



BACHELOR THESIS

How can the NHK generate more website traffic?

Research on website usability and social media



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SAMENVATTING

In het laatste decennium heeft de communicatie zich snel ontwikkelt en in het bijzonder met de ontwikkeling van het internet zijn er een reeks communicatie kanalen ontstaan. Het World Wide Web is ook een belangrijk deel van de paardenindustrie geworden. Voor een webgebaseerd bedrijf zoals het Nederlands Hippisch Kenniscentrum (NHK) is het essentieel dat de website vrij van technologische barrières is en dat iedereen in staat is om de website te gebruiken zonder verwarring of zelfs frustratie te veroorzaken. Daarom houdt zich een deel van dit onderzoek bezig met de NHK's website usability.

Ook biedt de recente sociale media *boom* veel bedrijven de kans om directer en persoonlijker met hun klanten te communiceren. Echter hangt de keuze - over welke sociale media gebruikt moeten worden voor de speciale communicatie strategie van het NHK - ervan af welke sociale media haar doelgroep gebruikt. Daarom is het belangrijk het belang van huidige NHK gebruikers in sociale media te analyseren. Ten slotte is het mogelijk, na

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het analyseren van de website usability en het sociale media interesse, om te onderzoeken hoe het NHK meer website traffic kan genereren.

De uitkomsten van de usability test (uitgevoerd door middel van een eye tracker) laten zien dat in het bijzonder onervaren gebruikers moeilijkheden met het gebruik van de website hadden. Bovendien is de kans groot dat informatie die binnen 5 levels/niveaus van een menu-hiërarchie of dieper geplaatst is, niet gevonden kan worden. Ook voorkomt een platter menu misnavigatie en verwarring. Bovendien wordt usability verminderd als zoekmachines slechts externe websites doorzoeken.

Categorisatie is ook een algemeen probleem dat in de moeilijkheidsgraad toeneemt als het te categoriserende onderwerp niet eerder gecategoriseerd werd. Daarboven heeft dit onderzoek laten zien dat het boven gedeelte van de website genegeerd neigt te worden door gebruikers waarentegen de navigatie in het midden van de pagina en enkele modules links en rechts in het midden de meeste fixaties hadden.

Uitkomsten van de social media enquête toonden aan dat huidige gebruikers van het NHK gemiddeld 3 platformen

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gebruiken waaronder Facebook, LinkedIn en YouTube de meest populaire waren.

Het merendeel van de huidige gebruikers was zich niet bewust van de social media accounts van het NHK, nog volgen ze of zouden het volgen van het NHK op een van de sites overwegen. Onderwerpen die als zeer interessant beoordeelt werden zijn bijvoorbeeld: paardengedrag, voeding, paardentraining, enz.

Op basis van de usability resultaten kunnen er volgende aanbevelingen gegeven worden:

- Website structuur vereenvoudigen: hierarchische structuur van subpagina's moet tot een maximale aantal van 4 levels/niveaus van de start pagina gereduceerd worden.
- Zoekmachine aanpassen: integratie van feature dat het zoeken naar trefwoorden op eigen website (intern) mogelijk maakt.
- Nieuwe vormgeving/plaats knop: de “Bibliotheek” knop moet een centrale rol krijgen (andere kleur, plaats, grootte en misschien andere benaming/tekst).

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- Nieuwe vormgeving/plaats knop: de “Bedrijf”, “Paard” en “Ruiter” knopen bovenaan de start pagina moeten in kleur, plaats, grootte en/of benaming/tekst veranderd worden.

Betreffend sociale media kunnen volgende aanbevelingen gegeven worden:

- Behoudt accounts op bestaande social media sites (met name Facebook en LinkedIn).
- Gebruik sociale media voornamelijk voor het werven van nieuwe gebruikers.
- Voorlopig niet naar andere sociale netwerken expanderen.
- Sociale media campagne: gebruik uitkomsten van de meest interessante onderwerpen volgens gebruikers om nieuwe gebruikers via sociale media accounts te werven.

SUMMARY

In the last decade, communication has developed fast and especially with the development of the internet a variety of communication channels were created. The World Wide Web has also become a major part of the equine industry. For a web-based company such as the *Nederlands Hippiisch Kenniscentrum* (NHK) it is essential that the website is free of technological barriers, and that everyone is able to use the website without causing confusion or even frustration. Therefore, a part of this study deals with the NHK's website usability. Furthermore, the recent social media boom offers businesses to communicate more directly and in a more personal manner with their customers. However, the choice of what social media to use for the NHK's particular communication strategy depends on what social media its target group uses. Therefore, it is important to analyse the interest of current NHK users in social media. Finally, after analysing the website usability and the interest of current users to use social

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media, it is possible to find out how the NHK can generate more website traffic.

The results of the usability testing (conducted with an eye tracker) showed that especially inexperienced users had difficulties using the website. Furthermore, information placed within 5 levels of a hierarchical menu structure or deeper is less likely to be found than when placed less deep. Also does a menu with less layers decrease misnavigation and confusion. Moreover, search engines which are only searching external websites have been found to decrease usability. Categorization is also an overall problem which increases in difficulty when categorization of the topic in question has not been experienced before. Furthermore, this study found out that the upper part of the website tends to be ignored by visitors whereas the navigation in the centre of the site and single elements on the middle-left and -right side have most fixations.

Results of the social media survey showed that current users of the NHK are using 3 platforms in average of which Facebook, LinkedIn and YouTube are the most popular. The majority of current users is neither aware of

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the NHK having social media accounts nor do they follow or would consider following the NHK on these sites. Topics that were rated as being very interesting were for example: horse behaviour, nutrition, horse training, etc.

Based on the usability results, following recommendations can be given:

- Simplify website structure: hierarchical structure of sub sites needs to be reduced to a maximum of 4 levels from the start page.
- Adjust search engine: integration of feature that allows searching for keywords internally.
- Redesign/-locate button: the *Bibliotheek* button should become a central role (other colour, location, size and maybe different name/text).
- Redesign/-locate button: the *Bedrijf*, *Paard* and *Ruiter* buttons at the top of the start page should be changed in colour, location, size and/or name in order to catch the visitor's eye.

Concerning social media, the following recommendations can be given:

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- Keep accounts on existing SNSs (esp. Facebook and LinkedIn).
- Apply social media to primarily attract new users for now.
- Do not expand to other social networks for now.
- Social media campaign: use results from most interesting topics according to users in order to attract new users on social media accounts.

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1. INTRODUCTION

Today, technological developments and innovations have become a part of daily life. It is beneficial to end-users as well as for businesses of all kinds. Especially with the development of today's computers and the internet many aspects of our lives changed. We are primarily communicating electronically by using telephones and the World Wide Web. The internet provides us with a variety of communication channels or applications respectively.

As in many industries, the internet also became an important application for the equine industry. The fast development of the internet becoming an own world made businesses realize the great potential and opportunities of taking part in it. Much bigger target groups can be approached and communicated with more easily and purposefully. Companies primarily present themselves in the World Wide Web via corporate websites and via advertisements on websites which are

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thought to be visited by the target group. Additionally, the internet made new services, such as information exchange and social communication, possible which would and could not exist without it (e.g. Google, Skype, apps, etc.).

With the evolution of social media, the whole internet culture changed by turning simple “users” looking for already existing information into active content-creators with the desire to expand their network, and gain information out of someone else’s experiences. Whereas in the past content used to be published only by corporations, nowadays everyone can generate content, share it and comment on it. There are numerous social media sites and it would take too much effort to communicate and interact with your target group via each one of them. Furthermore, there are social media sites that do not attract the same target groups.

Technological inventions such as the internet always bear the risk of not being able to be handled by anyone. However, more and more people are making use of the

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internet and therefore it is essential that websites can be operated by anyone as easy as possible. This usability testing has become the most important indicator of whether a website/application can be handled by its users without encountering problems which could quickly cause frustration leading to negative reputation and the loss of users.

The NHK is a service company that provides equestrians and people interested in horses with knowledge in the equine field. The service purely takes place via its corporate website www.nhk.nl. Therefore, it is even more important to focus on the internet as an advertising platform. The NHK has been operating for a couple of years and only has approximately 1000 visitors per week.

Website traffic is one of the most important key performance indicators for a web-based company and presents the grade of success. Only user friendly and interesting websites will be recommended to others and visited regularly. In order for the NHK to increase

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website traffic, it is essential to evaluate the usability of the corporate website and identify possible sources of errors, such as illogical navigation for example.

Additionally, the social media boom in the equestrian world made the NHK realize the opportunities in the field of marketing, customer relationship management and other areas. The growing interest in this medium led to the second aim of this study which is to find out how much interest there is from current website users to use social media. The problem definition led to the following research questions which will be answered by conducting this study:

MAIN QUESTIONS

How is the overall usability of the corporate website?

How much interest is there from current website users to use social media?

SUB QUESTIONS

Social Media

Which social media does the target group use?

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Does the target group know about existing accounts of the NHK on social media sites?

For how long and how often do people use social media?

Which social media should the NHK make use of?

Which social media are most popular?

Website

Which topics does the target group find most interesting?

How much time do users spend in order to find the information they need?

Where do visitors experience difficulties (e.g. disorientation)?

How many sub sites are visited during searches for information and how many sub sites do you have to click at least in order to find this information?

What elements on the website are fixated least?

What elements on the website are fixated most?

Where do visitors expect certain elements?

2. LITERATURE REVIEW

2.1 EXCHANGE OF INFORMATION

A single communication is called message or, as far as there is no possibility of confusion, a communication. A mutual correspondence between two or more persons is known as interaction. Communication does not only consist of words, but is also characterized by paralinguistic phenomena (e.g. cadence, speed or slowness of the language, interruptions, laughing and sighing), posture, facial expression, body language etc (Zunkovič, 2003). The content of a message is mainly information. Additionally, every message contains information about how the sender wants to be understood by the recipient. Consequently, every message shows a personal statement of the sender to the recipient (Zunkovič, 2003).

Objects in communication can be displayed in two different ways. According to Watzlawick, Beavin & Jackson (2002, cited in Zunkovič, 2003), objects can either be expressed by a name or by an analogy. This

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corresponds to digital as well as analogue communication modalities. Names are purely coincidental or arbitrarily chosen words which are assigned to objects. There is a semantic conformity that the sequence of the characters H, O, U, S, E names a building. Apart from that conformity no relation can be made.

Analogue communication has its roots in much older developmental periods and has a much more general validity than the more recent and more abstract digital communication.

When one tries to talk to a foreign-tongued person, you would not understand the words (digital communication) but you would be able to derive information from versatile gestures, signs/symbols etc. In a relationship, almost only analogue communication is used. The looks or a gesture tells more about someone than thousand words would. That is why it is difficult to analogously communicate a lie and try to convince someone of it. Digital and analogue communication complements one another in every message. On the one hand, one cannot differentiate clearly between past, future and present in analogy communication. The recipient has to intuitively

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find out the differentiations. On the other hand, digital communication does not contain sufficient vocabulary to clearly define relationships. As a result, the translation of digital to analogue communication and vice versa comes with essential losses (Watzlawick, Beavin, Jackson, 2002, cited in Zunkovič, 2003).

2.2 INTERNET

In 1999, approximately 39.3% of the Dutch population had access to the internet (The World Bank 2011, p. 5 of 8). In 2009, 90% of Dutch households and 93% of the Dutch population had internet access. In 2009, 93% of the Dutch population has been accessing the internet at home, 51% at work, 22% at someone else's home and 19% at educational facilities (school, university, etc) (Van Deursen & Van Dijk, 2010). The average time spent surfing in the internet was 7 hours/week back in 2009 in the Netherlands; in 2010, it had already increased to 8.3 hours/week.

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Approximately 25% of Dutch people aged 13 and older are using mobile internet once in a while, in 2009 only 18% used mobile internet. In June 2011, 6% of the Dutch population owned a tablet PC and 38% a smartphone (mobile phone with internet). Back in August 2010, only 1% owned a tablet and 23% a smartphone. 14% of the Dutch population is furthermore planning to purchase a tablet in the near future. 4.9 million Dutch people (majority of all internet users) are spending 5 or more hours/week surfing. Almost 80% of Dutch internet users use the Windows Internet Explorer to surf (STIR, 2011).

Websites like search engines (e.g. Google), news sites (e.g. De Telegraaf) and e-mail services (e.g. Gmail) are visited daily by most users. 45% of Dutch people at the age of 16-35 are using social networking sites (SNS) every day. However, still 14% of 55+ are using SNSs every day as well. It is obvious that the internet is still primarily used as a source of information and e-mail services have always been one of the most important applications of the internet.

