability testing for website? (Consumers feedback on usability testing)
5. What tool(s) are your company using for web analytics? How often do they check web analytics data?

6. Can you give an example how web analytics helped your company to improve the visual and navigation through website?
7. When it comes to user interactive website design (like how users communicate with the site), what metrics do you think most important for tracking UI website improvement.?
8. In your opinion, are there any challenges or limitations of using web analytics?

Design Thinking Approach for website

1. How familiar are you with the concept of design thinking in your company?
2. What are any differences your company identified using the design thinking approach for website development process?
3. What are the key factors you have observed in designing a human-centered website? Are there any design thinking principles you practise?

[Would you like to share anything else that come up on your mind while we are talking about the issue? Please provide any source link available for your company data e.g., company web, articles, reports.]

Thanks for your time and co-operation with this research