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– BACHELORARBEIT –

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The effect of daily internet usage on a short attention span and academic performance

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Studiengang:

Angewandte Medien

Seminargruppe:

AM12wK2-B

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Einreichung: 24.6.2015, Frankfurt/Main

Abstract (English)

This paper set out to determine what the effect of daily internet usage on a short attention span was and whether this had an effect on academic performance. As described briefly in the introduction this paper consisted of laying the groundwork through defining the relevant terminology, applying the methodology to the Hypotheses and making conclusive statements.

Two Hypotheses were presented to give the paper the aim. While Hypothesis 1 can be proven true through the two-step terminology applied, Hypothesis 2 does not stand up to the scrutiny. For lack of sufficient and specific evidence, the only conclusive statement that can be made regarding it is that it is untrue.

Approx. 80% of the population sample analysed were between the age of 19 – 30 which automatically reduces the analysis, extrapolations and scientific statements to a more specific age group. The other ages represented were almost all above, meaning that the findings could not accurately be applied to older age groups.

Nonetheless, the data collected was accurate and good be applied to prove Hypothesis 1, meaning that daily internet usage breeds and invites a short attention span. For lack of a fitting data collection method, physcial, social, mental factors along with motivation of an individual make up his academic performance. These were factors that could not be taken into consideration.

Conclusively, the author predicts that a present internet connection coupled with the growing popularity of digital technology attention spans will continue to stay as short as they are. Individuals will find ways to direct their short attention span where it is needed and apply it as necessary.

(Abstract Deutsch)

Ziel dieser Arbeit war es fest zu stellen, welchen Einfluss ein tägliches Verbundensein mit dem Internet auf eine kurze Konzentrationsspanne hat. Zusätzlich soll eine Verbindung zwischen einer kurzen Konzentrationsspanne und akademischer Leistung bewiesen werden. Anfänglich werden relevante

Wörter für die Arbeit definiert und erklärt bevor die Methodik in zwei Schritten angewandt wird. Die Ergebnisse und Feststellungen die aus der Methodik hervor gehen erlauben es dem Autor die Hypothesen als wahr oder unwahr zu erklären.

Neben der Erklärung und Definition der relevanten Begrifflichkeiten stellen zwei Hypothesen die Basis dieser Arbeit dar. Während sich Hypothese 1 als wahr heraus stellt, kann Hypothese 2 aufgrund fehlender Beweise und Information als unwahr bezeichnet werden.

Knapp 80% der Studienteilnehmer waren zwischen 19 und 30 Jahre alt. Dies reduziert die gemachten Aussagen, Resultate und Analysen stark auf diese bestimmte Altersgruppe. Andere Altersgruppen waren in der Studie dennoch vertreten, jedoch nicht mit der gleichen Menge.

Nichtsdestotrotz konnten die angesammelten Informationen und Daten genutzt werden um festzustellen das täglicher Internetgebrauch einen kürzere Konzentrationsspanne einlädt. Um akademische Leistung zu bewerten wären neben psychischer und körperlicher Gesundheit, Noten, soziales Umfeld und Motivation des Individuums von Relevanz. Diese Aspekte wurden in dieser Arbeit nicht beachtet und beurteilt.

Zusammenfassend sagt der Autor für die Zukunft heraus dass es mit täglicher Internetnutzung weiterhin kurze Konzentrationsspannen geben wird. Es wird nach wie vor Wege geben für gewisse Aufgaben die angebrachte Konzentration auf zu bringen und ein zu setzen.

Abbreviations

IAD - Internet Addiction Disorder

DN - Digital Native(s)

DI - Digital Immigrant(s)

MC - Multiple choice

SC - Single choice

Contents

1.0 Introduction/Pre-amble

The topic of this paper was chosen on account of its current appeal in the media and all across society.

This paper was written in the year of 2015 where digital technology and the internet are as relevant as ever before. The former two affect more and more global citizens every day, enabling a worldwide connection. The generation of people coming through school and university systems face new challenges and in light of this, it is my intention to look at the effect that internet usage has on a short attention span of an individual. Further, the attempt is made to determine what this shortened attention span has on the academic performance.

These are aspects that are relevant for many people in today's society, no matter what age or line of work. A growing number of global citizens are connected to the internet on a regular basis and use it for a variety of different things from communication, information seeking to financial gain. The rapid and undeniable establishment of the internet has come within a matter of years. As a result, effects on the population have been studied by some, especially in school or university environments.

The methodology I have chosen for this paper consists of two parts, the first being more significant than the second. To lay a groundwork for the methodology of this paper and to introduce the reader to relevant technology. Here I present definitions and explanations of words that will be relevant throughout the paper. An appropriate background will also be established for the reader.

The first part of the methodology will be my description/analysis of the field research (Part 1). Using the information collected, I will be able to prove/disprove the Hypotheses for this paper. The results of field studies made in similar circumstances or concerning themselves with a relevant topic will further back up the true Hypotheses.

Following the conclusionary statements made at after Part 1 & 2 of the methodology, the bibliography for the sources used in the writing of this paper will be listed alphabetically.

2.0 Hypotheses, Methodology and Gender disclaimer

The author has constructed two hypotheses for this paper and will give credence to those hypotheses by examining research that has already been conducted in the field as well as an own field study in the form of a questionnaire.

Hypothesis 1: There exists a link between a short attention span and internet usage

Hypothesis 2: Through a short attention span, academic performance will be negatively impacted.

The author will base the results of the methodology and hence the outcome of this paper on (1) the analysis of the results collected during the data collection and (2) supporting facts and figures from other research conducted. Any relevant and important terminology used in the paper is defined and explained, acting as a framework for the whole of the paper.

Part (1) will certainly be the major part of the methodology as it entails field research conducted in the form of an online questionnaire, accessible by a URL link sent to participants via text message, email, message or otherwise. A total of 104 people were questioned for the survey which is a significant enough number to make scientifically valid extrapolations. Along with Part (2) showing facts and figures from other studies, this evidence will be sufficient to prove/disprove the two aforementioned Hypotheses.

Gender disclaimer: whenever the author refers to *an individual* he will use the male sex to reference said 'individual' in the same context.

3.0 Definition of Terminology

This paper concerns itself with the effect of daily internet usage on the attention span and its correlation to academic performance. In order to give the reader a background and understanding of the field, all relevant terminology will be defined for the purposes of this paper. This is important to give this paper a framework which enables the reader to better understand the background, history and the terms used in the course of this paper.

3.1 Internet

In the year of 2015, access to information is more vast than it ever has been in known human history. Search engines and the internet bring us together. The internet enables any human to communicate and share Information via social media, various very specific forums that act as platforms for news websites, Encyclopedias, Libraries, University Learning Material, Blogs, personal websites and more.

The publication *The Internet Society* sums the Internet up as follows:

> The Internet is at once a world-wide broadcasting capability, a mechanism for information dissemination, and a medium for collaboration and interaction between individuals and their computers without regard for geographic location. The Internet represents one of the most successful examples of the benefits of sustained investment and commitment to research and development of information infrastructure. (Leiner, Cerf, Clark, Kahn, Kleinrock, Lynch, Postel, Roberts, Wolff, 2012, Absatz 1).

It is an ever-expanding, growing and further reaching medium that encompasses our lives little by little, day by day. In the palm of anyone's hand, any individual in the world has access to a whole universe of knowledge and information through a smartphone or any other way one can be connected to the internet. People all over the world use the internet to varying degrees for different uses and purposes.

In the 21st century, internet usage has increased dramatically. In 2005 merely 1 billion people were online. In 2010 it was 2 billion, four years later it is 3 billion (Internet Live Stats, 2014, Absatz 1). To many people living in a world where internet access is (by choice) constant from almost anywhere such as a cellphone, tablet or simply a laptop it can be overwhelming. To certain groups of our global population, the internet is hard to access. Reasons for this can include, but are not limited to geographical size or land forms , lack of funds or equipment, natural terrain, isolated communities, infrastructure,

censorship, war or social etiquette forbids or punishes it or an oppressive government regime restricts certain websites or undermines it's use completely. Also, there is a clear correlation between the wealth of a country and the amount of online users. According to the CIA World Fact book figures in 2014, the top 10 countries with the most internet access were China, USA, Japan, Brazil, Germany, India, UK, France, Russia and South Korea which are all developed/developing countries. The bottom 10 are small geographically and economically weak countries: Anguilla, Falkland Islands, Marshall Islands, Timor-Liste, Wallis and Futuna, Montserrat, Niue, St. Helena Ascension and Tristan da Cunha, Tokelau and Christmas Islands (CIA, . Many countries of the African continent have low internet usage per capita. While the Asian continent has similarities to its African counterpart, most Asian countries have a widespread internet usage, as do most European, South American and Australian nations. The South American continent has the highest internet usage (refer to Fig. 1 below) (Translation Directory, 2014, 2. Abbildung).
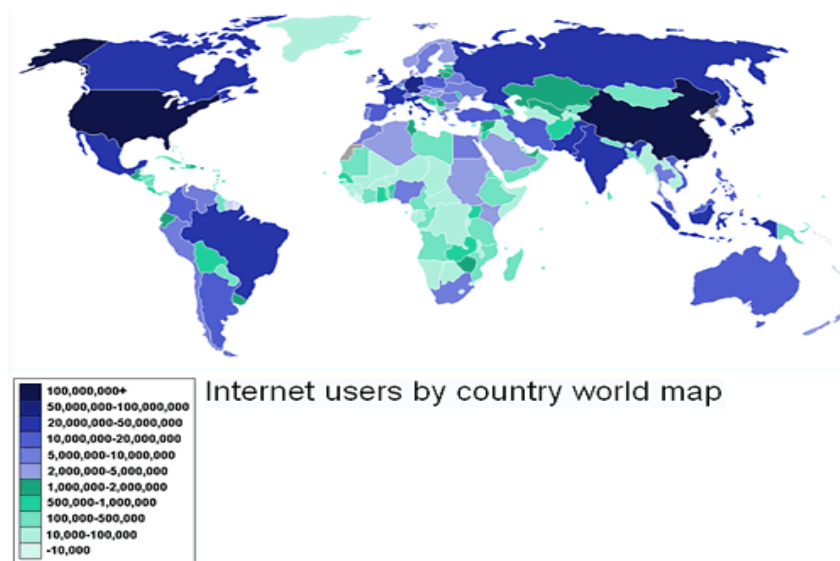
Fig. 1

Although the internet existed prior to widespread global use, it was in the 1990s when the internet starting being increasingly used by people around the globe (refer to Fig. 2 below) (Wikipedia, 2015, Absatz 34). Since then it has been growing and expanding rapidly and has given rise to widespread implementation of everyday digital technology. This goes from watches to gauges in cars to medicine, science, farming, schooling and other activities involving humans.
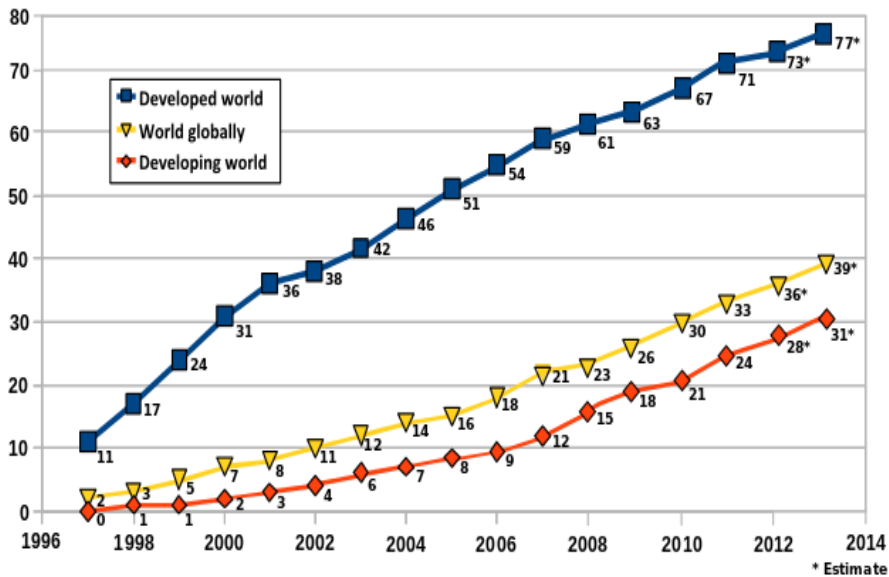
Fig. 2

Since its emergence, the internet has changed many profitable industries in their structure and product distribution, such as the movie, pornography and music industry. Information such as music or video files are easily shared through websites or peer-to-peer networks.