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Table 1: Usage of Social Networking Sites in the Netherlands

	2009	2010	+/-
Hyves	40,5%	42,5%	2,0%
Youtube	21,2%	23,3%	2,1%
Windows Live Spaces	20,8%	22,8%	2,0%
Facebook	10,4%	20,5%	10,1%
Airmiles	16,7%	14,0%	-2,7%
Schoolbank	16,7%	13,6%	-3,1%
LinkedIn	10,4%	11,5%	1,1%
Twitter	3,7%	6,1%	2,4%
Consumentenbond	5,3%	4,5%	-0,8%
Myspace	3,7%	3,7%	0,0%
Euroclix	3,2%	2,5%	-0,7%
Netlog	2,7%	2,0%	-0,7%
MoneyMiljonair	2,5%	1,9%	-0,6%
Web-log	1,4%	1,7%	0,3%
Habbo	1,1%	1,6%	0,5%
Plaxo	1,3%	1,1%	-0,2%
Jiggy	1,9%	0,9%	-1,0%

Bron: Establishment Survey STIR 2010

However, internet is gaining popularity as a tool for communication, especially in the form of social media sites, which makes e-mail services less important. Additionally, the field of transactions is gaining importance with its possibilities for online banking and online shopping (Van Deursen & Van Dijk, 2010). Concerning online participation (to be a member of a website or online community) Hyves is by far the most popular/visited website (see table 1: Usage of Social

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Networking Sites in the Netherlands). However, Facebook had the most significant increase of participation and doubled its percentage within one year from 10% in 2009 to 20% in 2010 (i.e. 1 million new users) (STIR, 2011).

2.2.1 Trends

Talking about the future, one trend that becomes apparent is “ubiquitous computing”: the ability to use computers and access internet everywhere with laptops and smartphones. Soon everyone will be able to access the internet with all kinds of devices wherever he or she is (Van Deursen & Van Dijk, 2010, Avital & Germonperz, 2003 & Mattern, 2001).

Another trend cannot be ignored by most people anymore. Social media, or Web 2.0, are becoming more and more popular. People are not only looking for information anymore, they want to communicate, share their opinion; rather actively create something themselves than simply watch and use the internet in a passive way.

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Furthermore, Mobile Web 2.0 is gaining more popularity. It is very similar to Web 2.0. The difference to its earlier version Mobile Web 1.0, which relied on proprietary protocols (e.g. WAP) and pricing based on use, is that Mobile Web 2.0 is characterized by new open standards (e.g. TCP/IP protocols, which are the technical foundation of the World Wide Web) and flat-rate payment methods. This technological revolution (together with Radio Frequency Identification tags) is forming the foundation for moving social media applications away from desktops and laptops towards mobile devices (Econsultancy, 2009). In accordance with Jupiter Research (n.d.), the market for Mobile Web 2.0 evolutions is expected to grow from 5.5 billion US-dollars to 22.4 billion US-dollars by 2013. Expected main drivers for this growth are mobile social media applications (Kaplan & Haenlein, 2009). In 2009, MySpace, for example, announced having plans for increasing its presence on mobile phones. Furthermore, MySpace predicted that half the traffic on its website would come from mobile devices until 2011 (Econsultancy, 2009). But this evolution can even have a

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greater impact on internet democratization since the digital divide between developed and emerging countries will be closed. Mobile devices already outnumber the desktop pc and laptop by 10 to 1 in India (Kaplan & Haenlein, 2009). Only 13% of Thailand's population owns a desktop pc, but 82% have access to a mobile device (Kaplan & Haenlein, 2009). According to estimations based on a survey conducted by Anderson & Rainie (2008) for Pew Research Centre (cited in Kaplan & Haenlein, 2009), a mobile device will be the primary internet connection tool for the majority of the world's population by 2020.

2.3 WEB 2.0

In January 2009, the social networking site Facebook registered more than 175 million active users. At the same time, 10 hours of content were uploaded to the video sharing platform YouTube every minute. The image sharing site Flickr which is part of Yahoo (comparable to Google's Picasa) provided access to over

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3 billion photos. In 2008, already 75% of internet surfers used social media by joining SNSs, reading blogs or writing reviews on shopping sites. This is a significant increase from 56% in 2007. But not only teenagers surf the social media, 35-44 year olds increasingly populate the groups of joiners, spectators and critics. Therefore, it is reasonable to state that social media represent a revolutionary new trend that not only became interesting for companies operating in the World Wide Web but also for those who want to reach as much potential customers as possible (Kaplan & Haenlein, 2009).

The term “Web 2.0” was first used in 2004 and refers to a new way in which software developers and consumers started utilizing the World Wide Web. This new way was characterized by using the cyberspace as a platform whereby contents of all sorts were no longer created and published by individuals, but were constantly modified by all users in a participatory and collaborative manner. While personal websites such as Encyclopaedia Britannica Online, and the idea of content publishing belonging to the era of Web 1.0, these have been replaced by blogs, wiki entries, and reviews in the age of Web 2.0.

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For all of this to function properly, there are a couple of basic functionalities that are necessary, although the term Web 2.0 does not refer to any specific update of the internet. Among those functionalities are Adobe Flash (used for adding animation, interactivity and audio/video streams to websites), RSS (used to publish frequently updated content in a standardized format) and others. The term “user generated content” achieved broad popularity in 2005 and is usually applied to describe the various forms of media content that are publicly accessible and created by end-users (Kaplan & Haenlein, 2009).

Social media refers to a group of online applications that allow the creation and exchange of user generated content and therewith builds on the ideological foundation of Web 2.0. The two key elements of social media are research (social presence and media richness) and social processes (self-presentation and self-disclosure) (Kaplan & Haenlein, 2009).

2.3.1 Research

According to the social presence theory (Short, Williams & Christie, 1976, cited in Kaplan & Haenlein, 2009),

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media differs in the degree of social presence which is defined as the acoustic, visual and physical contact that can be achieved. Factors influencing the social presence of a medium are intimacy (interpersonal or mediated) and immediacy (asynchronous or synchronous). Thus, social presence can be expected to be lower for a mediated (e.g. telephone conversation) than for an interpersonal medium (e.g. face-to-face discussion), and lower for asynchronous (e.g. e-mail) than synchronous communications (e.g. live chat). In accordance with the theory, the higher the social presence is, the larger the social influence the communication partners have on each other's behaviour becomes.

The concept of media richness is closely related to the theory of social presence. The media richness theory (Daft & Lengel 1986, cited in Kaplan & Haenlein 2009) is based on the assumption that the goal of any communication is the resolution of ambiguity and the reduction of uncertainty. According to this theory, media differs in the degree of richness they possess and therefore some media are more effective than others in reducing ambiguity and uncertainty. Media richness

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refers to the amount of information a certain medium allows to be transmitted in a given time interval.

2.3.2 Social Processes

Kaplan & Haenlein (2009), in reporting Goffman's study from 1959, argue that regarding social processes, the concept of self-presentation is based on the assumption that in any type of social interaction people desire to control the impressions other people get of them. This desire is driven by two objectives. Firstly, people influence others to gain rewards (i.e. make a good impression on future in-laws), secondly, the image one creates of him-/herself should be consistent with one's own identity (i.e. people perceiving themselves young and trendy are wearing fashionable outfits).

Another element is the conscious or unconscious revelation of personal information (i.e. thoughts, likes, dislikes) which is called self-disclosure. According to Schau and Gilly (2003), cited by Kaplan & Haenlein in 2009, the wish to present oneself in cyberspace is the key reason why people decide to create a personal webpage or profile. The revelation of personal information is a

critical step in the development of close relationships but can also occur between strangers.

Brought into context with social media, it can be assumed that another classification can be made concerning the degree of self-disclosure an application requires and the type of self-presentation it allows. The combination of both dimensions (research and social processes) leads to a classification of social media:

Applications like collaborative projects such as Wikipedia and blogs score lowest for social presence and media richness as they are often text based, and therefore they only allow a relatively simple exchange of information. Content communities (e.g. YouTube) and social networking sites (e.g. Facebook), which additionally enable the sharing of pictures, videos, and others, are considered to be on the next level (see table 2: Classification of social media by different dimensions). Virtual games and social worlds (e.g. World of Warcraft, Second Life) score highest since they try to replicate all dimensions of face-to-face interactions in a virtual environment. Regarding the element of social processes, blogs usually score higher than collaborative projects.

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The latter tends to be focused on specific content domains. The same applies for SNSs which allow for more self-disclosure than content communities. Lastly, virtual social worlds have a higher level of self-disclosure than virtual game worlds as the latter is linked to strict guidelines which force users behaving in a certain way and/or according to a certain character (e.g. warrior) (Kaplan & Haenlein, 2009).

Table 2: Classification of social media by different dimensions

		Research: Social presence/ Media richness		
		Low	Medium	High
Social processes: Self-presentation/ Self-disclosure	High	Blogs	Social networking sites (e.g. Facebook)	Virtual social worlds (e.g. Second Life)
	Low	Collaborative projects (e.g. Wikipedia)	Content communities (e.g. YouTube)	Virtual game worlds (e.g. World of Warcraft)

(Kaplan & Haenlein, 2009)

2.3.3 Social Media in the Netherlands

The average user age of LinkedIn members is higher (25-35 years) than that of Facebook and Hyves members. Furthermore, LinkedIn is slightly more dominated by men. However, women are more dominant on Hyves (46% women, 43% men). All SNSs have a peak in the age group of 20-25 years of age. The 65+ age group is increasing in size on Facebook. On Hyves, this trend cannot be found. 20% of women having a profile on Facebook are above 40 years of age. The amount of Dutch users per network is as follows: Facebook 2.6 million users, Hyves 10.2 million users, LinkedIn 1.9 million users. (Mans, 2010)

2.3.4 Social Media in the professional World

Whereas social media register above average growth with regards to the personal/private domain, the majority of businesses only have very little experience with social media (Koster & Van Gaalen, 2010). Many companies have difficulties dealing with consumers that can speak so freely with each other and businesses lose control over

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the information available about them or their products. On the other hand, the social media revolution is beneficial to consumers since they can get information about products from people that have already made experiences in using them. Searching online for certain brands or products nowadays, the results not only contain the corporate website anymore, but also e.g. the corresponding entry in any online encyclopaedia (Kaplan & Haenlein, 2009).

According to a study by Koster & Van Gaalen from 2010, 50% of studied businesses indicated having started with social media activities in 2009 and 20% of businesses still have to start using social media. Only almost one third of the 130 asked businesses make use of social media for more than two years, now. Businesses' fields of interest within social media are primarily limited to products and services (86%), and innovation (59%). Fields such as human resources, sustainability and (financial) performance attract less attention. The research also revealed that companies use 5 different social media platforms in average. Even businesses that are involved with social media for only a short time

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already have activities on 4.5 different platforms. Most popular types of social media are micro blogging (e.g. Twitter), professional SNSs (e.g. LinkedIn) and personal SNSs (e.g. Facebook). In addition, most companies use platforms that already exist, instead of designing own services.

In almost 60% of studied businesses, all activities connected with social media are performed by 2 employees or less. Furthermore, usually social media activities are executed in an experimental manner rather than precisely organizing or planning activities with a set goal. 37% of businesses assign social media activities to less than 1 fulltime-equivalent (FTE). For 29% of companies this is even less than half a FTE. In average, businesses have 3 employees and 1.35 FTE's for social media activities (Koster & Van Gaalen, 2010).

2.4 INTERNET MARKETING

According to MFG Baden-Württemberg (2008), the conception of marketing has fundamentally changed with

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the development of Web 2.0. This different conception starts with the self-image marketing experts have of themselves and the role they are playing. The task of marketers within organizations is not confined to come up with creative ideas and to choose a communication channel that results in a maximum advertising impact with regards to a certain target group. In fact, communication is desired to be stimulated and developed in order to form/create an attitude that contributes to a positive opinion, and that leads to the purchase and to the recommendation of an offer. Moreover, marketing experts do not see themselves as pure “broadcasters” anymore, who are sending their advertising messages via different media channels resulting in creating advertising impact. They rather see themselves as “aggregators” who are stimulating and constantly developing communication. The comparison of the old and new conception of marketing leads to a better perception of changes and (alterations of) requirements which are caused by the development of Web2.0. Marketing experts will be facing a challenge trying to unite the old and the new model of marketing conception. Usually, the

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application of a new medium like Web2.0 or a new media behaviour like Social Computing usually leads to different types of communication complementing one another rather than leading to substitution. Social Computing cannot be used as a communication channel but takes place as a communication community with the consumer, which adheres to its own rules and customs.

Definition `Advertising impact`:

The degree to which or the force with which an advertising message, or campaign, affects the audience receiving it, measured by either the extent and degree of its awareness attainments, or the sales it produces. (MFG Baden-Württemberg, 2008)

Definition `Social computing`:

“Easy connections brought about by cheap devices, modular content, and shared computing resources are having a profound impact on our global economy and social structure. Individuals increasingly take cues from one another rather than from institutional sources like corporations, media outlets, religions, and political

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bodies. To thrive in an era of Social Computing, companies must abandon top-down management [in contrast to the bottom-up strategy which gains its input by communicating with consumers] and communication tactics, weave communities into their products and services, use employees and partners as marketers, and become part of a living fabric of brand loyalists.” (Forrester Research, 2006)

2.5 ONLINE MARKET RESEARCH

Computer mediated communication is becoming more and more important for consumers making product and brand choices. Besides researching advertisements and corporate websites, newsgroups, virtual communities and other online formats are used by consumers to finalize the decision making process. The term “virtual communities” can be misleading since it might imply that these communities are less real. But these social groups have a real existence and therefore consequential effects on many aspects of behaviour; and on consumer behaviour

as well (Kozinets, 1998, cited in Kozinets, 2002).

Marketing researchers use a broad variety of methods to study consumers. Qualitative research methods aim at revealing needs, desires, meanings and choices consumers make. Besides the qualitative methods of focus groups and personal interviews, another popular method is market-oriented ethnography, which is focusing on the behaviour of the people who constitute a market for a certain product or service. Compared to ethnography, face-to-face focus groups and personal interviews are less time consuming, simpler and more popular techniques in the world of qualitative research. Disadvantages are their obtrusiveness, artificiality and decontextualization (Kozinets, 2002).

2.5.1 Usability

Usability is important for the virtual world nearly everyone is part of. Usability refers to the degree of the user friendliness of products and services. In online market research, this applies to interfaces and navigation of websites and applications. The key element of usability is the satisfactory accomplishment of tasks.

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Usability deals with the extent to which a product can be used by specified users to achieve specified goals with effectiveness, efficiency and satisfaction in a specified context of use. The context of use describes how and in which environment users want to achieve their goals. Even more important is the actual achievement of the goal as fast as possible. Therefore, usability tests should already be conducted during the development of a product and/or service. Thus, weaknesses can be detected at an early stage of a product and service which results in lower expenditures.

For testing and evaluation, different methods can be applied depending on the research aim. On the basis of evaluation criteria and assignments, the usability is tested by test persons. An assignment for an internet presence of a translation service could be: Find out what “How are you?” means in Spanish. Assignments should be realistic, and understood and accomplished without any help. With the help of those assignments, researchers can see how much time the test person spends for accomplishing the task, how many mistakes are made, and weaknesses of the product/service might be found. Moreover, the

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subjective evaluation and satisfaction of users is important (MFG Baden-Württemberg, 2008).

Eye-tracking is probably the most common way of testing surfing behaviour and usability. By using eye tracking technology, eye movements and mouse clicks can be tracked exactly. This system measures eye movements by following the gaze directions of the pupils. An eye tracker estimates the point of gaze with high accuracy using image sensor technology that finds the user's eyes and calculates the point of gaze with mathematical algorithms. The pupil centre corneal reflection method enables the eye tracker with infrared and near-infrared illuminators, invisible to the human eye, to create reflection patterns on the cornea of the eyes. This technology makes eye movement patterns visible, shows which elements attract attention and/or are ignored and shows how much effort has to be made in order to orientate on a website.

On a more abstract level, usability testing allows studying implicit interaction with websites. In contrast to explicit interaction with a website which the user is aware of (e.g. filling in a form field), implicit interaction usually takes

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place unconsciously. In this way, hesitations and other unconscious behaviour can be tracked (Atterer, Wnuk & Schmidt, 2006). Only by testing potential users sufficiently, a user friendly internet presence can be assured, which means that users like to visit the website again/regularly in the future and also like to recommend it to others. Very often, plenty of time is spend on the design of a website to create an appealing internet presence, but in the end it is all about the usability of it and, consequently, about the satisfaction of the users (MFG Baden-Württemberg, 2008).

2.5.2 Website Design

Several studies concerning website design and usability give some general insight about the organization and design of different website items. According to research of Morkes and Nielsen from 1997 (cited in Bernard, 2003), a website is considered more user friendly when text is written concisely, easily scannable and written in an objective rather than a promotional style. As a result, text should be formulated briefly, highlighted keywords or phrases should be used and bulleted lists should be

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used when possible. Users have become used to looking in certain areas on a screen for specific items. Studies of Bernard (2001 and 2002, cited in Bernard, 2003) suggest that users generally expect specific web objects to be located as following:

1. Users expect internal web links to be located on the upper left side of the screen.
2. The right side or lower left side of the browser window is expected to be filled with external web links.
3. The “(back to) home” link is expected to be at the top left corner and bottom centre of the screen.
4. The location of the internal search engine is expected to be at the top centre of the screen.
5. The location of advertisement banners is expected to be at the top of the browser window.
6. The location of the login/register button is expected to be at the upper left corner of the browser window.
7. The help button was expected to be at the upper right side.

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Very often, websites are confusing and information cannot be found easily or is missed completely by users. Usually, users forget or do not want to scroll horizontally. Consequently, users do not see information that is placed outside of the primary viewing field. This problem can be reduced by fitting important website information within the usual horizontal viewing area of the browser window. In a study by Bernard and Larsen (2001, cited in Bernard, 2003) users indicated preferring fluid layouts (which are not fixed to any particular width) to centred and left-oriented layouts because a fluid layout would be best suited for reading and finding information and because the layout adjusts to the individual screen size. Furthermore, participants stated that this type of layout would look most professional. The left-oriented layout was the least preferred layout because of the need to scroll horizontally.

A study by Baker, Bernard and Riley (2002, cited in Bernard, 2003) revealed that links with summaries are perceived as being most suitable in finding information, being visually pleasing, looking professional, etc. Furthermore, in 1999, Spain found out that lists of links

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lead to a higher accuracy rate when they are bulleted or have spacing instead of no space between the links (cited in Bernard, 2003).

In order to reduce the risk of making mistakes and find information more quickly, the menu structure of the website should be broader rather than deeper. Research has found that all information should ideally be placed within three hierarchical levels from the initial homepage. Moreover, an index layout saves time searching for information and is found to be less disorientating than a vertical cascading layout and a horizontal cascading layout. The horizontal layout performed poorest (Bernard and Hamblin, 2003).

Maldonado and Resnick (2002, cited in Bernard, 2003) found that breadcrumb menus/ navigation lead to reduction of a user's search time, amount of errors and clicks. Additionally, breadcrumb menus may help reducing disorientation. However, other studies (e.g. Lida, Hull and Pilcher, 2002) suggest that breadcrumb navigation is rarely used and not more efficient than other navigational tools.

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Bernard, Hull and Drake (2001, cited in Bernard, 2003) discovered subjective differences between link arrangements relating to topics in documents. According to this, participants favour links to be embedded into a document compared to links positioned at the bottom or at the top-left of a document. Users believed embedded links to make navigation easier, recognize key information easier and promote comprehension. There is some research (e.g. Bernard and Chaparro, 2002) suggesting that categorical menus are more satisfying and allow for a better search performance than alphabetized sitemaps. Participants had difficulties finding information in an alphabetized menu. Moreover, categorical menus are searched 25% faster when arranged in columns instead of rows (Parkinson, Sisson and Snowberry, 1985, cited in Bernard, 2003).

Looking at fonts and font sizes, the use of Times New Roman and Arial allow users to read faster than when using Courier New, Century Schoolbook and Georgia. Fonts sized 12-point allow furthermore for faster reading than 10-point sized fonts. The average difference in

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reading speed between these two font sizes was 99.4 seconds. In general, Arial and Courier were perceived as being the most legible fonts in contrast to Comic, which was perceived as the most illegible font. Moreover, Verdana was the most preferred and Times New Roman the least preferred font (Bernard & Mills, 2000, cited in Bernard, 2003).

According to a study by Hill & Scharff (1999, cited in Bernard, 2003), plain backgrounds produce faster search times than medium textured backgrounds. However, the contrast between the text and the background is more important. Thus, the more textured the background, the greater the contrast between them. Most studies have shown that dark characters on a light background are better visible (Bauer & Cavonius, 1980: 26% higher reading accuracy) than light characters on a dark background and another survey by Scharff et al. (1996, cited in Bernard, 2003) has shown black text and a white background to be perceived as the most readable colour combination.

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The Poynter Institute (2000, cited in Bernard, 2003) found out that users were twice as likely to fixate on text rather than on images in their first visit to a website. It is rather the case that users do not look at images until the second or even third visit to the same website.

Furthermore, only 22% of ads/promotional icons, 45% of banner ads and 64% of pictures attracted the attention of users. Users generally expect ads to be located at the top half of a website.

Since people tend to ignore areas where they expect ads to be located, the effectiveness of banner ads would probably increase when placing them where they are not expected. According to this, Benway (1998, cited in Bernard, 2003) found banners located at the top of a website to be ignored more often than banner ads located lower down on the website. Moreover, extremely colourful and obvious banners seem to be ignored by users as well. According to some research executed by Pagendarm and Schaumburg (2001, cited in Bernard, 2003), banners were more likely to be recognized and remembered when users were browsing aimlessly in contrast to users searching for specific information. In

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addition, Faraday (2001, cited in Bernard, 2003) found out that banners should be much larger than the surrounding text for users to notice them.

The first two major annoyances according to users concern navigation and the positioning of information. Websites with slow download times are ranking third on the annoyance scale. Moreover, slower websites are judged as being less interesting than their faster competitors (Ramsay, Barbesi & Preece, 1998, cited in Bernard, 2003). The recommended maximum loading time for a website is considered to be 8 seconds. It has been suggested that users would not tolerate any loading times above 8 seconds. For longer waits, it is recommended to inform users about how long the wait should usually take, because uncertainty about waiting time decreases perceived usability and satisfaction (Bernard, 2003).

2.6 EQUINE INDUSTRY & INTERNET

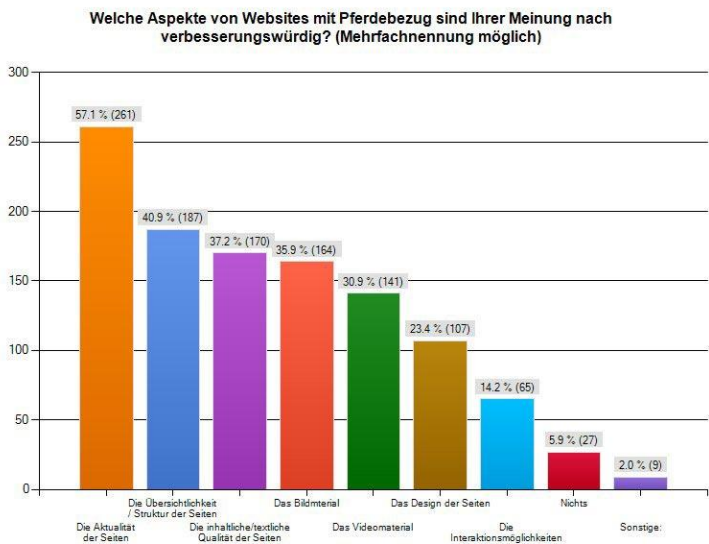
In 2010, the German public relations agency PR MarCom studied internet use in equestrian sports. According to this survey, the majority of equestrians plan to purchase an equestrian product online within the same year the survey has been conducted. Additionally, 85% of participants generally purchase equestrian equipment online. Furthermore, more than 95% of participants enquire about products on the internet before deciding to buy. In contrast to these findings, only one out of ten participants is satisfied with already existing equestrian websites.

Moreover, equestrians like online shopping very much but are not content about the quality of websites. Only 10% are absolutely pleased with websites concerning equestrian sports. Asking for unsatisfactory aspects of equine websites (see table 3), 57% of participants indicate the up-to-dateness of websites to be problematic, 41% are not satisfied with the clarity of websites and 37% criticize the quality in terms of content.

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Social Media is also popular in the equestrian world; 59% are actively using SNSs. 73% of the 226 active social media users stated to be a member of Facebook. In addition to the communication with friends and relatives, equestrians also use social networks to pick up news relating to the equine world. Just less than 40% indicated using social networks when looking for equine related content. Search engines are used most commonly (by 88%) to find content about equestrian sports (PR MarCom, 2010).