3.2 Digital Natives, Digital Immigrants and Internet Addiction Disorder

Through its emergence, the internet has created a unique divide between the global population that splits its citizens in two: Digital Immigrants and Digital Natives.

3.2.1 Digital Natives

Digital Natives is a term used to describe a rapidly growing part of global society and was first termed by Marc Prensky, a well-known and respected author in the field. Digital Natives are human beings who "have spent their entire lives surrounded by and using computers, videogames, digital music players, video cams, cell phones and...other...tools of the digital age." (Prensky, 2001, Absatz 3)

Digital Natives are people born in the 1990s and later. They are used to the internet as an everyday useful medium which can be used in many ways. Turning to the internet in search of news, information, entertainment or knowledge is first-hand and natural. Digital Natives are known to multi task, such as using multiple screens at one time. It does not bother a Digital Native in the least to have the TV running whilst texting a

friend about plans for the upcoming night while at the same time using his tablet to find an appropriate bar. Emails are responded to quickly, digitally written (seldom hand written) and photographic communication is seen as a way to interact with fellow human beings next to the traditional oral route. Almost all Digital Natives own smartphones next to a tablet, laptop or other non-telephonic handheld device. The former is a constant companion in everyday life serving as a photographic life documentation, communication and information device at all times. Next to its practical uses, the smartphone has increasingly become a fashion statement.

Some Digital Natives show signs of almost addict like behavior when they cannot get their daily fix of internet, others find themselves constantly glued to their phones. It is a fear of some Digital Natives to be left out of certain discussions or to miss an important piece of news if they are not on constant watch. Not only does it quickly drain the battery of the device in questions, it removes the person from the real, physical world to a digital, non-physical one. The danger here is that an individual may get too distracted and caught-up with unimportant facts or distance himself from friends and family through finding comfort in like-minded people. Negligence of the physical world can further lead to possible accidents or isolation.

For the most part, Digital Natives prefer for their information and communication to be short and precise. This is exemplified by constant news updates that briefly summarize on-goings.

Through its ease of access and simple usage social media has become a platform for Digital Natives to represent themselves and showcase their lives through photographic documentation. In most cases, Digital Natives tend to have more than one social media account, depending on what their interests and goals are (Pew Research Center, 2015, Absatz 7).

It has never been easier for a person to make known their views on any topic in the history of humanity. Anyone can post a blog or on their personal website, write a review about a business they have visited, start campaigns for themselves or local/global events. Not only is communication and the spread of information faster than it has ever been before but every human being has their own voice which can be expressed digitally via the internet in a variety of different ways.

3.2.2 Digital Immigrants

As mentioned earlier, the emergence of digital technology has created a divide in the global population today, of which the Digital Natives make up the first part. The other and currently still larger part of the global population is referred to as Digital Immigrants. They are those that are born in the early 80s and before. They know that there was a time without the internet, a time where home phones, phone booths and movie rental businesses were commonplace. When communication took place, it was through landlines or letters, information was accessed through enormous volumes of encyclopedias or libraries and news was conveyed through newspaper, TV, radio. Information was slower to spread, the pace of life was not as fast as it is in 2015, reading books was a commonplace activity. Newspapers were considered a legitimate and true news source, mainly because it was the only one to bring in depth stories and reports.

The emergence of digital technology into our everyday lives has left almost all Digital Immigrants with what Marc Prensky refers to as a "Digital Immigrant accent" (Prensky 2001, Absatz 8). What is meant by this is that even though the vast majority of Digital Immigrants have accepted and implemented digital technology into their lives (it becomes difficult to resist), some have done so easier than others. Some Digital Immigrants are so savvy and knowledgeable with today's newest digital trends and technological advances that it seems like they too have had this technology since the crib. This may be because they have a natural inclination and fascination towards the field and they easily adopt the nature of the intuitive and logical movements that are prevalent with smartphones and tablets.

Other Digital Immigrants find themselves lagging behind their more advanced comrades and Digital Natives. This can have a variety of reasons such as unwillingness to accept the new societal change, difficulty comprehending the new technology or a stubbornness to believe that digital technology is a permanent aspect to today's society. This may manifest itself in slow email exchanges, impractical and seldom use of the smartphone or the general criticism of the fast-paced nature of communication and information that makes the internet extraordinary.

Irrespective of a possible accent a Digital Immigrant has, which is understandable with the learning of a new language, most Digital Immigrants have adapted well to the arrival of digital technology. Mainly, one does not have a choice to reject digital technology today, as it surrounds us and has vital everyday uses.

Between the Digital Natives and Digital Immigrants lie a small section of people that were born in a time where digital technology was slowly starting to be introduced into society. These people tend to fall under the umbrella of Digital Natives, picking up the habit quickly.

3.2.3 Internet Addiction Disorder (IAD)

With the introduction of a new medium in the form of digital technology to our way of life and our global population, new positive and negative features have emerged with regards to its effect on the population.

The positive effects of digital technology and internet outweigh the negative effects but this does not neglect the latter. Like with anything ranging from cigarettes, heroin, sugar or fast food the internet can impact people's lives negatively.

In *Internet Addiction: A Brief Summary of Research and Practice*, a psychiatry journal published in 2012, Internet Addiction Disorder is classified as follows:

> "[IAD] is accompanied by changes in mood, preoccupation with the Internet and digital media, the inability to control the amount of time spent interfacing with digital technology, the need for more time or a new game to achieve a desired mood, withdrawal symptoms when not engaged, and a continuation of the behavior despite family conflict, a diminishing social life and adverse work or academic consequences...The *American Society of Addiction* (ASAM) recently released a new definition of addiction as a chronic brain disorder, officially proposing for the first time that addiction is not limited to substance use. All addictions...share certain characteristics including salience, compulsive use (loss of control), mood modification and the alleviation of distress, tolerance and withdrawal, and the continuation despite negative consequences" (Cash, Rae, Steel, Winkler, 2010, Absatz 3)

The authors further conclude that IAD has five criteria through which it can be generally diagnosed:

> "(1) Is preoccupied with the Internet (thinks about previous online activity or anticipate next online session); (2) Needs to use the Internet with increased amounts of time in order to achieve satisfaction; (3) Has made unsuccessful efforts to control, cut back, or stop Internet use; (4) Is restless, moody, depressed, or irritable when attempting to cut down or stop Internet use; (5) Has stayed online longer than originally intended. Additionally, at least one of the

following must be present: (6) Has jeopardized or risked the loss of a significant relationship, job, educational or career opportunity because of the Internet; (7) Has lied to family members, therapist, or others to conceal the extent of involvement with the Internet; (8) Uses the Internet as a way of escaping from problems or of relieving a dysphoric mood (e.g., feelings of helplessness, guilt, anxiety, depression)" (Cash, Rae, Steel, Winkler, 2010, Absatz 5)

The lure of the internet lies in its "anonymity, convenience and escape..., the access, affordability" (Cash, Rae, Steel, Winkler, 2010, Absatz 9) to many addicts who seek an escape from their everyday life. There have been connections made between the symptoms of IAD being a sign for a different disorder. However, the *American Society of Addiction* (ASAM) has recently revised their definition of addiction, stating that "addiction is a primary, chronic disease of brain reward, motivation, memory and related circuitry. Dysfunction in these circuits leads to characteristic biological, psychological, social and spiritual manifestations. This is reflected in an individual pathologically pursuing reward and/or relief by substance use and other behaviors." (ASAM, 2011, Absatz 1).

Addiction can be classified with something other than substances, additionally with certain behavior patterns that negatively impact an individual's life. In the case of IAD, it is the prolonged and uncontrolled use of the internet in whichever way this may manifest itself such as excessive time spent on social media websites, pornography or online games.

One way of kicking an addiction is clearly by abstaining completely from the abusive substance and finding a fitting replacement. This can be seen with alcoholics joining alcoholics anonymous groups or cigarette smokers replacing their daily cigarette need with nicotine gum or toothpicks. Many former sufferers of bulimia-nausea turn to strength athletics in a bid to leave behind their weak and thin self, finding good reason to eat and a joy in life again. However, this cannot simply be done with IAD. As has been previously stated and is obvious, the internet takes a role in our lives that we can no longer ignore. The internet is here to stay and as such, anyone finding themselves spending too much time with internet based activities must find a solution. There are several methods to go about reducing online time depending on the individual but this is not the space in which to explore those options.

I look to explore the possible effects internet usage on a short attention span and academic performance alongside digital technology. To do this, these terms needs to be defined.

3.3 Academic performance and attention span

As this paper focuses itself on the correlation between internet usage and a short attention span and academic performance, it is paramount to define the terminology. For the reader, the terms *academic performance* and *attention span* can have a different meaning that the intended one of the author.

3.3.1 Academic performance

Academic performance is a term that will be defined solely by the author, as these terms relate more to logic than scientific meaning. Grades and school work start becoming relevant for an individual between 1st and 5th grade, depending on the school system the individual finds himself in. An individual starts to learn the basics of mathematics, sciences and structured writing and finds that work both inside and outside the classroom starts to bear relevance on not only the grades in school or college but also on the ability to learn a new skill, in whatever subject that may be. Depending entirely on the school system and the country, an individual may have one test per week per month or per year in an attempt to solidify the information and reinforce the learning process, testing knowledge of the subject as a result.

For the particular purpose of using the terms academic performance the author does not denote examination scores such GPA or grade average but rather the act of continually being present in an academic institution on a daily basis and completing the tasks that are required by that said institution. Grades that are awarded after examinations count towards academic performance as well.

For the consideration of this paper, academic performance will be defined as the amount of work someone puts into a certain ambition involving the passing of a test. Examples might include the certification to become a qualified fitness trainer, pilot or a Jiu Jitsu black belt. The term will not be applied solely to school or academic environments.

3.3.2 Attention span

The second aspect that comes under scrutiny in this paper is the relationship between internet usage and attention span. An attention span is what allows an individual to concentrate on any given task for an appropriate period of time without becoming distracted. The ability to focus on a task in hand, thus utilizing the attention span is crucial in achieving goals and accomplishing a task at hand. According to the website Statistic Brain the average attention span has sunken from 12 seconds in 2000 to 8.25

seconds in 2015 (Statistic Brain, 2015, zitiert nach Weinreich, Obendorf, Herder & Mayer, 2008). The source goes on further to define attention span as "the amount of concentrated time on a task without becoming distracted. Most educators and psychologists agree that the ability to focus attention on a task is crucial for the achievement of one's goals" (Statistic Brain, 2015, Absatz 1). The presence of social media and increase of constant distractions in our lives has led to increased impatience. Instances involving an attention span would be paying full attention to the road when driving from point A to point B, completing a manual labor task or listening to a professor talk in a lecture. Through pre-determined reasons such as genetics, health issues or natural diversity the attention span of one individual will vary.

4.0 Field research/Data collection

4.1 Description/Justification of Data Collection

In order to present concrete findings and not just base my conclusions and results on the findings of others it was imperative that I undertake some field research and data collection of my own.

In conducting this survey, it was my aim to learn about the effect the internet has on a short attention span and academic performance. Considering this is the subject of my paper, it was appropriate to conduct a survey. The internet allowed me to conduct the survey without any paper or personal contact, so the amount of people I could theoretically reach was much higher.

There are numerous ways to go about data collection, depending on what one is trying to achieve. For the purposes of this paper I decided to come up with a quantitative data collection method.

The aim for my field research was to have an extensive reach across a broad spectrum of people so as to guarantee a broad sample of the population that I was reaching. I decided to use a web based questionnaire as my method of data collection. Although it is a less in depth method of collecting data compared to individual in-depth face to face interview, it allowed me to reach over 100 people. The way I drew up the survey, I kept in mind that people's time during the day is their most precious resource. Upon thorough completion of the questionnaire, an individual would have spent no more than 5 minutes of his time and I had all the data I needed. Granted, I could not collect as much detail as I would have interviewing everyone one by one, but I obtained the data in a very neat and orderly fashion. Where detail was necessary, the individual was invited to put it down.

My field research consisted of a questionnaire that was compromised of 17 questions, some of them multiple choice, though most were single choice. For some questions, there was a blank field where an individual was invited to put down an answer that I had not considered (e.g. "What do you use the internet for?"). For the remainder of the questions, the individual could only select one of the answers listed. This made the most sense because the questions that were single choice consisted of answers that mutually excluded each other (e.g. age or gender).