Table 3: Unsatisfactory aspects of equine websites



2.7 CONCLUSION

Equestrians are surfing more and more and look for information on the internet be it nutrition, anatomy, training, breeding, etc. The NHK responds perfectly to this need in principle, however some basic conditions need to be met in order to become successful in the World Wide Web. No one will visit a website that is complicated and difficult to navigate and no one will recommend such a website to friends, relatives, etc. Some general usability enhancing as well as usability decreasing elements could be identified in the previous chapter but individual sources of errors can only be identified by testing the usability of the specific website of the NHK.

But how can equestrians visit the website when they do not know it exists? Social Media have been identified as an efficient and effective communication channel with great potential which responds to the needs of nowadays users. However, again further investigation has to be made on the social media usage of the specific target

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group. By investigating these two factors (social media usage and website usability) advice can be given on how to generate more traffic on the website of the NHK.

3. METHODOLOGY

3.1 PARTICIPANTS

Study 1: Eye-Tracking

The group of participants consisted of 30 Dutch and German students (to be) and lecturers of the University of Applied Sciences Van Hall Larenstein in Wageningen, the Netherlands. All participants had at least basic knowledge about the usage of computers and internet and made use of both regularly. Furthermore, the group consisted of 25 female and 5 male participants. 22 participants were younger than 25 years of age, 3 participants were between 25 and 35 years old and 5 participants were older than 35 years of age. Education ranged from school graduates to PHD graduates.

Study 2: Social Media Survey

The social media survey was completed by 71 Dutch internet users. The participants were (regular) visitors of the website of the NHK.

3.2 PROCEDURE

Study 1: Eye-Tracking

In this research, 30 respondents were asked to participate in the research by personal acquisition. Respondents primarily consisted of lecturers and current and future students of the University of Applied Sciences Van Hall Larenstein. Three research sessions took place of which the first session was done during an open day of the University of Applied Sciences Van Hall Larenstein. In the following two weeks, two more sessions followed. For testing usability, each of the respondents had to complete a set of assignments. For every participant, the assignments and procedure were the same. Before the start of the assignment, the position of the monitor (with in-built camera and infrared sensors) needed to be adjusted according to the location (height and distance) of the participant's eyes (see plate 1).

With the help of a five point calibration the camera and sensors got adjusted. Therefore, participants followed a moving dot with their eyes five times. Test persons then

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got an instruction of what was going to happen next. Firstly, the screen showed the first assignment which was to be read by the participant (different periods ranging from 5 to 10 seconds depending on length of the assignment text).

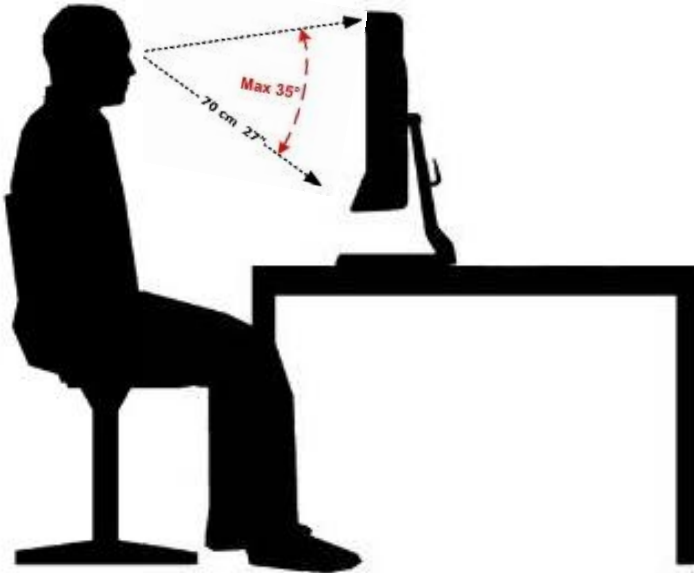


Plate 1: Position of eye tracker and participant (Tobii Technology AB, 2010a, 2010b).

Thereafter, the internet explorer loaded automatically and opened the website of the NHK. Now, the participant was asked to accomplish the task. Eye movements and mouse

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clicks were followed and processed by the camera and the software belonging to the eye-tracking system. At the point of completion or termination, the test period was interrupted and participants continued with the next assignment.

After the completion of all assignments for all participants, so called “areas of interest” (AOIs) needed to be defined for each individual website. With the definition of the AOIs, data could be processed by the software.

Assignment 1: Imagine you would visit the website of the NHK because you want to find out the address of the NHK.

This assignment refers to the company itself and shows how easily information about the company is accessible.

Assignment 2: Imagine you would visit the website of the NHK because you want to find more information about the upbringing of foals.

This assignment refers to a general field of interest where equestrians would be interested in.

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Assignment 3: Imagine you would visit the website of the NHK because you want to find out which universities of applied sciences offer horse-related studies.

This assignment aims at people that are interested in higher education.

Study 2: Social Media Survey

A survey about social media usage was conducted online. It was placed on the website of the NHK in order to find out more about social media usage of the target group. The survey was a 4 item multiple choice questionnaire (see below for survey details). The last question (Likerttype scale ranging from not interesting to interesting) aimed at preferred topics within the equestrian world.

3.3 MATERIALS

Study 1: Eye-Tracking

In study 1 the eye tracking technology Tobii Studio 2.2.7 was used to measure visual search behaviour of

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participants. This system enables to track eye movements and even mouse clicks exactly. The technology makes eye movement patterns and orders visible, shows which elements attract attention and shows how much effort has to be made in order to orientate on the website and find information. The website that has been object to research was the corporate website of the NHK (www.nhk.nl).

Study 2: Social Media Survey

The 4 item multiple choice survey has been carried out online via the website of the NHK.

Questions in detail:

- Which social media sites do you use?
- Did you know that the NHK has accounts on Facebook, LinkedIn and Twitter?
- Do you want to follow the NHK on one of those sites?
- Which topics are the most/least interesting?

3.4 STATISTICAL DATA ANALYSIS

After the definition of the AOIs, the software of Tobii Studio 2.2.7 enables researchers to look for different so called metrics (i.e. variables) which provide descriptive statistics about the surfing behaviour of participants. In this research, following metrics have been applied:

Time to first fixation (TFF) - seconds: “This metric measures how long it takes before a participant fixates on an AOI [...] for the first time. The time measurement starts when the media [(website)] containing the AOI is first displayed and it stops when the participant fixates on the AOI. [...]

Brief description: The time from the start of the media display until the test participant fixates on the AOI or AOI group for the first time (seconds).” (Tobii UserManual, page 126/127)

Fixations before (FB) - count: “This metric measures the number of times the participant fixates on the media before fixating on an AOI [...] for the first time. The

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fixation count starts when the media containing the AOI is first displayed and it stops when the participant fixates on the AOI. [...]

Brief description: Number of times the participant fixates on the media before fixating on an AOI or AOI group for the first time (count).” (Tobii UserManual, page 128/129)

Visit duration (VD) - seconds: “This metric measures the duration of each individual visit within an AOI. [...] A visit is defined as the interval of time between the first fixation on the AOI and the next fixation outside the AOI. If during the recording the participant returns to the same media element then the new fixations on the AOI will be included in the calculations of the metric. [...]

Brief description: Duration of each individual visit within an AOI or AOI group (seconds).” (Tobii UserManual, page 134/135)

Percentage fixated (PF) - %: “This metric measures the number of recordings in which participants have fixated at least once within an AOI [...] and expresses it as a fraction of the total number of recordings. [...]

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Brief description: Percentage of recordings in which participants fixated at least once within an AOI or AOI group.” (Tobii UserManual, page 138/139)

Percentage clicked (PC) - %: “This metric measures the number of recordings where participants have clicked at least once within an AOI [...] and expresses it as a fraction of the total number of recordings.[...]”

Brief description: Percentage of recordings in which participants clicked at least once within an AOI or AOI group.” (Tobii UserManual, page 139/140)

Time to first mouse click (TFMC) - seconds: “This metric measures how long it takes before a test participant left-clicks with the mouse on an AOI [...] for the first time. The time measurement starts when the media containing the AOI is first displayed and it stops when the participant clicks on the same AOI. [...]”

Brief description: The time from the start of the media display until the test participant left-clicks with the mouse on the AOI or AOI group for the first time (seconds).” (Tobii UserManual, page 142/143)

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Mouse click count (MCC) - count: “This metric measures the number of times the participant left-clicks with the mouse on an AOI [...]

Brief description: Number of times the participant left-clicks with the mouse on n AOI or an AOI group (count).” (Tobii UserManual, page 140/141)

Total visit duration (TVD) – seconds: “This metric [...] measures the duration of all visits within an AOI [...]. A visit is defined as the interval of time between the first fixation on the AOI and the next fixation outside the AOI. [...]

Brief description: Duration of all visits within an AOI or an AOI group (seconds).” (Tobii UserManual, page 136/137)

Descriptive statistics were used for collected data of all variables. These statistics show the amount of participants fixating on an AOI (N value), the average of fixations on an AOI (mean), the total of fixations on an AOI (sum) and the variation from the mean (standard deviation). For other variables, not the amounts but the

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time needed (also N value, mean and sum) were calculated.

For the data gained from the social media survey, the mean, N value and sum were computed.

4. RESULTS

4.1 WEBSITE USABILITY

4.1.1 Assignment 1: Imagine you would visit the website of the NHK because you want to find out the address of the NHK.

The average time spend on this assignment was 36.4 ± 31.71 seconds. Approximately 11 seconds of this were necessary to let the participants read the assignment and for the website to load. In average, participants visited 2.37 ± 1.38 sites (starting page and goal included). For the shortest possible navigation to the goal, 2 sites need to be visited.

On the start page, 21 persons fixated on the *NHK* button after an average of 3.48 ± 4.92 seconds and on the *NHK* pop-up after 5.3 ± 8.23 seconds (see plate 2 for location of AOIs). On average, there were 9.65 fixations before fixating on the *NHK* button ($SD=14.06$). Only 3% (1 person) clicked on the *NHK* button after 20.5 seconds and

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another 7% (2 persons) clicked on the *NHK* pop-up after an average of 11.1 seconds.



Plate 2: Start page with AOIs (yellow)

After navigating to the *NHK* sites, the *Contact* button has been fixated by the 3 participants after an average of 17.6 ± 20.72 seconds. The *Contact* pop-up was fixated by 2 participants. For those 3 participants, there were 50.33 ± 55.18 fixations on average before fixating on the *Contact* button. The *Contact* button has been clicked once. The pop-up has been clicked twice after an average of 25.17 seconds ($SD=28.2$).

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On the start page, 28 participants fixated on the *Contact* button after an average of 4.22 ± 6.66 seconds and on the *Contact* pop-up after 7.47 ± 7.01 seconds. These participants had an average of 11.41 ± 19.06 fixations before fixating on the *Contact* button. The *Contact* button was clicked by 18 persons after an average of 12.49 ± 11.17 seconds (click on button makes the site change). The *Contact* pop-up has been clicked by 10 participants after an average of 11.76 ± 8.59 seconds.



Plate 3: *Bedrijf* site with AOIs

RESULTS

Furthermore, on the site *Bedrijf* (see plate 3 for location of AOIs) there were each 3 fixations on the *Bedrijf* button (clicked once), *Home* button (clicked once after 71.86 seconds) and *Paard* button (not clicked). The search function and *Ruiter* button each had 2 fixations and one click.

The site *Ruiter* had one visitor who clicked the *Bedrijf* button after 18.54 seconds.

The site *Contactformulier* had 4 visitors. Those 4 fixated on the *Contact* button after an average of 1.28 ± 1.29 seconds. On average, there have been 4 ± 3.6 fixations before fixating on the *Contact* button. The *Contact* pop-up was clicked 3 times after an average of 3.08 ± 1.44 seconds.

The site with the right information (*Adresgegevens*) was visited/fixated by all 30 participants.

4.1.2 Assignment 2: Imagine you would visit the website of the NHK because you want to find more information about the upbringing of foals.

RESULTS

The average time spend on this assignment was 130.64 ± 54.13 seconds. Approximately 12 seconds of this were necessary to let the participants read the assignment and for the website to load. In average, participants visited 6.34 ± 4.04 sites (starting page and goal included). For the shortest possible navigation to the goal, 5 sites (via *Paard* site) or 3 sites (via *Bibliotheek* button) need to be visited.

The fixation order on the start page (majority; see plate 4 for location of AOIs):

Nieuws (after 3.9 seconds), *Onderzoek* button (after 4.28



Plate 4: Start page with AOIs

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seconds), *Sector* button (after 6.53 seconds), *Onderwijs* button (after 14.7 seconds), *Zoeken* (after 18.59 seconds), *Bibliotheek* (after 24.78 seconds), *Kennisloket* (after 26.27 seconds).

At the start (see plate 4 for location of AOIs), 22 persons fixated on the *Bibliotheek* AOI after 24.78 ± 24.6 seconds. However, this AOI was only clicked twice after an average of 92.34 seconds (SD=26.16). On the site *FAQ Paard*, the *Bibliotheek* AOI was only fixated by 1 participant and has not been clicked.

The site *Dossiers* (Navigation: *Start-Bibliotheek* button → *Dossiers*) was visited by 5 participants and fixated on after an average of 3.41 seconds. This AOI (see plate 5 for location of AOI) also had 4 mouse clicks. Here, the average time to the first mouse click was 7.31 seconds (SD=4.16).

RESULTS

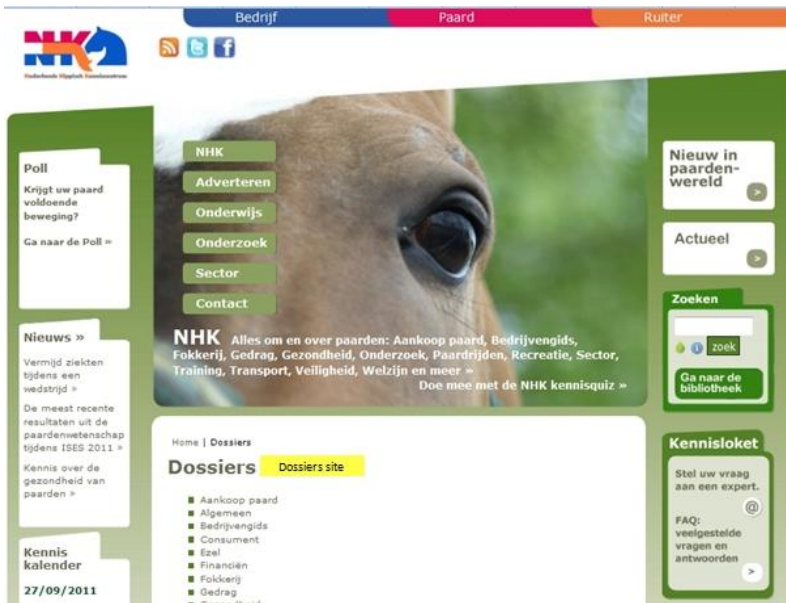


Plate 5: *Dossiers* site with AOIs

13 persons fixated on the *Dossiers* button of the *Paard* site after an average of 19.25 ± 15.37 seconds. It was only clicked by 2 participants after an average of 35.31 seconds ($SD=20.39$). The *Paard Dossiers* site was only visited/fixated and clicked by one person. 2 participants fixated on the *Dossiers Veulen* site (Navigation: *Start* → *Paard* → *Dossiers* → *Dossiers Veulen*) after an average of 2.58 seconds and clicked after an average of 3.91 seconds (see plate 6 for location of AOI).

RESULTS

The *Dossier Veulen* site (Navigation: *Start-Bibliotheek* button → *Dossiers-Veulen* link → *Dossier Veulen*) was visited by 4 persons and all of them clicked on the site as well (see plate 7 for location of AOI).

Of 23 persons fixating on the search function at the start page (see plate 4 for location of AOI) after an average of 18.59 ± 17.21 seconds, this AOI was clicked by 10 persons after an average of 33.99 seconds ($SD=26.55$). The search function on the *Paard* site was additionally clicked by 9 persons after an average of 18.06 seconds ($SD=13.33$).



Plate 6: *Dossiers Veulen* site with AOIs (via *Paard* site)

The *Kennisloket* was visited by 4 participants and the AOI *Categorieën Kennisloket* had 3 mouse clicks after an average of 6.83 seconds ($SD=2.91$).

RESULTS



Plate 7: *Dossier Veulen* site with AOIs (via *Bibliotheek/Dossiers* site)

The site *Bedrijf* (see plate 8 for location of AOIs) had 3 visitors and the *Dossiers* button was fixated by 3 participants after an average of 9.33 ± 11.02 seconds (and 2 times clicked after 15.15 ± 10.7 seconds). The AOIs *Nieuw in Paardenwereld* (after an average of 6.01 ± 5.43 seconds fixated on but not clicked) and *Paard* button (after an average of 7.83 ± 13.06 seconds fixated on and clicked twice after an average of 17.51 ± 10.97 seconds) were each fixated 3 times.

RESULTS



Plate 8: *Bedrijf* site with AOIs

The site *Ruiter* (see plate 9 for location of AOIs) had 6 visitors of which 4 fixated on the *Bedrijf* button after an average 7.29 seconds ($SD=5.63$). The AOI *Nieuws* has been fixated on 5 times after an average of 1.57 ± 2.04 seconds and the *Paard* button had 3 fixations after an average of 5.82 ± 9.36 seconds. The *Bedrijf* button has been clicked twice after an average of 9.48 ± 3.68 seconds and the *Paard* button has been clicked once after 5.33 seconds.

In general, 10 participants gave up and did not complete the assignment. 14 participants accomplished the assignment by using the search function (but leaving the

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NHK's website) and 6 participants accomplished the assignment by searching the *Dossiers* sites (4 persons via the *Bibliotheek* link, 2 persons via the *Dossiers* on the *Paard* site).



Plate 9: *Ruiter* site with AOIs

4.1.3 Assignment 3: Imagine you would visit the website of the NHK because you want to find out which universities of applied sciences offer horse-related studies.

RESULTS

The average time spend on this assignment was 47.6 ± 32.89 seconds. Approximately 15 seconds were necessary for the participants to read the instructions and for the website to load. In average, 3.63 ± 3.05 sites have been visited (start page and goal included). For the shortest possible navigation to the goal, 2 sites need to be visited.



Plate 10: Start page with AOIs

At the start of the assignment (see plate 10 for location of AOIs), 25 persons fixated on the *Onderwijs* button after an average of 2.66 seconds (SD=3.48). The *Onderwijs*

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pop-up was fixated by 30 persons. The *Onderwijs* button was clicked 11 times, the *Onderwijs* pop-up 17 times. When the button was clicked, the *Onderwijs* site loaded (see plate 11). On this new site, the *Onderwijs* pop-up has been fixated 9 times after an average of 1.87 ± 5.94 seconds. There were 4.22 ± 12.3 fixations in average before fixating on the *Onderwijs* pop-up. 7 persons (23%) clicked the *Onderwijs* pop-up.

When opening the *Onderwijs* pop-up in the beginning, 6 participants visited the site *Overige Opleidingen*. 4 of them fixated on the *Onderwijs* button/pop-up again after an average of 10.91 ± 12.87 seconds. There was an average of 33.25 ± 38.66 fixations before fixating on the *Onderwijs* button/pop-up. These AOIs were clicked 3 times after an average of 16.22 seconds (SD=15.67). Another 13 participants visited the site *Groen Onderwijs*. All of them fixated on the *Onderwijs* button/pop-up again with an average of 6.77 ± 16.54 fixations before.

RESULTS

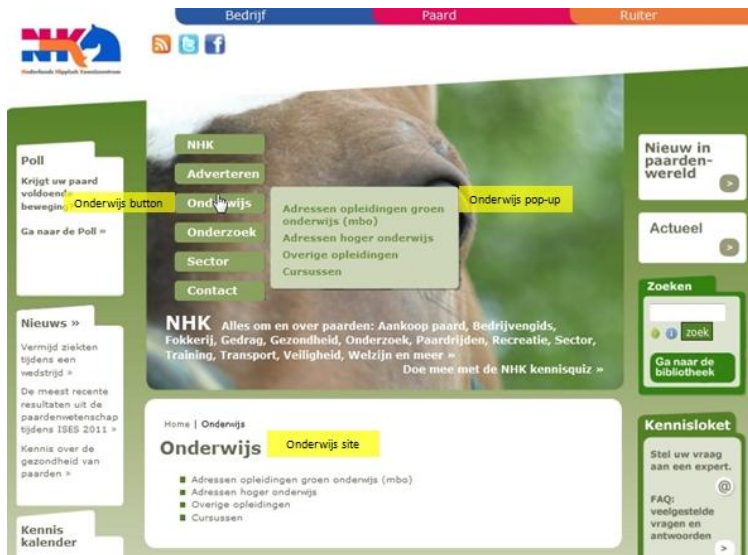


Plate 11: *Onderwijs* site with AOIs

These AOIs were clicked 12 times after an average of 11.44 seconds (SD=7.1).

The site *NHK* (see plate 12 for location of AOIs) had 3 visitors of which all fixated on the *Onderwijs* button/pop-up after an average of 0.47 ± 0.37 seconds and of which all clicked on these AOIs after an average of 13.33 seconds (SD=13.92).

The site *Contact* was visited twice and from there, the *Onderwijs* pop-up was clicked twice after an average of 8.3 ± 3.1 seconds.

RESULTS

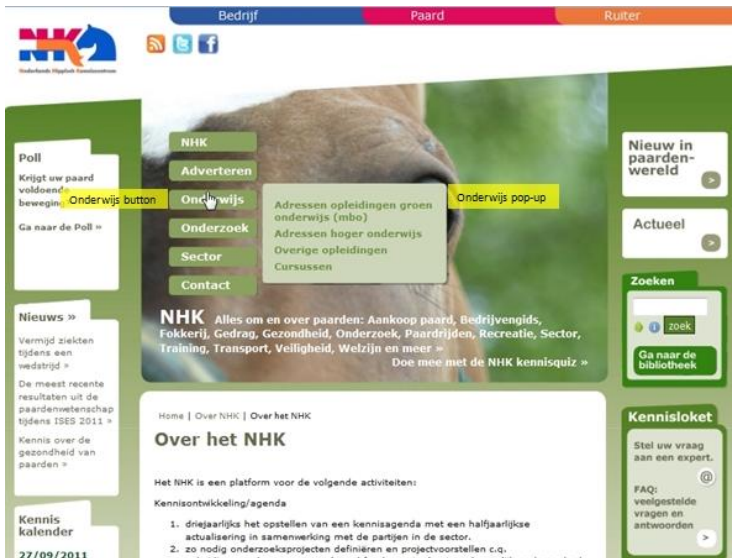


Plate 12: NHK site with AOIs

The site *Onderzoek* had 3 visitors. The *Onderwijs* button/pop-up had 3 fixations and the *Onderwijs* button was clicked twice after an average of 15.97 ± 0.28 seconds.

Furthermore, the site *Ruiter* had 3 visitors, the site *Bedrijf* had 2 and the site *Paard* had 1 visitor.

The site with the right information (*Hoger Onderwijs*) was visited/fixated by all 30 participants.

RESULTS



Plate 13: Start page with most (yellow)/least (red) fixated AOIs of all assignments.

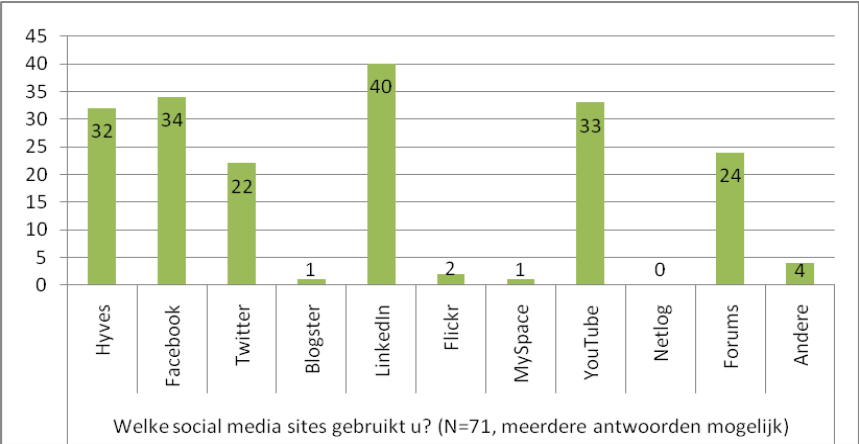
Above (see plate 13), the most and least fixated AOIs from all assignments put together can be seen.

RESULTS

4.2 SOCIAL MEDIA SURVEY

Question 1: Which social media sites do you use? (N=71)

Table 4: Usage of social media sites among NHK website visitors.