I decided to cluster the questions into three themes: identity, internet behavior and attention span. This way, the questions were presented to the individual answering the survey in a logical manner. The first two questions identified age range and gender of the individual, the second set of questions concerned itself with daily internet usage and the third set of questions concerned itself with the attention span of the individual, partly in connection with the internet. A detailed profile on the individual answering the questions would be unnecessary, as it is a random sample I was after and not specific people. Furthermore, asking an individual for anything more than age and gender would have been too personal and would have created distrust. No doubt this would have led to a much lower completion rate of the survey.

The use of the first two sets of questions were to create a profile on the individual who answered the survey. Next to age and gender, I wanted to know what those answering the survey used the internet for, how many devices with internet connection they owned and how long they were online daily. This way, I could find out what people's online habits were.

Presenting the questions in the clusters I mentioned earlier is plausible because it would have confused the individual answering the questions out of order and at random. By logically and thematically presenting the questions, the individual answering the survey would be able to answer the questions by topic.

The online questionnaires are available as an attachment supplementing this paper.

4.2 Population sample & time frame

For my data collection method, I wanted to analyze a significant sample of the internet users. Considering that in 2014 there were almost 3 billion internet users to have even a sample of 0,1% would mean to question 300,000 people. This is an impossibility in the time frame of this paper and would also not be a realistic undertaking. Instead I focused to make the questionnaire available to people across a variety of ages and professions as this would determine a fair mix of the people online in my wider social circle.

In total, 104 people took part in the survey. This is a meaningful sample of people to make accurate extrapolations to the remainder of internet users that are relevant to this category. Some of the world's population who use the internet daily will not concern themselves with academic performance because they have different priorities in life.

4.3 Limitations

One of the disadvantages that come with a web based questionnaire would be not reaching someone who was not regularly connected to the internet. Considering the fact that the whole subject of this paper concerns itself with the internet usage, this was not a concern of mine. Someone who is not online and makes no effort to do so would not be an appropriate part of my sample. The final disadvantage to be considered is that whilst answering the survey, an individual could become distracted by the task in hand and abandon the survey. Potentially, this would falsify my data and give me an inaccurate number as to how many people answered the survey.

A further disadvantage is the lack of detail that I have with my answers. Although the quantitative amount of answers I received were numerous, they lack quality and depth. Someone using the internet for 3 hours a day could be a constant scrolling through the endless Facebook newsfeed, while a different individual could use his 3 hours of daily internet usage in the form of looking of effects of a certain sedative on a patient in surgery with a certain body fat percentage. Both internet uses have a usage of 3 hours but the difference is significant - one uses the internet to stare at a never-ending futile stream of information while the other is finding out vital medical facts.

One fact to consider when dealing with online proceedings is the possibility of bots or fake accounts. Fortunately, this was not something I needed to concern myself with, as all of the people answering the survey were all chosen by me. There would have been no instance where I knowingly sent the survey to a highly sophisticated bot to falsify the results of the survey.

Though I am investigating the connection between internet usage and academic performance, I had only a very limited viewpoint in terms of building a more well-rounded picture of all the pieces that make up academic performance. Accounts from teachers or fellow students (be it in normal high schools or other types of academic institutions such as specific colleges) or applicable test results (the passing or failing of certain tests e.g. pilot license examinations) might be a useful way to understand the full realm of academic performance. Other aspects would include actual work done outside of said academic institutions in the form of preparing for upcoming classes by studying the material, doing independent research through an apparent interest for the subject. Furthermore, the willingness of the individual to be in any academic institution is highly relevant. From personal experience many people admit to or at least know another person that disliked certain stages of school or school all together. The environment in which an individual resides, both economically and socially, are even more vital to a positive achievement of academic results.

All of the above aspects were not factors that could be taken into consideration during the type of data collection I was taking. The truth is that there are many personal and environmental factors that affect the entirety of what academic performance over a given time period is. These are areas that my type of data collection did not suit because they did not take them into account.

Another weakness that comes with this form of data collection is the subjectivity of the answers given. Some of the questions asked may be skewed because those answering them may have a different perception of their habits or uses than is actually the case. An example would be of someone using the instant messaging service WhatsApp daily. Every time a message is sent, the internet is used even it is for a more passive purpose than reading a newspaper article. Once the message has been sent with WhatsApp, the program still runs in the background, whereas once an article has been finished the browser will be closed and no internet usage will take place any more. An individual assessing his own daily usage of the internet may not count this as active internet usage due to his own subjective understanding of the question posed. Furthermore, some of the sample population might not put down some of the uses they utilize the internet for in spite of the anonymity of the survey. The issue of subjectivity and lack of an objective view for the answers needs to be considered throughout the survey.

One unfortunate and specifically applicable error for the field research ocurred during the bi-lingual construction of the surveys. In order to gain a further reach and cross connection in cultures I drew up one survey in German containing 17 questions with it's English counterpart counting 18 questions. This was a mistake by me which I noticed only after the data collection was completed and thus could not be reversed and corrected. The question which was phrased as "Do you find yourself multi-tasking, doing many things at one time?" and was consequently ignored in the description and analysis of the questions.

4.4 Strengths

Clearly, the amount of people that can be reached through an internet link is higher and time effective. The act of sharing the link through social media, email, text message or otherwise is easily completed.

The link was easily distributed in large part through the help of Facebook to reach the sample population that I chose. The individual answering the questionnaire could access it at any time of the day at his convenience and quickly answer the short and

precise questions posed to him. Where appropriate, the individual could add his own personal answer to the ones listed to provide specific feedback.

The answers were treated in an anonymous fashion which will encourage the sample population to answer the questions honestly. A more intrusive data collection method carries the possibility of not 100% honesty with the answers that the individuals provide.

The answers had been presented in two simple formats: single choice and multiple choice. Through this basic yet effective answering technique, the data collected can be displayed systematically in a comprehensive way. It will be easy to display the results of the survey in form of a graph and thus to analyze it after the survey is complete. By having set answers for all of the questions, there can be no ambiguous answers or incomplete questions.

I am confident in the validity and impeccability of the questions that I asked; they are short, simple yet understandable and relevant in their nature. They are applicable to the topic I am writing about and easily answered and accessed, whether on a desktop, laptop, tablet, smartphone or any other mobile device.

4.5 Data collection hypothesis

My hypotheses for the survey are that there I will be able to deduce a link between a short attention span and internet usage through my phrasing of questions. In addition following on from Hypothesis 1, I hypothesize that academic performance is negatively affected by internet usage.

1. There exists a link between a short attention span and internet usage

2. Through a short attention span, academic performance will be negatively impacted.

4.6 Data collection description/explanation

The data will be presented in the order they were phrased in the survey. Each question will be described and analyzed and displayed through a pie chart.

To accurately replicate the actual questionnaire that was used for my survey, the wording to each question will be used as the sub-title. The survey itself - the questions as they were asked in the language will be provided as an attachment.
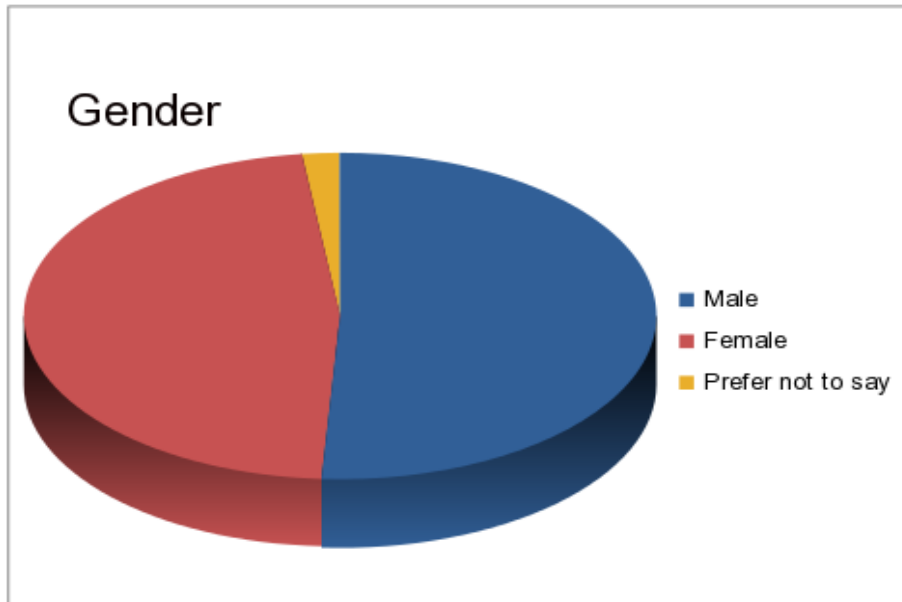
4.6.1 Gender (SC)

Fig. 3

The first question aims to identify the gender of the individual answering the questionnaire. As can be seen from the above pie chart, it was almost an even split between male and female, with a very small part of the sample not wanting to disclose their gender. There will be no speculation as to why this option was chosen; it was after all provided as a legitimate answer. Males made up 51%, females 47% and those not wanting to disclose their gender made up 2% of the sample.

Whilst I was distributing the questionnaire towards the sample population, I wanted to reach a close to equal split between men and women so as avoid any gender bias. Those two percent that chose to be keep their gender a secret are equally as valid as the choice to name the gender. For obvious reasons, this question was a single choice question as a multiple choice one would imply confusions in the results.

To have an even split between the genders is important because men and women use the internet for different purposes. According to the Pew Research Center's publication entitled 'Teens, Social Media & Technology' "Teenage girls use social media sites and platforms for sharing more than their male counterparts do. For their part, boys are more likely than girls to own gaming consoles and play video games" (Pew Research Center, 2015, Absatz 14). The trend of males and females having differing numbers in this their uses of social media is apparent one throughout this publication. For this reason, it was important to have a close to even split in the genders. Having one gender being represented over another would have led to false results.
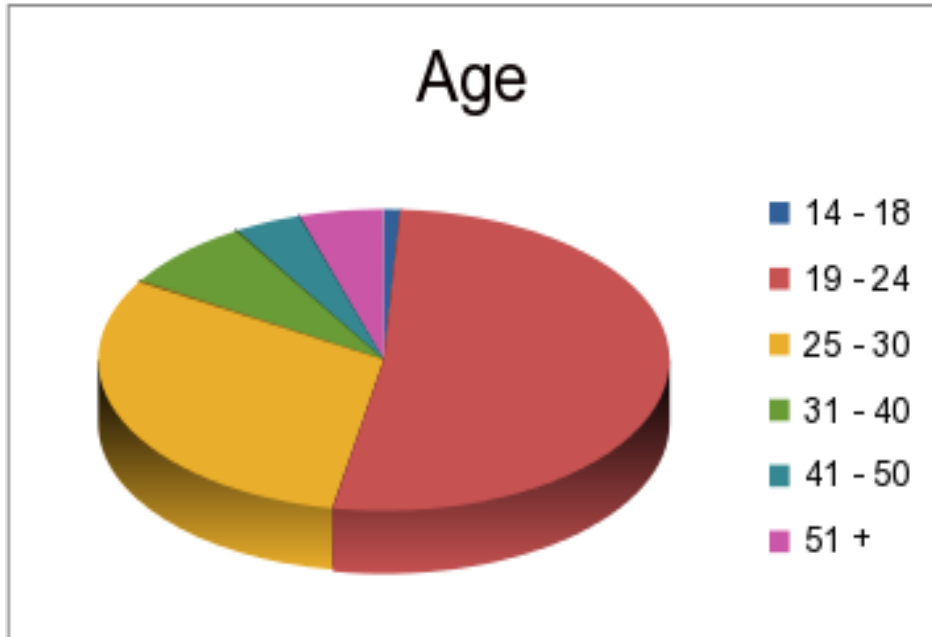
4.6.2 How old are you? (SC)

Fig. 4

The question of age was an important one because it describes what age groups and with which permeance I have crossed the age groups.

The first observation that jumps out is that more than 50% of the sample population were 19 - 24 years old and a further 31% were between 25 - 30. This puts over 4/5 of the sample population in an age gap of 10 years. The rest of the age groups make up 19% of the population sample, meaning they are underrepresented. This will certainly cast a bias on the results collected as it represents the opinions, habits and traits of internet usage for the 19 - 30 year olds and much less those of the other age groups that were in contention. Question 2 was chosen as a single choice question because choosing two age groups would have been a mutually exclusive and nonsensical scenario.