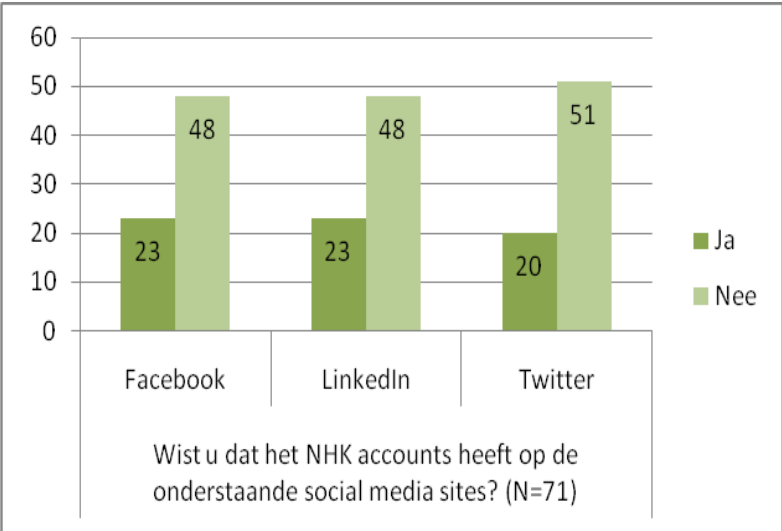
As can be seen in the table above (Table 4: Usage of social media sites among NHK website visitors), most participants stated to use LinkedIn and Facebook ranking second with 34 out of 71 persons indicating using it. Furthermore, asked persons use 2.72 social media sites in average. Blog sites as Blogster, picture sharing sites as Flickr, MySpace and Netlog are not as popular among the participants only being used by 1 person on average.

RESULTS

Twitter is used by 30.99% of asked persons and Hyves is still popular being used by 45.1% of participants. Fora are used by 33.8% and YouTube is used by 46.49%. Other social media sites being used are for example Xing, Partyflog and Tumblr.

Question 2: Did you know that the NHK has accounts on Facebook, LinkedIn and Twitter? (N=71)

Table 5: Awareness of the NHK having accounts on different social networks among NHK website visitors.

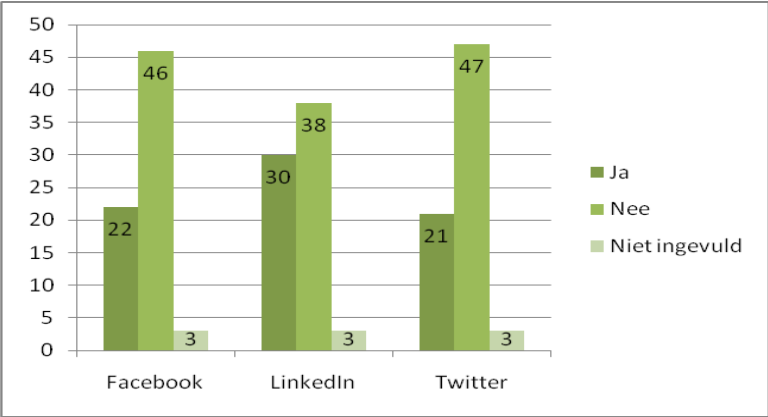


RESULTS

This table (Table 5: Awareness of the NHK having accounts on different social networks among NHK website visitors) shows that 67.6% of respondents have not been aware of the NHK having accounts on Facebook as well as on LinkedIn. Furthermore, even 71.83% of the participants did not know that the NHK has an account on Twitter.

Question 3: Do you want to follow the NHK on any of these sites, or are you already doing so? (N=71)

Table 6: Willingness of NHK website visitors on following the NHK on social networks.



RESULTS

Asking for whether respondents are willing to follow the NHK on any of these social media sites or are already following (Table 6: Willingness of NHK website visitors on following the NHK on social networks), participants are most willing to follow or are already following the NHK on LinkedIn (42.25%). Additionally, 30.99% of respondents are willing to or already follow the NHK on Facebook and 29.58% want to or already follow the NHK on Twitter.

Question 4: Which topics do you find most interesting?

The table below (Table 7: Interest on different topics within equine field) suggests that horse behaviour is the most popular topic amongst respondents. 85.9% of them indicated to find this topic interesting. In addition to that, 80.9% of participants stated to find horse welfare, nutrition and horse training interesting. 41 to 56 persons find breeding (41), dressage (43), equine business management (44), horse anatomy (45), numbers regarding the equine industry (48), horse digestion (49),

RESULTS

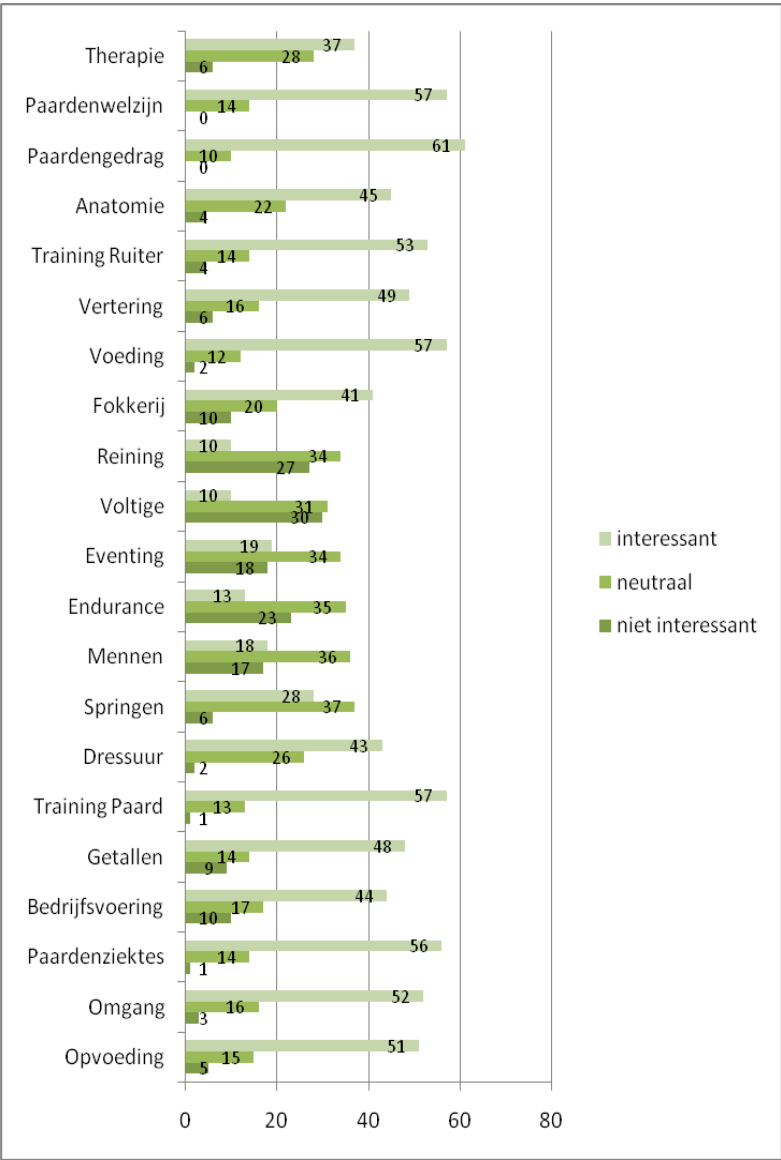
training of the rider (53), upbringing of horses (51), horse handling (52) and equine diseases (56) interesting topics. Reining, vaulting, horse therapy, eventing, endurance, carriage driving and jumping are however perceived as being less interesting.

Being asked about topics that have not been mentioned in the list, respondents named following topics as being interesting as well (number of times mentioned in brackets):

Laws regarding (European) equine/animal legislation (2x), sector interests (1x), political developments regarding equine industry (1x), sector organizations (1x), equine education (1x), interaction of horse and rider (1x), housing (legislation) (1x), historico-cultural perspective (1x), research results concerning effects and influence of aids (saddle, spurs, whips, etc) (1x), equine entrepreneurs (1x), developments of industry (1x), export (1x), international trade (1x), identification/registration system (1x), hoof and dental care (1x), threatening diseases (1x), landscape pollution (1x), (trot) racing (1x) and holidays with horses (1x).

RESULTS

Table 7: Interest on different topics within equine field.



5. DISCUSSION

5.1 WEBSITE USABILITY

The first aim of this study was to evaluate the usability of the NHK's corporate website. In order to analyze the surfing behaviour of the participants, the areas of interest needed to be looked at. The times spend for the different assignments varied from 36.4 to 130.64 seconds in average. The second assignment being more complex, participants needed much more time than for the other assignments. Most fixations, mouse clicks and durations had high standard deviations meaning that the range was very broad and that many participants needed much more time and others needed much less time than the general average suggests. Thus, some participants had difficulties orientating on the website and some oriented faster than the mean. This can have a number of reasons. Maybe the participants that were faster than the majority have had experience with similar websites in the past or their overall website knowledge is better than that of the other participants. Therefore, the website should be designed

DISCUSSION

according to users that do not have as much experience in surfing websites. As a result, not only inexperienced users will be able to navigate through the NHK's website, but experienced users will be able to surf the website even faster.

The outcome of the first assignment revealed that participants had partly difficulties with the categorization of the contact address. Many participants firstly thought to find the address in the *NHK* section of the website. Others expected the address to be located at the *Bedrijf* section of the website. However, the right navigation could be found quickly in most cases.

The amounts of sites visited ranged from 2.37 to 6.43 sites depending on the assignment. This amount does not differ very much from the minimum amount of sites that need to be visited at a minimum in order to achieve the goal. Especially for the second assignment, many different sites were visited, many elements were fixated, a lot of time was spent and a number of participants ceased surfing the site and thereby failed to complete the assignment. These aspects suggest that the navigation to

DISCUSSION

this particular goal caused a lot of confusion and frustration. Certain elements of the site (depending on the assignment) were fixated most and others were ignored completely, which might be caused by the location and design of these elements. The amount of elements that were fixated most was 4 for the first assignment and 7 in the second assignment (at the start page). Thus, participants looked at considerably more elements in the second assignment. This suggests that participants did not initially know what naming or location the right information would have. When for example being asked to look for the contact details of a company, participants are likely to know from experience with other websites that they need to look for a button or link with the naming “Contact”. The upbringing of foals however could not be categorized quickly, not at all or there were too many possibilities categorizing the upbringing of foals. The inexperience of where to generally find information about certain topics might have made the second assignment more difficult than the other assignments.

DISCUSSION

To quicken up the search for information about the upbringing of foals, some participants made use of the website's search engine. However, the search engine is searching external websites for finding hits on the term users are looking for. As a result, when users do not know how to navigate to a certain article or similar within the NHK's website, the search engine will not even be able to bring them there. This fact is likely to provoke further confusion.

Furthermore the risk of making mistakes would be reduced and information would be found more quickly if the menu structure of the website would be "broader" rather than "deeper": A study conducted by Ramsay, Barbesi & Preece (1998, cited in Bernard, 2003) revealed that the first two major annoyances according to users concern navigation and the positioning of information. In addition to that, research found that all information should ideally not be too deeply imbedded, i.e. within three hierarchical levels from the initial homepage (Bernard and Hamblin, 2003). Thus, the navigation concerning the second assignment, whereby users needed to navigate through 3 to 5 levels (depending on whether

DISCUSSION

navigating through the *Bibliotheek* button on the start page or through the *Dossiers* button of the *Paard* site) might be too deep. Therefore it is advisable to arrange subpages in a way that makes the menu structure less deep by eliminating hierarchical levels and rather broaden the structure of the website, i.e. include additional subpages at the same hierarchical level. Moreover, simplifying the menu structure to improve navigation and search times does not only have an effect on the single article that has been tested but to numerous other articles. These articles have an almost identical navigation as the tested one and are therefore unlikely to be found as well.

In all three assignments, participants tended to ignore the upper part of the website together with its elements whereas the navigation in the centre of the site and single elements on the middle-left and -right side had most fixations. A study conducted by the Poynter Institute (2000, cited in Bernard, 2003) revealed that users generally expect ads to be located at the top half of a website. Additionally, Benway (1998, cited in Bernard, 2003) found banners located at the top of a website to be

DISCUSSION

ignored more often than banner ads located elsewhere. It is thus possible that participants ignored this area because they expected banner ads to be located there.

In general, two out of three assignments could be accomplished without encountering too many difficulties. However, assignment 2 showed a great amount of confusion on how to navigate to the goal.