However, considering the age of the author, the distribution methods and the purpose of the questionnaire, it is of no surprise that the age group into which he himself falls is also the one that is represented most heavily. For accurate results and a fairer spread of ages, the number of people in each age group should have been equal. It is exactly through this bias that the accurate assessment can be made of the population sample between ages 19 to 30. This part of the population is represented best. It must be kept in mind going forward that the data gathered will be most applicable to two age groups: 19 - 24 and 25 - 30. This means that the majority of the results will be applicable to Digital Natives more than Digital Immigrants.

Males and Females in the teenage age range use the internet for differing purposes, according to a study by the Pew Research Center: "Teenage girls use social media sites and platforms...for sharing more than their counterparts do. For their part, boys are more likely than girls to own gaming consoles and play video games" (Pew Research Center, 2015, Absatz 15). Girls are inclined to keep their friendships up to date through social media whilst boys are more likely to use the internet for gaming purposes.

To not skew the results of the survey inaccurately, it was important to achieve the split between males and females that I got.

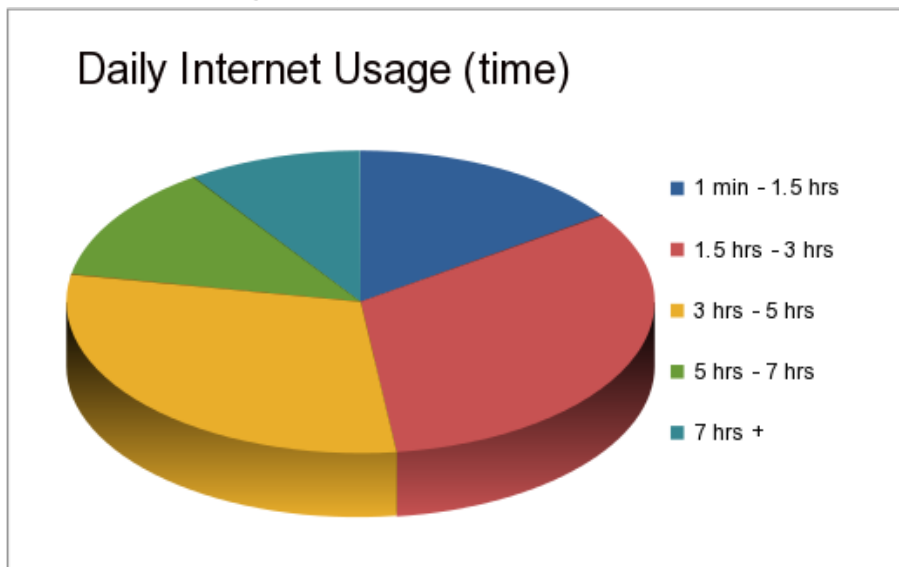### 4.6.3 How long do you use the internet for? (SC)

Fig. 5

In terms of the clusters question 3 belonged in the category of 'internet behavior' and set out to determine how long the individuals were actually connected to the internet daily. The individuals answering the survey had five options, between 1 minute and more than 7 hours to select. To not falsify the answers for question 3, I decided it was most appropriate to present the answer in a single choice format. Compared to question 2, the answers were more evenly spread, though two categories did make up more than 50% of the sample population. 63% of the sample population indicated that their computer usage was between 1 hour and 5 hours daily. The remaining 37% comprised of 1 min - 1.5 hours at 15%. 13% specified that their daily usage between 5 and more than 7 hours and 10% claimed to use more than 7 hours. In total, one third of the sample population spent between one and a half and three hours using the internet daily while 30% used the internet between three and five hours a day.

Questions 3 was an important one to ask to determine how actively the sample population used the internet every day. It was clear from the onset that all of the sample population would use the internet daily but it was of paramount importance to determine how long daily usage was.

It can clearly be stated that almost 2/3 of the sample population spend between one and a half to five hours online daily. However, the question did not take into consideration to what use the individual was putting his time online and how he defined his active daily internet usage. An individual checking his Facebook 20 times a day for 10 minutes each time uses the internet in a futile manner compared to an anesthesiologist checking the effect of a certain sedative on a morbidly obese patient. This use of the internet was not investigated in this question.

Like all of the questions in this survey, question 3 relied on the subjectivity of the individual. This creates problems when one individual defines his internet usage differently than the next. An individual watching a movie on Amazon Prime for two hours and closing the internet browser to dedicate himself to a different task has an inherently different internet usage than someone who uses an internet-based instant messaging service such as Messenger. Even if Messenger is not being actively used it still runs in the background, downloading data or files that are being transferred. Does the sample population consider this when answering the questions? Maybe those that didn't chose a lower daily internet time window whilst those that did take this into account selected the answer of five hours and upwards.

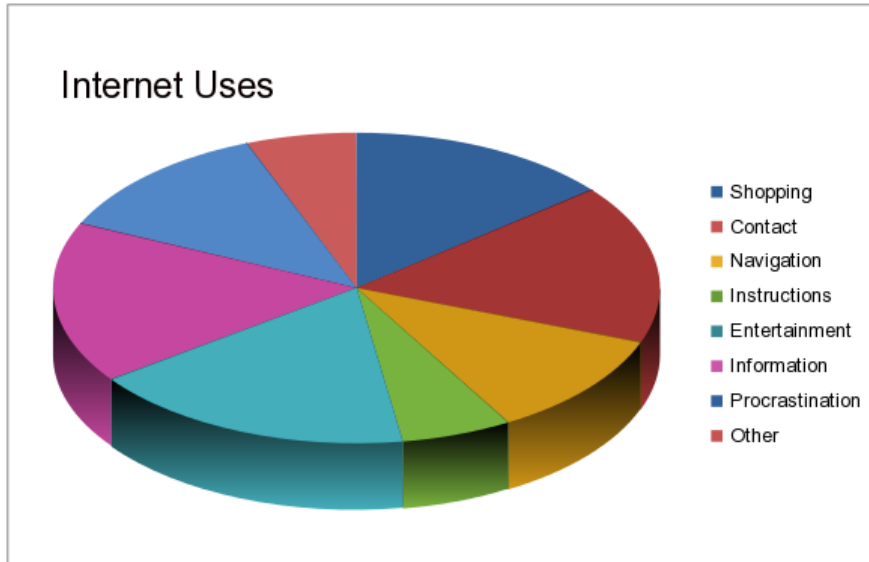## 4.6.4 What do you use the internet for? (MC)

Fig. 6

Question 4 concerned itself with the different uses each individual in the sample population had. It gives an accurate reflection on what intention the user has and what his motivation is to be online. This was the first question that was posed in multiple choice fashion, as one use did not exclude another. I presented the sample population with seven different commonplace, everyday internet uses and provided a blank box under 'other' to let the individual add a use that wasn't listed. The largest segment is clearly the turquoise one which represents entertainment. 63% of the sample population indicated that the internet was a source of entertainment for them which includes watching movies, documentaries or clips, listening to the radio or podcasts, playing online games or reading blogs articles or books. Not only does the internet provide entertainment in the form of new media but also the more traditional ways through a screen. Considering the ease of access to the internet with the advent of the smartphone, tablet and other mobile devices, this is hardly surprising. Internet Wi-Fi spots in restaurants, businesses and even cars and schools has become more commonplace, so undoubtedly the trend of online entertainment will keep continuously growing.

The second largest section is made up of contact, information and shopping. Their respective segments have the same size relative to each other in the pie chart and in terms of percentages they rank closely too: Contact 60%, Information 61% and shopping 51%. As with the entertainment industry, the internet has changed these respective industries and forced them to adapt. Many Digital Natives nowadays make use of free internet contact ways such as messaging (e.g. Messenger, WhatsApp), call services (e.g. Hangouts, Skype), social media (Twitter, Google+) or email.

At 61%, information made up a similar number to contact in the sample population. Many Digital Natives tend to turn to the internet first to obtain information. Depending for what subject the internet is being gathered for, an individual will use different sources at his disposal. This is an area that interested me more thoroughly and I delve into which outlets individuals use one online at a later stage of this survey. Someone gathering personal information on another person would be inclined to use social media or google as their primary tools, someone wanting to inform themselves on the worlds proceedings and goings-on will read a news article or watch a news bit, someone wanting to personally educate themselves further will seek information in topic specific journals/blogs or the like. These are but a few examples of how an individual would access information about a certain topic. The outlet and form in which the information is expressed can vary from audio to video to plain text with pictures.

Next to entertainment, contact and information shopping was chosen by 51% of the sample population as an internet use. Many people chose to complete the otherwise tedious, strenuous and time-consuming act of shopping for goods from the comfort of their own home or wherever they happen to access the internet. The trend of online shopping is a growing one and with good reason: selection is wider, price shopping is very convenient and more variety is presented. One does not need to hassle oneself with the trip to the location where goods are to be purchased and the physical confrontation with the product does not take place until it has arrived in the home. Digital Natives especially have become very fond of this method of shopping as it makes for great prices and is time efficient. Many businesses increasingly understand the importance of an established online presence to appeal to many customers.

44% of the population sample chose procrastination as one of their most common internet uses. Especially amongst Digital Natives who are far more used to the internet, the ease to change the focus of reading a scientific article to wasting time on social media is done at the click of a few buttons in a few seconds is shocking. Many people, the author included, procrastinate during the day in their own way on the internet; whether it be by watching clips on YouTube, checking emails feverishly or distracting oneself with other websites from a more pressing matter at hand. The frustrating thing about procrastination is that it is a futile use of time and results in no positive gain for anyone. Except maybe more views on certain clips or more traffic on social media websites. The former uses all had some end goal as to why they were being pursued but procrastination acts only to distract oneself from a more pressing matter at hand.

Navigation made up 39% of the sample population use of internet. Navigation would include the use of a mapping service such as google maps on a smartphone and

recommending the best route depending on the mode of transport. Some of the users might also use certain applications for mobile devices to summon taxi rides or find the best public transport route from point A to B.

The final two segments "Instructions" and "other" comprised both of 21%. Instructions for furniture, electronic devices or machinery is often found online and solutions to problems or fixes are often shared in troubleshooting sections of websites. Blogs, forums, threads or videos are other possibilities for an individual to explore to seek instructions. These instructions might stem from a primary source (e.g. producer of affected product) or from other users reviews or hints.

The final section "other" was put in place for individuals to express uses for their internet consumption that I had neglected to provide as answers. Answers that were given ranged from useful practices such as university, work and banking to futile practices like pornography.

All in all, the uses for the internet I provided were spread quite even across the board - some as low as 21%, others at just over 60%. The pie chart shows that the sample population uses the internet for a variety of different purposes and that it takes the place of more traditional ways of conducting practices e.g. shopping or entertainment. These are only two mere examples of industries that the existence of the internet has brought about.

The answers given and their percentages reflect what would be a realistic image of what a Digital Native uses the internet for. Some of the areas overlap and what becomes clear is that the internet can be put to many different uses, depending on what the individual is looking to achieve.

What the pie chart of question four shows an outsider ultimately is that entertainment is the largest segment in internet uses.

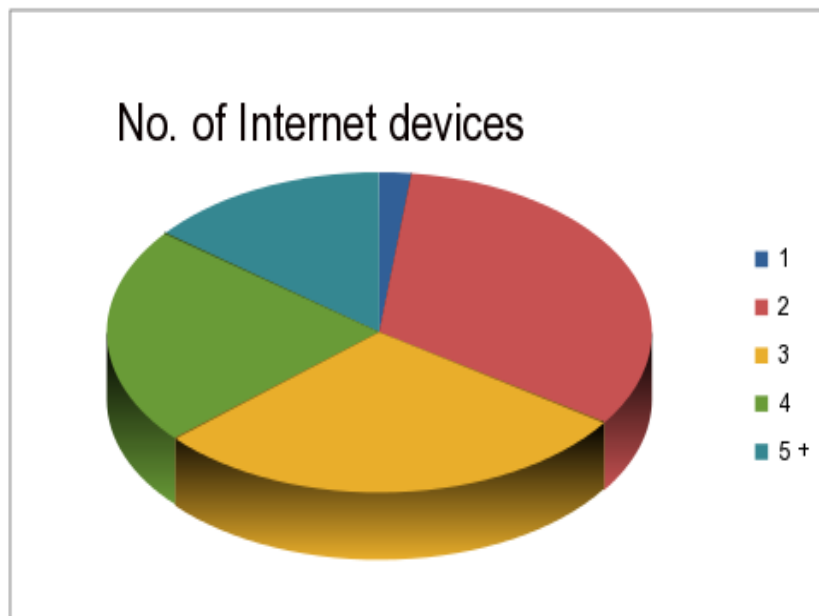## 4.6.5 How many devices with an internet connection do you own? (SC)

Fig. 7

Question number 5 was the last of the 'internet behavior' cluster. By putting this simple yet telling question, the individual answering the survey indicated how many devices he owned that were able to connect to the internet. Traditionally this would be a desktop computer but other devices such as laptops, smartphones, tablets, e-book readers, mp3/mp4-players or game consoles would be contenders.

The first thing that jumps out from the above pie chart and gives credence to the internet permeating modern day society and ingraining itself in it, is that ownership of only one internet device is at a miniscule 2%. These days, the majority own a smartphone and an additional device such as a laptop or a tablet which they don't carry on themselves at all times. This is a trend that has been establishing itself through the latter age groups of society within the Digital Immigrants. Many people chose to invest in an e-book to have a more organized and comprehensive grasp of their book or music library and chose to trade the use of a comparably impractical desktop to a portable device.

The most common answer that was selected among the sample population was the indication that they owned either two or three internet capable devices. 33% claimed they owned two while 29% claimed that they possessed three devices with the ability to connect to the internet. Those owning four and five devices at 22% and 14% respectively made up more than 1/3 of the sample population.

Question 5 was presented as a single choice question in order to avoid confusion of the subjects answering the question and falsification of results. Clearly, those owning

only one device capable of an internet connection were in the stark minority. Those owning two or more devices made up the remaining 98% of the sample population.

It comes as no surprise that those in possession of one device are in the minority considering the unfortunate bias of the population sample. Ownership of two or more internet capable devices is very high at 98%. From this it can be extrapolated that many of the users have a prolonged connection to the internet, which was established earlier in the survey. Question 5 served to demonstrate that the internet is accessible in different ways through different devices and that almost the entirety of the sample population chose to do so through various devices.

4.6.6 Do you use the internet for academic purposes such as study groups? (SC)
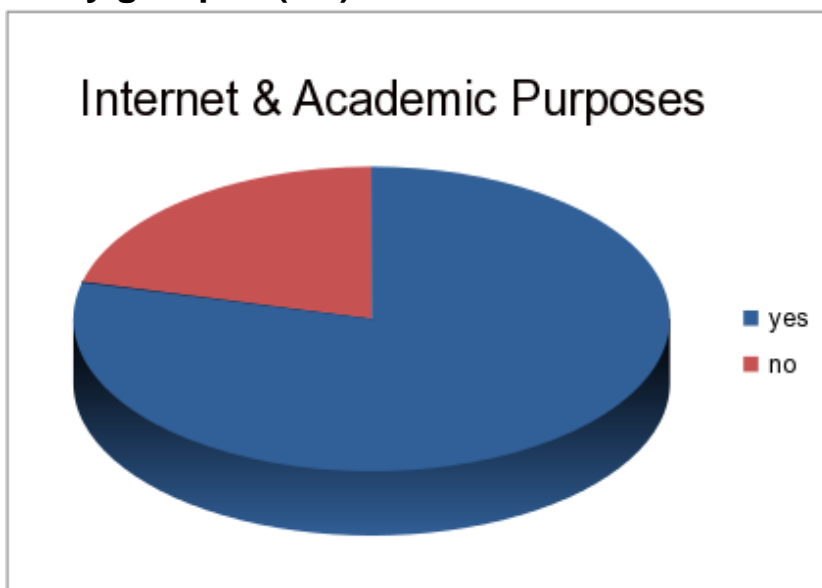
Fig. 8

Questions 6 was the first one of the cluster 'academic performance'. Its aim was to determine how the sample population used the internet for academic purposes. The question as it was put to the individual had the example of study groups which may have heavily skewed the results. In hindsight, the question could have easily been interpreted as "Do you use the internet for study groups?" but then again this might have not been the case. Either way, 79% of the participants indicated that they did use the internet for academic purposes while the remaining 21% reported the opposite. For obvious reasons, this question was a single choice question to avoid mutually exclusive and confusing answers.

Although some of individuals answering the question could have been too caught up with the term 'study groups' that was listed as one of many examples in the question,

the internet offers far more opportunities for academic purposes. I purposely did not define the term any clearer as I wanted to give more room for interpretation the part of those answering the questions. Academic purposes might include communicating with fellow students through social media or various chat programs, research in an online library or subject specific journals.

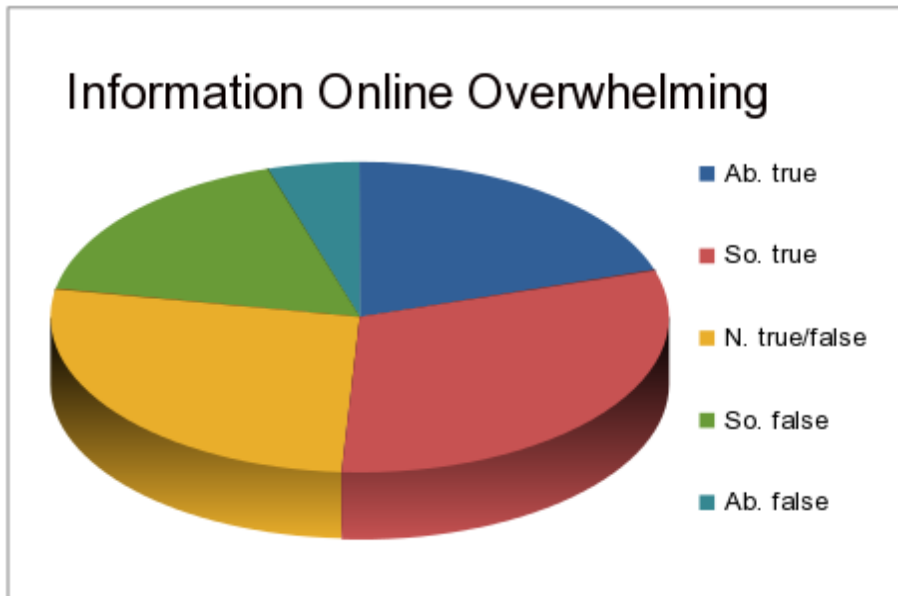## 4.6.7 Do you find the amount of information online overwhelming? (SC)

Fig. 9

Question 7 belongs to the 'academic performance' cluster. It posed to the individual whether the information found online and to which he has access to was of an overwhelming magnitude. The answer that was least selected by the sample population was the option of 'absolutely false' with 5% and answer 'somewhat false' was a little more resonant at 17%. A further 27% were undecided on the matter and that remaining 51% were of the opinion that this was either somewhat true or absolutely true.

Considering not only the amount of information but also of (dis)information that is afloat on the internet for anyone to read, believe or post it is hard to get a grasp on the enormity of information and content the internet offers. There are not many topics that are not in some form discussed or mentioned online and where there is discussion and mention, there is most certainly more information. Depending on the intention of an individual anything can be proven. Of course this is in no ways makes it an indubitable fact or truth. The expanding nature and sheer amount of websites available which provide information is astonishing.

The link between overwhelming amount of information online and academic performance is that the former may have an impact on the latter. A student looking to research the whether fracking contaminates the groundwater is bound to find a lot of information describing the positive effects that it has for the economy and the high retention of oil extraction. On the other hand, an individual will find accounts at the other end of the spectrum telling of destroying land, liquid toxic waste seeping into the surrounding environment and the ill effects it has had on the community. The information gathered depends on a variety of factors, such as the searchers intent, pre-existing knowledge about a given subject and how plausible the information found is.

The indication of less than 1/4 of the participants was that the information online was overwhelming was not a surprising or new one. It relates to academic performance because it shows that some of the information being found by an individual could either a) be false or b) con the individual into believing that it is a credible source of information.

If a certain source does not cite sources or doesn't seem credible judging by appearance and origin, it may well be misinformation uploaded to the internet to discredit a different cause or by mistake. The sheer enormity of the data online is indeed overwhelming, regardless of validity of the subject.

4.6.8 Do you find that you can quickly find the information that you are looking for? (SC)
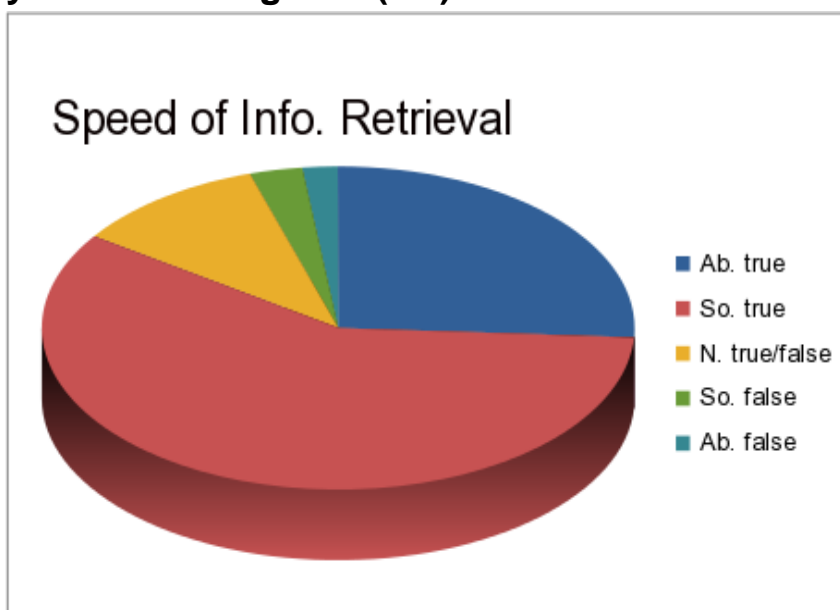

Fig. 10

Question 8 concerned itself with the speed at which an individual would find certain information he is looking for online. Depending on what an individual is looking for on the internet it can either take a short time or longer time.

As can be seen instantly from the pie chart, more than half the sample population (59%) were of the opinion that the information they were looking for was found in a reasonable time frame. More than 26% indicated that they easily and quickly came across the information they were seeking. 11% seemed to have mixed results in efficiently finding their information on the net and only a minority totaling 5% said that finding information on the internet was a time consuming endeavor.

Questions 8 was set up in a single choice format because one answer automatically excluded all the others from being valid.

The age of bias that was apparent in the sample population plays a significant role in the analysis of this question. As the chart clearly shows, the majority of those answering the survey claimed that they found the statement of quickly finding relevant information on the internet as "absolutely true" or "somewhat true" at a total of 75%. When considered that 83% of the sample population are between 19 - 30 and that their primary source for information is the internet, the correlation between the two questions makes sense. A digital native knows what key words to type into a search engine, what telltale signs of questionable sources are and what the best method is of obtaining information (it might not always be the internet!). Had the sample population been of an older age group e.g. from 49 - 60, the results for the above question probably would have been different.

Another aspect to consider is that certain information is easier to find than others. Something that has been in the news recently or is a topic of discussion thrown about from day to day on social media or by word of mouth will be found quickly. Other topics, possibly due to their illegality or the social stigma attached to them are in more remote areas of the internet. An individual might chose to search these in a place other than his home to protect his identity. Going about collecting such information is more arduous process and not likely to be the standard case as to why 5% indicated that they had trouble with quickly finding the information.

One possible explanation for this is the age discrepancy - those trying to find information on a certain subject on the internet, normally familiar with looking up such information in encyclopedias or turning their time and energy towards a library would have a harder time going about. This is an issue prevalent in Digital Immigrants. The inability or lack of knowledge to know what key words to search, how to skim read

results or in what forum to best pose a certain question (amongst other things) are what Marc Prensky refers to as a "Digital Immigrant accent" (Prensky 2001, pg. 2). This particular type of accent is more pronounced in some Digital Immigrants than others but nonetheless it still there. As it happens to be, the 5% linked to taking a long(er) time to find certain information on the internet is in the same percentage range as the age group of 51+ which is 4%. This would give credence to Prensky's Digital Immigrant accent, showing that the older generations have a harder time navigating the internet.

On the whole it can be said that only 1/4 of the sample population had time issues with retrieving their information online while the remaining 3/4 not having any major issues.