5.2 SOCIAL MEDIA SURVEY

The second aim of the study was to find out how much interest there is from current users to use social media. The social media survey that has been conducted showed that users already use approximately 3 different social media platforms of which LinkedIn, Facebook and YouTube were used the most. This result shows a similar picture than the outcomes of the establishment survey conducted by STIR (2010). As another study conducted by MarCom in 2010 suggests, just less than 40% of participating equestrians indicated that they use social networks when looking for equine related content. Search

DISCUSSION

engines are used most commonly (by 88%) to find content about equestrian sports. Thus, SNSs might not be the right platform for a company as the NHK. However, social media are still developing quickly (as discussed in “Literature Review”) and it might be possible that they will be used for searches more often in the future. Furthermore, the majority of users did not know about existing accounts of the NHK on different social media platforms and in addition to that only about one third is following the NHK on any of these sites or would consider doing that. Generally, the interest in using social media is high but probably for other purposes than following companies, at least for now. Consequently, the question at hand is whether using social media will generate more visitors to the corporate website. It could be argued that current users do not see the need in following the NHK on SNSs because they already know the website and know how to get there. Furthermore, only current users of the website of the NHK were asked about their social media interest which does not mean that the general target group (thus also people potentially interested in the NHK’s service) shares these interests. It

DISCUSSION

is possible that social media could be used as a link to introduce the new user to the NHK with its service and the website.

Topics that were voted to be most interesting by current users were: horse behaviour, horse welfare, nutrition and horse training. Still more than half the sample group finds breeding, dressage, equine business management, horse anatomy, numbers regarding the equine industry, horse digestion, training of the rider, upbringing of horses, horse handling and equine diseases interesting topics whereas topics such as the different disciplines (eventing, endurance, show-jumping, etc) of horse riding and equine therapy were perceived as being less interesting. Topics that have additionally been mentioned by the users were usually only mentioned once. Therefore, these topics, articles about single disciplines (except of dressage) and equine therapy should not be considered when trying to attract new users. In order to attract new website users by using social media, the announcement of a new article concerning a topic being found most interesting (e.g. equine behaviour, welfare, nutrition, etc) needs to be the eye catcher.

6. CONCLUSION

In general, the NHK's website usability showed to have some flaws. High standard deviations in fixations while browsing point out that especially inexperienced users had difficulties using the website. A number of results (differences in search times, in amount of fixations and in amount of sites visited) suggest that information which is placed within 5 levels of a hierarchical menu structure or deeper is more difficult to be found by the sample group. In contrast to that, information which is placed within 2 levels can be found much more quickly and without many difficulties such as misnavigation or similar. Furthermore, this study found that search engines which are only enabling an external search are decreasing usability.

In addition to that, categorization is an overall problem which increases in difficulty when categorization of the topic in question has not been experienced before.

Finally, the upper part of the website together with its elements tends to be ignored by visitors whereas the

CONCLUSION

navigation in the centre of the site and single elements on the middle-left and -right side have most fixations.

Current users of the NHK are using 3 platforms on average of which Facebook, LinkedIn and YouTube are the most popular SNSs. The majority of current users is neither aware of the NHK having accounts on different SNSs nor do they follow or would consider following the NHK on these sites.

Topics that were rated as being very interesting were for example: horse behaviour, nutrition, horse training, etc.

Having identified elements decreasing the usability of the NHK's corporate website and highlighting the interests of current users to use social media, it is now possible to analyze further steps that can be taken. In order to generate more website traffic, the usability needs to be enhanced and social media need to be applied adequately.

7. RECOMMENDATIONS

The website design and navigation should be adjusted according to the problems and concerning the elements that have been addressed earlier. Information that users are looking for needs to be found more easily in order to reduce confusion and prevent resulting frustration.

Therefore, following recommendations can be given:

- Simplify website structure: hierarchical structure of sub sites needs to be reduced to a maximum of 4 levels from the start page.
- Adjust search engine: integration of feature that allows searching for keywords internally.
- Redesign/-locate button: the *Bibliotheek* button should become a central role (other colour, location, size and maybe different name/text).
- Redesign/-locate button: the *Bedrijf*, *Paard* and *Ruiter* buttons at the top of the start page should be changed in colour, location, size and/or name in order to catch the visitor's eye.

RECOMMENDATIONS

Concerning social media, the following recommendations can be given:

- Keep accounts on existing SNSs (esp. Facebook and LinkedIn).
- Apply social media to primarily attract new users for now.
- Do not expand to other social networks for now.
- Social media campaign: use results from most interesting topics according to users in order to attract new users on social media accounts.

Following the advice given above, the NHK will be able to generate more website traffic by increasing usability aspects of the corporate website and by attracting new users via social media which will lead them to the NHK's website eventually.

8. REFERENCES

8.1 LITERATURE

Anderson, JQ & Rainie, J 2008, *The Future of the Internet III*, Pew Research Centre, Washington.

http://www.pewinternet.org/~media/Files/Reports/2008/PIP_FutureInternet3.pdf.pdf

Atterer, R, Wnuk, M & Schmidt, A 2006, *Knowing the User's Every Move – User Activity Tracking for Website Usability Evaluation and Implicit Interaction*, University of Munich, Munich, viewed 09 July 2011.

<http://www.medien.ifi.lmu.de/pubdb/publications/pub/atterer2006www/atterer2006www.pdf>

Avital M & Germonperz M, 2003, *Ubiquitous Computing: Surfing the Trend in a Balanced Act*, Case Western Reserve University, USA. Sprouts: Working Papers on Information Systems, 3(19), viewed 23 August 2011.

<http://sprouts.aisnet.org/3-19>

Baker, R, Bernard, M & Riley, S 2002. *Reading Online News: A Comparison of Three Presentation Formats*, Usability News 4.2.

Bauer, D & Cavonius, CR 1980, *Improving the legibility of visual display units through contrast reversal*. In: E. Grandjean, E. Vigliani (Eds.), *Ergonomic Aspects of Visual Display Terminals* (pp. 137-142). London: Taylor & Francis. [no URL]

Benway, JP 1998, *Banner blindness: The irony of attention grabbing on the world wide web*, Proceedings of the Human Factors and Ergonomics Society 42nd Annual Meeting, USA, 1, 463-467.
[no URL]

Bernard, M 2001, *Developing schemas for the location of common web objects*, Usability News 3.1.
http://psychology.wichita.edu/surl/usabilitynews/3W/Web_object.htm

Bernard, M 2002, *User Expectations for the Location of Common E-Commerce Web Objects*, Usability News, 4. 1.

<http://psychology.wichita.edu/surl/usabilitynews/41/web-object-ecom.htm>

Bernard, M 2003, *Criteria for optimal web design (designing for usability)*, Wichita State University, Wichita (USA), viewed 03 July 2011.

www.hcomtech.com/documents/index.php?docid=5

Bernard, M & Chaparro, B 2002, [not found]

Bernard, M & Hamblin, C 2003, *Examining three common menu item layouts*, Usability News, 5, 1.

<http://psychology.wichita.edu/surl/usabilitynews/51/menu.htm>

Bernard, M, Hull, S & Drake, D 2001, *Where should you put the links? A comparison of four locations*. Usability News 3.2.

<http://psychology.wichita.edu/surl/usabilitynews/3S/links.htm>

Bernard, M & Larsen, L 2001, *What is the best layout for multiple-column web pages?*, Usability News 3.2.

<http://psychology.wichita.edu/surl/usabilitynews/3S/layout.htm>

Bernard, M & Mills, M 2000, *So what is the most legible type, size, and format of common font to use for Websites?*, Usability News 2.2.

<http://psychology.wichita.edu/surl/usabilitynews/2S/font.htm>

Daft, RL & Lengel, RH 1986, *Organizational information requirements, media richness, and structural design*, Management Science, 32(5), 554—571.

Econsultancy, 2009, *Online PR and Social Media Trends Briefing*, London, viewed 05 July 2011.

<http://econsultancy.com/uk/reports/online-pr-and-social-media-trends-briefing>

Kaplan, AM & Haenlein, M 2009, *Users of the world unite! The challenges and opportunities of Social Media*, Indiana University, Indiana, viewed 20 June 2011.

<http://iranmanagers.net/wp-content/uploads/2011/04/Users-of-the-world-unite.pdf>

Koster, B & Van Gaalen, M 2010, Social Media Update 2010, Jungle Minds, Amsterdam, viewed 15 July 2011.

http://www.jungleminds.nl/upload/public/file/2010/Social_Media_Update_2010_Jungle_Minds.pdf

Kozinets, RV 1998, *On Netnography: Initial Reflections on Consumer Research Investigations of Cyberculture*, in: *Advances in Consumer Research*, Volume 25, ed., Joseph Alba and Wesley Hutchinson, Provo, UT: Association for Consumer Research, p. 366- 371.

Kozinets, RV 2002, *The Field Behind the Screen: Using Netnography for Marketing Research in Online Communities*, in: *Journal of Marketing Research*, 39 (February), p. 61-72, viewed 05 July 2011.

http://kozine.net/_oneclick_uploads/2009/07/field_behind_round4.pdf

Lida, B, Hull, K & Pilcher, K 2003, *Breadcrumb Navigation: An exploratory study of usage*, Usability News 5.1.

Maldonado, CA & Resnick, ML 2002, *Do common user interface design patterns improve navigation?*,

Proceedings of the Human Factors and Ergonomics Society 46th Annual Meeting, 1315-1319.

<http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.114.37&rep=rep1&type=pdf>

Mans, R 2010, *Some numbers regarding Hyves, Facebook and LinkedIn in the Netherlands*, Capgemini, Utrecht, viewed 14 July 2011.

<http://www.slideshare.net/rickmans/some-numbers-regarding-hyves-facebook-and-linkedin-in-the-netherlands>

Mattern F, 2001, *Ubiquitous computing: Der Trend zur Informatisierung und Vernetzung aller Dinge*, Institut für Informationssysteme ETH Zürich, viewed 23 August 2011.

<http://www.4managers.de/fileadmin/4managers/folien/Internetkongress.pdf>

MFG Baden-Württemberg 2008, *A Digital Lifestyle: Leben und Arbeiten mit Social Software*, Klaus Jaasis & Nadia Zaboura, Stuttgart, viewed 15 July 2011.

<http://www.adigitallifestyle.de/wp-content/uploads/2008/04/adigitallifestyle.pdf>

Morkes, J & Nielsen, J 1997, *Concise, scannable, and objective: How to write for the Web*, Alertbox.

<http://www.useit.com/papers/webwriting/writing.html>

Pagendarm, M & Schaumburg, H 2001, *Why are users banner-blind? The impact of navigation style on the perception of web banners*, Journal of Digital Information, viewed 20 August 2002.

<http://jodi.ecs.soton.ac.uk/Articles/v02/i01/Pagendarm/>

Parkinson, SR, Sisson, N & Snowberry, K 1985, *Effects of breadth, depth and number of responses on Computer menu search performance*, Journal of Man-Machine-Studies, Bd. 28, S. 683-692.

Poynter Institute 2000, *Definitely not your father's newspaper and surprise*, viewed 20 August 2002.
<http://www.poynter.org/centerpiece/050300.htm>

PR MarCom 2010, *Internetnutzung im Pferdesport*, Hamburg, viewed 20 July 2011.
http://www.pr-marcom.de/pr-marcom/files/100317_PI_UmfragePferdesport_und_Internet.pdf

Ramsay, J, Barbesi, A & Preece, J 1998, *Psychological investigation of long retrieval times on the World Wide Web*, Interacting with Computers, 10.

Scharff, LF, Hill, A & Austin, SF 1996, *Color test results*, viewed 20 August 2002.
<http://www.thecube.com/color/survreslts.html>

Schau, HJ & Gilly, MC 2003, *We are what we post? Selfpresentation in personal web space*, Journal of Consumer Research, 30(3), 385—404.

Short, J, Williams, E & Christie, B 1976, *The social psychology of telecommunications*, John Wiley & Sons, Hoboken (USA).

Spain, K 1999, *What's the best way to wrap links?*, Usability News, Wichita State University, Wichita (USA).
<http://psychology.wichita.edu/surl/usabilitynews/1w/Links.htm>

STIR, 2011, *STIR Internet Jaarboek 2011 (establishment survey 2010)*, viewed 30 June 2011.
<http://www.stir.nl/upload/documenten/online-jaarboek-2011/stirjaarboek2011es2.pdf>

The World Bank, 2011, *Internet users 1996-2000*, viewed 6 July 2011, p. 5 of 8.