4.6.9 Do you find that you are easily distracted from a certain project and procrastinate on the internet? (SC)
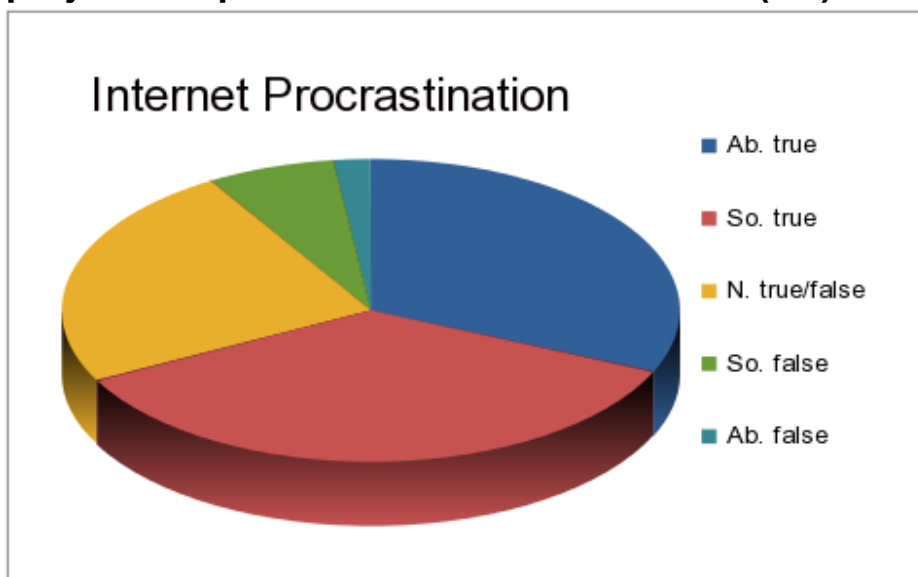
Fig. 11

Question 9 was the last question in the 'academic performance' cluster. It was also chosen to be a single choice question to avoid false answers for apparent reasons. This question aimed to identify whether the sample population used the internet for procrastination purposes. In Question 4, 44% indicated that they procrastinate online regularly and the tie in to academic performance is apparent. An individual who procrastinates more than spending productive time on the internet will be sure to see a reflection of that behavior in the academic goal being pursued.

Clearly it can be seen that the largest segment of the pie chart is the red one, which indicates that 36% of the sample population is somewhat likely to be distracted from the internet and procrastinate with it. A further 32% indicated that they're very likely to procrastinate with the help of the internet. This makes more than 2/3 of the sample

population likely to be distracted through the internet. Almost 1/4 (24%) of the sample population chose that the lure of procrastinating on the internet left them unphased while a combined total of 9% stated that internet procrastination did not tempt them.

Question 9 lends itself to make extrapolations about the academic performance of the population sample. Most likely, an individual that gets easily and often distracted from the task at hand breaks the concentration pattern that is needed to successfully and efficiently work at a certain task. The more often this concentration pattern is broken and the more an individual needs to conjure up the mindset to complete a task that requires different attention to detail than scrolling the Twitter timeline or window-shopping online, the more difficult it can be to complete the task at hand.

These 68% are very open to interpretation and the above is merely one of many. Another could be one proclaiming that those likely to be distracted are aware of their tendency to do so, They might time their procrastination periods or make them more productive in the sense that relevant material is being utilized. One individual might be far more aware of his procrastination alongside the fact that the individual is subjectively judging his habits.

Those that indicated the answer " neither true nor false" were unsure whether the internet presented a lure of procrastination to them or whether they were procrastinating at all. Perhaps they do not see the difference between spending time online and procrastinating and do not feel entitled to give an honest opinion. Those that did not encounter any procrastinating time ventures on the internet indicated so. The small number could well mean that this segment of the sample population falls to the higher aged Digital Immigrants.

Of course, question 9 also ties in with the cluster 'attention span'. An individual judging himself likely to be distracted by the banality and futility of social media will have a short attention span. Someone who is able to withstand the whims of internet distraction or only does so from time to time has more discipline and shows more determination to concentrate on the task at hand.

4.6.10 Do you find the presence of the internet makes you more productive?
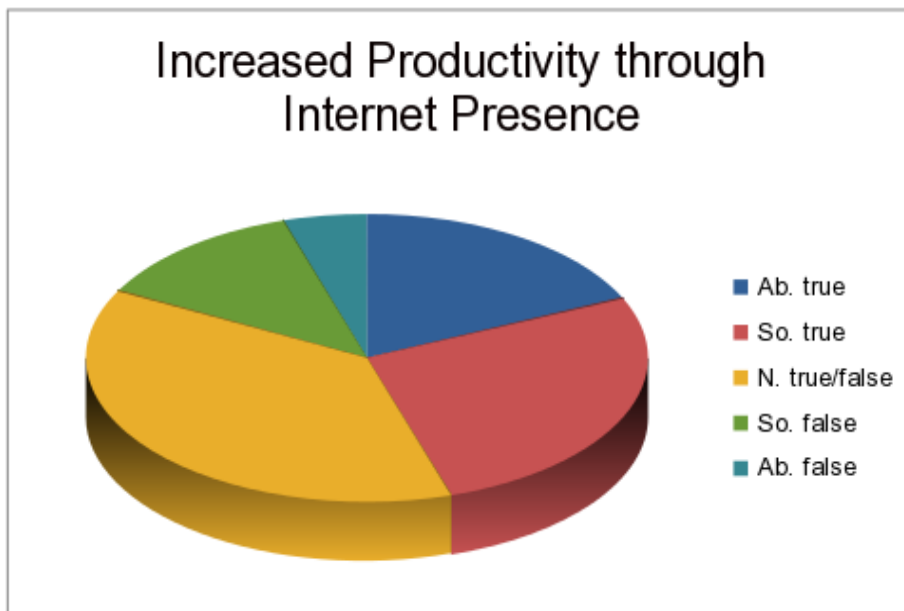

Fig. 12

Question 10 posed a more unconventional angle as it looked to discover whether the presence of the internet made an individual more productive. Reasons for this could be the fear of procrastinating for too long and risk completing any given task or higher information flow through effective use of the internet to produce results better and more quickly.

The largest segment in the above pie chart is the "neither true nor false" at 38%. This gives the impression that more than 1/3 of the sample population did not feel a change in their productivity through internet presence and a total of 48% claimed that is either somewhat or absolutely true that the internet presence boosted their productivity.

The remaining 18% gave indication that their productivity was either somewhat or absolutely not increased through the presence of the internet. This shows the other end of the scale of the population sample that had more trouble veering from the possibilities that the internet has to offer them.

Once again for the sake of validity of answers, this question was posed as a single choice type.

The 38% of the sample population indicating that there was no effect of the internet presence on productivity could have a variety of different reasons as to why they find this to be the case. Their unaffected productivity does not exclude the use of the internet during a certain activity but merely the controlled usage thereof. This could mean that they are already used to incorporating constant internet usage into their day

and it does not stop or hardly stops their performance for the task in hand. Or it could mean that when they have a task at hand that they do not deviate from the goal that is the completion of the task.

The 48% that implied that their productivity did increase through the presence of the internet may have a variety of ways to do this. The ways in which this productivity came about or what aspects exactly were vital to the individuals increased productivity do not specifically become clear. A user could benefit from multiple screens where one is full of research for the writing of a dissertation while the other has open other relevant windows and websites that help the individual writing make cross connections and look up things easier. Productivity can also be increased through the completion of all editing, changing, saving and sharing of written documents through online based word processing programs and cloud sharing services. An individual does no longer need to save written documents to an external hard drive or a separate folder but rather to a folder in a cloud. Here an individual can instantly chose to share various documents or other information with friends, family or peers to invite an exchange to take place. Many files, regardless of format, can be shared at a few clicks.

Other people may use the presence of the internet and its lure of entertainment and relaxation as a reward for the completion of certain work at a project or a task. An individual might tell himself that he will write three more pages for his dissertation for the rest of the day, after which social media and all other internet distractions may be used without any restrictions. This method might be most suited for individuals who have an easily addictive personality and tend to have difficulty in prying themselves away from the internet's distractions.

18% of the sample population suggested that the presence of the internet did not increase their productivity. There are a variety of different reasons why this could be the case which are not specifically shown by this form of data collection. A possible explanation could be the users who trouble themselves sorting information from misinformation online. Their lack of productivity could also be linked to the distracting element (e.g. an online game) being constantly available and open in a tab, not closed or blocked. This could be a simple form of ill-discipline or even Internet Addiction Disorder.

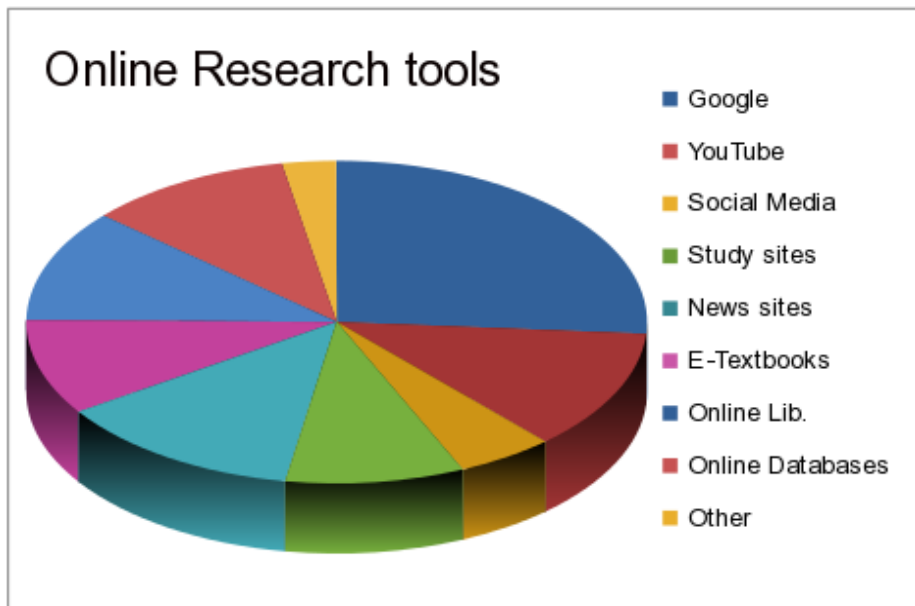## 4.6.11 Which of the following will you use when doing research online?

Fig. 13

Question 11 asked all of the participants to choose their online research tools. Because this question was posed as a multiple choice type, the segments are not representative of the actual numbers. They do represent the popularity of any given answer as a whole. This question was part of the 'academic performance' cluster and the aim was to determine which online research tools are implemented most often.

Far and away the largest segment is occupied by Google at 89%. This is hardly surprising as Google is the most popular search engine next to Google's other multiple services. YouTube (owned by Google since 2006) is used by 41% of the sample population, while 44% rely on online news websites (e.g. New York Times or RT) to do some of their research. 38% and 37% made use of Online Libraries and Online Databases respectively while a further 33% and 32% claimed that E-Textbooks and specific study sites respectively were used for online research. The least used tool to do research was social media at a surprisingly high 17%. 10% of the sample population indicated that there were other research tools they made use of, such as "Google Scholar, Pubmed.gov, [specific] forums/threads, YouPorn and Pornhub". The latter two present a one-dimensional, pornographic view for online research but nonetheless have their place.

All in all, it can be said that Google is used by almost 9 in 10 participants, far and away the most of all online research tools. Not even the second most popular choice of news sites (chosen by 44% of the sample population) were half as popular as Google. All were dwarfed by Google.

It comes as no surprise that the most popular online research tool turned out to be Google. Google has the reputation for the most popular search engine with the most trusted results, continuous improvements and user friendly simple design. Interestingly, no other search engine was mentioned by any of the sample population. Google has since its existence in 1998 been the forerunner in search engines and other digital technologies. It's solid and reliable service along with ever expanding service options makes it a popular, easy and familiar choice for users. Through constant innovation and development of a larger user base, Google gains the trust and search engine habits of many internet users. This preference of search engine was clearly reflected in the results collected.

It is no surprise that a search engine topped the popularity of online research tools. A search engine provides specific results to the user, so at some point the research done (irrespective of the subject) is very likely to start out with a search engine. Search engines do not discriminate (or at least they claim not to!) when displaying their search results, unless certain filters are activated.

News articles were used by almost half of the sample population. While news articles are a legitimate way to gain information or pursue a particular view on a certain topic, news articles can vary radically on their take regarding a certain topic that might be controversial. News reporting entities (the websites who post articles either through their own authors or whether it be a collection of news articles that have a similar view) always have a bias, regardless. A news reporting entity that supports the integration of all races and sexual preferences into society, will tell a different story than a news entity that is old fashioned and homophobic. Each news outlet puts its own bias on a story, some more than others. The information contained within the news articles should be judged critically considering their origin.

At 41%, YouTube might be considered a high number but videos are increasingly being used as a source of information. These days, any news agency that can put up an article on their webpage is able to post videos. Videos come in different lengths, picture and content qualities and here it is vital to ask who the publisher of such videos is. Their intent and background must also be critically examined for useable and unbiased content, although a slight bias will always be present. Many people chose to use YouTube as a search engine to find troubleshoot help or instructions on how to complete tasks next to news, educational and a research tool. Increasingly, universities and other educational institutions are uploading videos of whole lectures for students to see and access them freely.

Online Libraries and Databases are noticeably popular choice at 38% and 37% respectively. Many academic and scientific journals and papers are found in online libraries and databases. Depending on the size and upkeep of the aforementioned research tools, they can hold an enormous body of knowledge which is available at all times. The distinct advantage they offer is that they are considered far more legitimate than other online research tools, based on their links to colleges or pre-existing libraries. They have a trusted name and that is a huge advantage in old academia and under some Digital Immigrants who consider all online sources untrustworthy. Pubmed.gov would be one such legitimate example and many of the scientific papers found in online libraries or databases are found by Google Scholar.

E-Textbooks and study sites at 33% and 32% respectively are popular choices for their legitimacy and specific information. Textbooks are considered an unquestionably reliable source of material in spite of the bias infused in them, whereas study sites are often written by students for students. This takes some of its authenticity away but nonetheless the information can be used, coupled with common sense provided by the individual looking up the information.

At 17%, social media provided a not insignificant amount of the sample population who used this avenue as one of their research tools. An individual could use social media to contact someone who is knowledgeable in a certain field to gather information. Alternatively, there might be an article or news bit on social media that is legitimate and of interest to a particular individual. Social media acts as medium between the inquisitor and information, not as a direct source of information.

4.6.12 Do you critically consider who the author of information found online is? (SC)
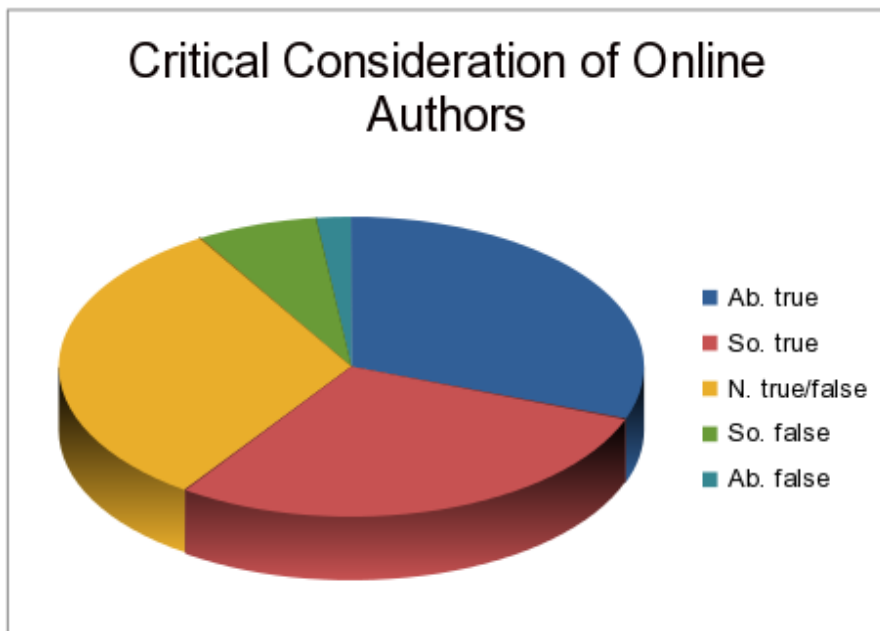

Fig. 14

Question 12 concerned itself with the critical consideration of publications or information in general online with respect to the viewer and was posed as a single choice question so as to achieve accurate results for description/analysis. This question ties in with the 'academic performance' cluster as it is of vital importance to call into question the source in order to ensure correct research and learning.

Judging by the above pie chart, 60% of the sample population critically considered the source of the information they were viewing. 31% considered the statement to be absolutely true, 29% claimed that it was somewhat true. Almost 1/3 (32%) didn't seem to have an opinion in the matter and only 9% claimed that they did not consider what the source of information found was.

It has become of paramount importance to check, consider and evaluate every source of information online. On the other side, a person who posts up a certain piece of information has an aim. One most always question the motivation for a certain piece of information, especially if it is controversial or seemingly dubious. The written word is not the truth like it was taught to generations before. One should always keep in mind that all sources or information have bias to some degree - some more than others. Misinformation is at times hard to tell from actual information and separating the two is something that is a skill acquired over time. Along with the actual written word, spelling, grammar and website layout also play a part in deciphering useful from useless information.

Seeing that 60% of the sample population critically consider the author of information found online is a number that I would have expected to be far higher. However, the 32% that answered that the claim was neither true nor false could be individuals that at some times question the validity of the source and its author and at other times they do not do this. The importance of being aware of the bias or mistakes an author can make through putting his work up online must be considered at all times.

On the other hand, it is very positive to see that so little of the sample population trust online sources blindly.

Unfortunately, there is no one source of information or material that provides 100% valid, unbiased and easy to access information, although many strive to do just this by creating online databases or specific libraries which have criteria that their work needs to match.

4.6.13 Do you find yourself interrupting tasks to check emails, social media or other internet related interruptions? (SC)
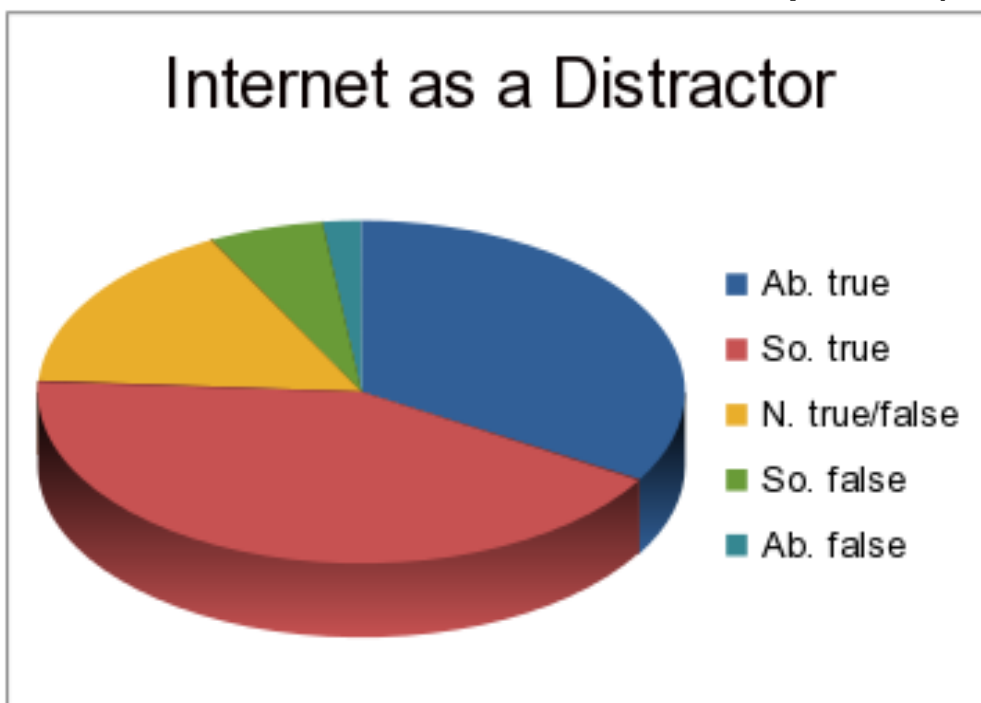

Fig. 15

Question 13 was like many of the preceding in that it was of a single choice nature. The answers are mutually exclusive and for this type of question, a multiple choice or any other type of answer technique would have been insufficient. This question focused on the 'attention span' cluster.

This question asked the sample population whether they considered the internet a distracting factor in their lives. 34% claimed that this was absolutely true, while a further 42% claimed that the statement is somewhat true making it a total of more than 3/4 (76%) of the sample population. Some 16% indicated that they weren't sure whether the internet played a distracting role in their lives while the remaining 8% were adamant that the internet did not pose a distraction to them.

Question 13 showed clearly that the internet was a source of distraction for the sample population. 76% claim that the internet absolutely or somewhat comes into play as a distraction. The internet can be a distraction in many different ways, depending what internet related distraction the individual chooses. An individual could chose to check his emails or Facebook every five minutes or stay connected to an instant messaging service that he cannot take a break from. Other people chose to periodically play online games, watch certain video clips or browse through random photo galleries in a bid to procrastinate and squander time. The internet is very easily accessible at minimal effort which makes the pull for distracting oneself even easier and less of a hurdle to overcome every time.

The length and severity of the distraction significantly depends on the individual. A person who has a tendency to lose interest in a given task quickly or has a short attention span will likely be more easily and readily distracted by the activities that the internet has to offer. The 76% that indicate that the internet is a distracting medium for them likely suffer from their short attention span.

16% indicated that they were unsure whether the internet posed a distracting element to them which leaves them open to be in a number of different categories. It could be people who are online all the time for their professional and personal life and hence can control very well what they use the internet for. For them, checking emails or social media may not be an active past time because they have separate windows. They split their attention span in several ways, knowing their weakness and only wanting to glance briefly at windows which can cause hours to go by untold. Another explanation would be that some of the sample population are immersed in the fields which they might themselves consider a possible distraction e.g. someone working for Twitter or someone else managing the upkeep of a clothes website.

Those not at all distracted by the internet are most likely not very internet savvy and do not consider the internet to have any lure to distract themselves with. Very possibly, these 8% use the internet on a weekly basis to check emails, make skype calls and look up directions. They are controlled in their internet use.

Clearly, the tie-in to attention span is significant. Attention span will be more likely to be short and punctuated with constant interruption through the internet in the sample population that answered with "somewhat true" or "absolutely true". Its easy availability makes it a quick distraction and an individual decides the time the distraction takes place, although often they can be chores such as writing business emails.

4.6.14 Do you find it difficult to focus on finishing a traditional newspaper article or a book? (SC)
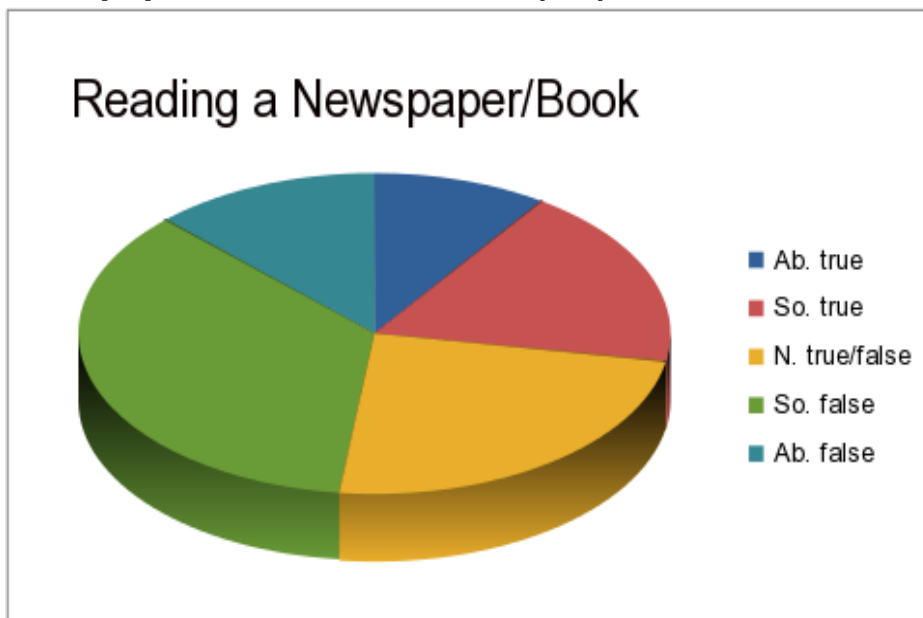
Fig. 16

Question 14 aimed to find out what individuals of the population sample thought about their ability to bring up the concentration and attention to read a book cover to cover or a traditional newspaper article. Reading an article or even a book on the internet is a different act than doing the same on paper. The paper version does not invite for digressions e.g. to look up words, requiring a more concentrated and determined attention span to understand the article or book as a whole. With books, the difference is that they are usually much longer than a standard newspaper article. The question posed to the individual here is whether they have the longevity and more matured concentration span to stick by a book or traditional newspaper article.