[http://data.worldbank.org/indicator/IT.NET.USER?page=](http://data.worldbank.org/indicator/IT.NET.USER?page=2)

[2](http://data.worldbank.org/indicator/IT.NET.USER?page=2)

Van Deursen, AJAM & Van Dijk, JAGM 2010,
*Trendrapport Computer- en Internetgebruik 2010. Een
Nederlands en Europees perspectief*, Universiteit Twente,
Enschede, viewed 7 July 2011.

http://www.utwente.nl/media/489315/trendrapport_computer_en_internetgebruik_2010.pdf

Watzlawick, P, Beavin, JH, Jackson, DD 2002,
*Menschliche Kommunikation. Formen, Störungen,
Paradoxien*, 10th unchanged edition, Hans Huber, Bern.

Zunkovič, K 2003, *Rezension*, University of Klagenfurt,
Klagenfurt, viewed 02 June 2011.

[no URL]

8.2 PLATES & TABLES

Plate 1: Position of eye tracker and participant

Tobii Technology AB (2010a), User Manual: Tobii X60 & X120 Eye Trackers, Revision 3, p. 11, viewed 09 September 2011:

<http://www.slideshare.net/AcuityETS/user-manual-tobii-x120>

integrated into:

Tobii Technology AB (2010b). User Manual: Tobii T60 XL Eye Tracker, Revision 1, p. 11, viewed 09 September 2011:

<http://www.slideshare.net/AcuityETS/tobii-t60-xl-user-manual-s>

Plate 2: Start page with AOIs (yellow), viewed 05 August 2011:

<http://nhk.nl/>

Plate 3: Bedrijf site with AOIs, viewed 05 August 2011:

<http://nhk.nl/bedrijf.php>

Plate 4: Start page with AOIs (see plate 2 for reference)

Plate 5: Dossiers site with AOIs, viewed 05 August 2011:

http://nhk.nl/index_dossiers.php

Plate 6: Dossiers Veulen site with AOIs (via Paard site) ,
viewed 05 August 2011:

http://nhk.nl/paard_dossier_veulen.php

Plate 7: Dossier Veulen site with AOIs (via
Bibliotheek/Dossiers site) , viewed 05 August 2011:

http://nhk.nl/index_dossier_veulen.php

Plate 8: Bedrijf site with AOIs (see plate 3 for reference)

Plate 9: Ruiter site with AOIs, viewed 05 August 2011:

<http://nhk.nl/ruiter.php>

Plate 10: Start page with AOIs (see plate 2 for reference)

Plate 11: Onderwijs site with AOIs, viewed 05 August
2011:

http://nhk.nl/index_onderwijs.php

Plate 12: NHK site with AOIs, viewed 05 August 2011:

http://nhk.nl/index_over_nhk.php

Plate 13: Start page with most (yellow)/least (red) fixated AOIs of all assignments (see plate 2 for reference)

Table 1: Usage of Social Networking Sites in the Netherlands

STIR, 2011, *STIR Internet Jaarboek 2011 (establishment survey 2010)*, viewed 30 June 2011.

<http://www.stir.nl/upload/documenten/online-jaarboek-2011/stirjaarboek2011es2.pdf>

Table 2: Classification of social media by different dimensions

Kaplan, AM & Haenlein, M 2009, *Users of the world unite! The challenges and opportunities of Social Media*, Indiana University, Indiana, viewed 20 June 2011.

<http://iranmanagers.net/wp-content/uploads/2011/04/Users-of-the-world-unite.pdf>

Table 3: Unsatisfactory aspects of equine websites

PR MarCom 2010, *Internetnutzung im Pferdesport*,
Hamburg, viewed 20 July 2011.
http://www.pr-marcom.de/pr-marcom/files/100317_PI_UmfragePferdesport_und_Internet.pdf

Table 4: Schuetz, S 2011, *Usage of social media sites among NHK website visitors*, University of Applied Sciences Van Hall Larenstein, Wageningen.

Table 5: Schuetz, S 2011, *Awareness of the NHK having accounts on different social networks among NHK website visitors*, University of Applied Sciences Van Hall Larenstein, Wageningen.

Table 6: Schuetz, S 2011, *Willingness of NHK website visitors on following the NHK on social networks*, University of Applied Sciences Van Hall Larenstein, Wageningen.

Table 7: Schuetz, S 2011, *Interest on different topics within equine field*, University of Applied Sciences Van Hall Larenstein, Wageningen.

9.1.1 Assignment 1

[illegible]

[illegible]

Time to first mouse click																																								
Web Group	Start																																							
AOI	Contact button	Contact pop-up						NHK button			NHK pop-up			NHK			Contact button			Contact pop-up			Over het NHK			Bedrijf			Home button			Paard button			Router button			Zoeken		
	N (count)	Mean (sec)	Sum (sec)	N (count)	Mean (sec)	Sum (sec)	N (count)	Mean (sec)	Sum (sec)	N (count)	Mean (sec)	Sum (sec)	N (count)	Mean (sec)	Sum (sec)	N (count)	Mean (sec)	Sum (sec)	N (count)	Mean (sec)	Sum (sec)	N (count)	Mean (sec)	Sum (sec)	N (count)	Mean (sec)	Sum (sec)	N (count)	Mean (sec)	Sum (sec)	N (count)	Mean (sec)	Sum (sec)	N (count)	Mean (sec)	Sum (sec)				
Anne	-	-	-	1	9,3	9,3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
Barbara	1	18,85	18,85	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
Charlotte	-	-	-	1	31,54	31,54	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
Christiane	-	-	-	1	4,63	4,63	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
Dion	-	-	-	1	20,44	20,44	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
Elise	1	14,2	14,2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
Elodie	1	9,37	9,37	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
Eva	-	-	-	1	5,62	5,62	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
Eveline	1	14,53	14,53	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
Frans	1	3,42	3,42	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
Inge	-	-	-	1	8,43	8,43	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
Jamie	1	10,63	10,63	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
Jeroen	-	-	-	-	-	-	-	-	-	1	7,36	7,36	-	-	-	1	5,23	5,23	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
Joltske	1	3,27	3,27	1	5,62	5,62	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
Josephien	-	-	-	1	16,23	16,23	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
Joyce	1	49,65	49,65	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	13	13	-				
Kim	1	12,16	12,16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
Laura J.	-	-	-	-	-	-	1	20,5	20,5	-	-	-	-	-	-	1	45,11	45,11	1	8,31	8,31	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
Laura K.	1	6,16	6,16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
Lennart	1	5,85	5,85	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
Linda	-	-	-	1	9,24	9,24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
Marcel	1	5,75	5,75	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
Nazmi	1	21,4	21,4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
Nikki d. K.	1	6,24	6,24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
Nikki T.	-	-	-	1	6,59	6,59	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
Nelina	1	24,17	24,17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
Nhi	1	3,72	3,72	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
Sigrid	-	-	-	-	-	-	-	-	-	1	14,83	14,83	1	11,85	11,85	-	-	-	-	-	-	-	1	27,78	27,78	1	71,86	71,86	-	-	-	-	-	-	1	32,55	32,55			
Sophie	1	6,18	6,18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
Tom	1	9,23	9,23	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
All Recordings	18	12,49	224,78	18	11,76	117,61	1	20,5	20,5	2	11,1	22,19	1	11,85	11,85	2	25,17	50,34	1	8,31	8,31	1	27,78	27,78	1	71,86	71,86	-	-	-	-	1	13	13	1	32,55	32,55			

ANNEX

[illegible]

Time spend in total and amount of visited sites		
Web Group	Time to goal	Sites visited
Anne	22,335	2
Barbara	34,256	2
Charlotte	44,898	2
Christiane	19,455	3
Dion	33,39	2
Eline	29,226	2
Elodie	24,444	2
Eva	19,39	2
Eveline	28,904	2
Frans	20,049	2
Inga	23,383	2
Iamie	26,82	2
Jeroen	36,952	4
Jolitske	19,047	2
Josefien	29,051	2
Joyce	159,472	6
Kim	24,434	2
Laura J.	80,43	6
Laura K.	19,572	2
Lennart	21,723	2
Linda	21,93	2
Marcel	20,915	2
Naomi	67,588	4
Nikki d. K.	23,032	3
Nikki T.	19,062	2
Melina	38,213	2
Shi	16,897	2
Sigrid	118,879	7
Sophie	19,73	2
Tom	28,396	2
All Recordings	1091,873	79
Average	36,396	2,63
SD	31,7052609	1,35359603

9.1.2 Assignment 2

[illegible]

Time spend and amount of sites visited		
	Time to goal	sites visited
Anne	113,624	6
Barbara	238,344	6
Charlotte	62,232	2
Christiane	200,526	7
Dion	160,774	4
Elaine	57,656	6
Elodie	180,721	10
Eva	146,876	7
Eveline	165,428	6
Frans	102,249	3
Inga	140,896	3
Jamie	241,691	12
Jeroen	190,7	17
Jotiske	62,711	2
Josetien	98,819	5
Joyce	122,458	11
Kim	89,224	2
Laura J.	156,955	15
Laura K.	133,435	7
Lennart	132,856	7
Linda	53,456	2
Marcel	70,878	3
Naomi	145,758	4
Nikki d. K.	182,085	10
Nikki T.	44,657	3
Melina	75,791	3
Shi	193,738	12
Sigrid	124,24	5
Sophie	92,382	3
Tom	138,168	10
All Recordings	3919,328	193
Average	130,644	6,43
SD	54,1337184	4,04017184

9.1.3 Assignment 3

[illegible]

[illegible]

Time spend	Time to goal
Anne	32,5
Barbara	74,02
Charlotte	26,785
Christiane	25,192
Dion	55,039
Eline	61,839
Elodie	20,666
Eva	38,177
Eveline	164,166
Frans	31,399
Inga	35,333
Jamie	25,714
Jeroen	86,921
Jotiske	41,23
Josefien	59,461
Joyce	27,963
Kim	50,842
Laura J.	67,583
Laura K.	33,66
Lennart	18,75
Linda	21,024
Marcel	24,531
Naomi	102,25
Nikki d. K.	26,035
Nikki T.	106,255
Melina	29,78
Shi	66,75
Sigrid	23,658
Sophie	27,599
Tom	22,843
All Recordings	1427,965
Average	47,599
SD	32,88631819

ANNEX

9.2 RESULTS SOCIAL MEDIA SURVEY

	Welke social media sites gebruikt u? (N=71, meerdere antwoorden mogelijk)										
Site	Hyves	Facebook	Twitter	Blogster	LinkedIn	Flickr	MySpace	YouTube	Netlog	Forums	Andere
Aantal	32	34	22	1	40	2	1	33	0	24	4

	Wist u dat het NHK accounts h		
	Facebook	LinkedIn	Twitter
Ja	23	23	20
Nee	48	48	51

	Wilt u het NHK volgen op de onderstaa		
	social media sites, of doet u dit al? (N=		
	Facebook	LinkedIn	Twitter
Ja	22	30	21
Nee	46	38	47
Niet ingevuld	3	3	3

	niet interessant	neutraal	interessant						
Opvoeding	5	15	51						
Omgang	3	16	52						
Paardenziekte	1	14	56						
Bedrijfsvoering	10	17	44						
Getallen	9	14	48						
Training Paard	1	13	57						
Dressuur	2	26	43						
Springen	6	37	28						
Menen	17	36	18						
Endurance	23	35	13						
Eventing	18	34	19						
Voltige	30	31	10						
Reining	27	34	10						
Fokkerij	10	20	41						
Voeding	2	12	57						
Vertering	6	16	49						
Training Ruiter	4	14	53						
Anatomie	4	22	45						
Paardengedrag	0	10	61						
Paardenwelzijn	0	14	57						
Therapie	6	28	37						
andere onderwerpen:									
specifieke regelgeving m.b.t. Europese paardenwetgeving									
Sector belangen									
politieke ontwikkelingen m.b.t. paardensector maar dat doen jullie al wel!									
sectororganisaties, paardenonderwijs									
Interactie ruiter -paard									
huisvesting, wet- en regelgeving									
Cultuurhistorisch perspectief									
onderzoeksverslagen naar de werking en invloed van de hulpmiddelen die wij gebruiken bij het									
hippische ondernemers, ontwikkelingen									
export, internationale handel; identificatie/registratie systeem; hoef- en gebitsverzorging									
Dreigende diefstakten/ zoonose									
huisvesting									
landschapsvervuiling/-verfraaiing, alles rondom vergunningen									
wetgeving									
Recreatief paarden gebruik									
Scholing									
draf en rensport									
paardrij vakantie									

ANNEX