At 49%, almost the majority of the sample population were not under the impression that their ability to read a newspaper article or a book was impacted. Although to many people it may seem old-fashioned to read the traditional printed word, it is still a popular choice. The printed word on paper is easier on the eye, less distracting than a webpage and certain passages can easily be marked or highlighted. Some 24%

weren't sure whether it impacted their ability to read traditional print media and the remaining 18% did not find their ability to read impaired.

Question 14 shows that about half of the sample population had difficulties with finishing a newspaper article or showing the perseverance of staying with a book to finish it. Some may become distracted not by the internet but by other incidents that occur during a normal day, such as running errands. Some people, especially Digital Natives rely on mobile devices such as kindles to display books or newspapers in a bid to save space and paper and also to have a more compact organization of their reading material. The above pie chart does not show with what means the people are distracted with, only that they are. Similarly, the "neither true nor false" category has an unchanged relationship to their printed words; either they were never an adopter of reading much in general or they focus on one reading episode they want to finish and do so. Even though book sales have decreased since the beginning of the century, they remain steady, as the need for this style of reading is not likely to disappear any time soon.

The remaining 18% claimed that there was no impact on their reading a book or a newspaper. This is a trait most definitely more pronounced in Digital Immigrants as they have been longer accustomed to this method of sharing information. Likely they are also light internet users, whose attention span and need to multitask is not as pronounced.

4.6.15 Do you find yourself using multiple screens when...(SC)
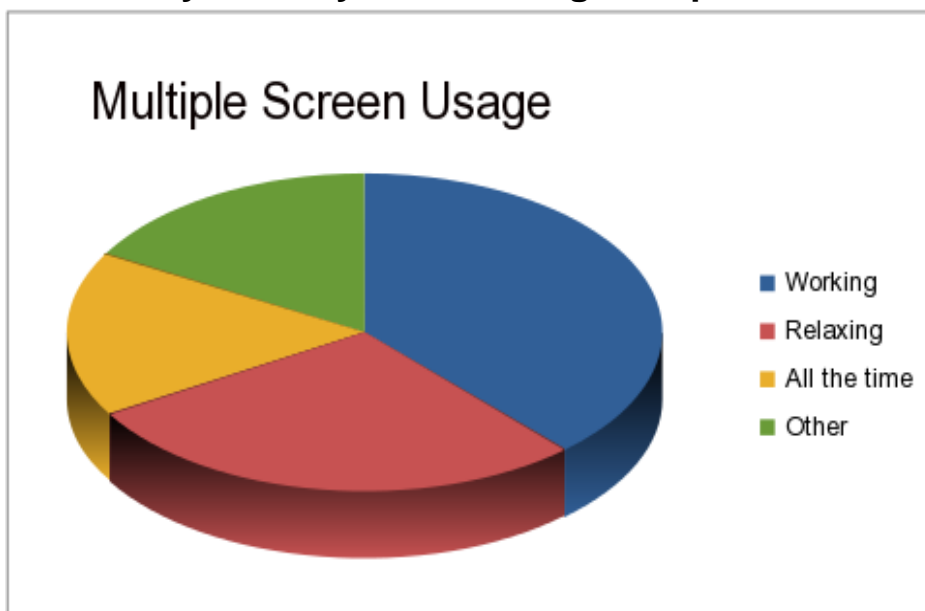

Fig. 17

Question 15 aimed to determine whether the individuals in the sample population used more than one screen. This is already common practice in some professions e.g. banking. The question was phrased as a single choice question with the option to choose "other" to specify.

39% of the sample population indicated that their multiple screen usage was during work. To give an employee in certain job fields better oversight and ability to multitask, two or more screens are connected to the same computer. This allows for the user to have any windows and applications open at one time. Alternatively, there might be one computer which is used for inventory, purchases and customer information and a tablet which is used for promotion and social media.

29% of the sample population suggest that they make use of multiple screens when they are relaxing. This has become increasingly common as screens replace other forms of entertainment or relaxation activities such as reading. An individual may choose to watch TV, message friends and watch a video on how to put hair extensions in all at the same time without blinking an eye. There is always an opportunity where the other two screens are not as active. This may seem overwhelming for some but completely normal and logical to others.

Some 17% of the sample population implied that they used multiple screens all the time, not differentiating between work or private life, as the phone and the tablet or iPod or computer are never far away. The remaining 17% indicated other, to which the answers were the following: "never, only when handling larger workloads, watching pornography, try not to do this". The four options given are mixed, yet they show that there also other uses for two or more screens.

The trend towards a culture with more screens is clearly a growing one. Screens have not only replaced, books, newspapers and music libraries. They are also increasingly being used in businesses as a medium for payment, menus in restaurants or instead of paper in schools. This trend can clearly be seen in Question 15, where only one person was adamant not to use two screens ("never"). Avoiding a screen is impossible in our society, so it comes as no surprise that Digital Natives growing up today have fast gotten used to the concept of multiple screen usage. Even 10 years ago, this would not have been the norm but our rapidly changing society along with technical innovation and digital technology has brought it upon us.

The reality of using more screens is that it is more practical - tasks can be completed alongside each other and often time's tasks go hand in hand with each other but require a separate screen to manage. Whilst this dissertation is being written I am

using two screens and a third would benefit me. One could even say that using upwards of one screen is inescapable in the age of digital technology that we are living in. This view is held by 17% of the individuals who answered the question.

Undoubtedly the trend will continue upwards. Digital Natives will soon make up the majority of the population and (touch) screens may be a lot more prevalent than they already are.

4.6.16 Do you find yourself multi-tasking, doing many things at one time? (SC)
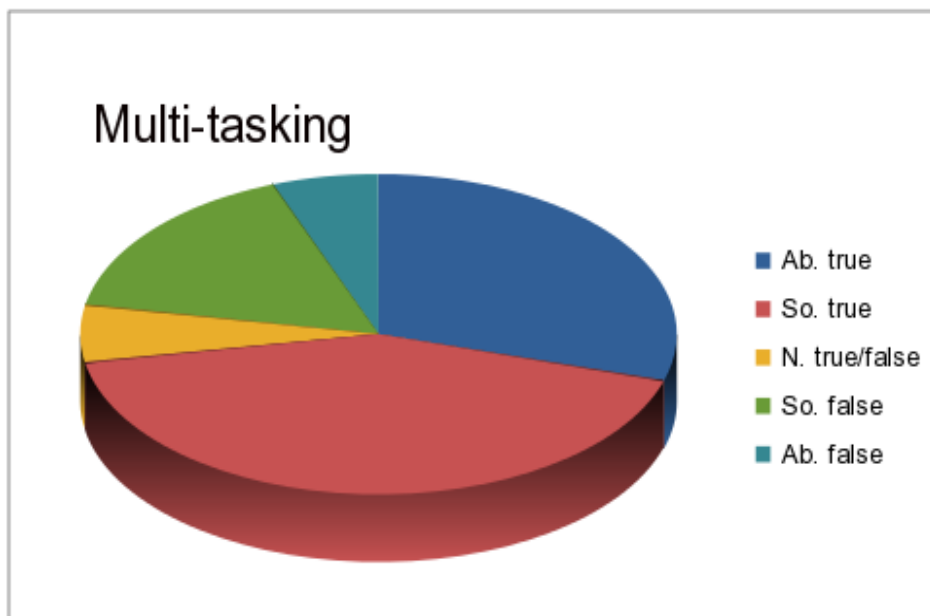
Fig. 18

Question 16 aimed to find out whether the sample population were used to the skill of multi-tasking. The consensus was that almost 3/4 of the sample population chose the answers "absolutely true" and "somewhat true", indicating that they were very much accustomed to multi-tasking. Multi-tasking is a skill developed, especially when one is using multiple screen. It is a skill that comes in handy and is considered a necessity by many people to survive.

6% expressed that they were unsure about whether they multi task. In this case, maybe they did not comprehend the question in its entirety or are unaware of their multi-tasking skills because they have become accustomed to them.

22% of the sample answered with "absolutely false" and "somewhat false" indicating an inability to work in multi-tasking mode. This may be preference so as to devote concentration and focus only to the task at hand or simply unable to cope with more

than one task. Age and mental stress level could equally well play a role in affecting the ability to multi-task.

In today's day and age, multi-tasking has become something of an everyday, regular occurrence. Cooking, doing the laundry and talking on the phone while cleaning out the dishwasher is nothing new and tasks have been done chronologically alongside each other since the beginning of time. With the advent of digital technology in our lives and the increasing normality of screens, doing several things at once is simply a part of getting through the days and ensuring and with more screens come more tasks.

As Question 16 shows, many people are comfortable multi-tasking and are clearly accustomed to it. Only a little more than 1/5 (22%) indicate that they have trouble with multi-tasking. This could be age related or it could be a matter of the subjective view the individual has on themselves. They may multi-task far more than they give themselves credit for.

4.6.17 Do you get nervous when you are without an internet connection for a prolonged period of time? (SC)

Fig. 19

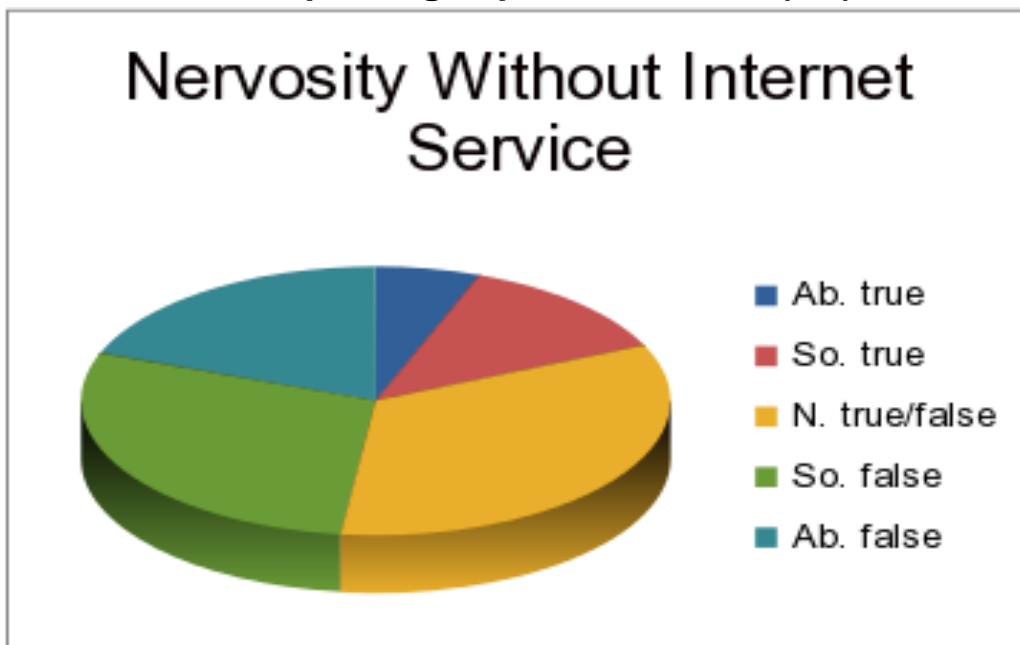Question 17 was the last question in the survey and was posed as a single choice question so as to avoid falsification of results. The final question aimed to determine whether the sample population experienced any nervousness when not being connected to the internet for a prolonged period of time. Some internet users experience adverse effects when they do not use the internet for a given period of time.

A total of 19% admitted to being nervous if without an internet connection. Most likely, these will all be Digital Natives who are used to having internet access almost 24 hours a day.

Some 34% seemed to indicate that there was sometimes nervousness when there was a longer period without internet usage. This would be something taken on a case by case basis; in some cases individuals might be restless without an internet connection because they are looking to procrastinate (e.g. sitting in traffic) and in other cases there may be no opportunity to feel nervous about the absence of the internet.

The majority of the sample population seemed to be comfortable and at ease even when there was no immediate internet connection. 48% indicated that the statement was "somewhat false" or "absolutely false" showing that even when they found themselves in a spot with no internet service, their phone was not on their person or a monthly limit has been reached they were unbothered.

Although there are far more anecdotal reports of IAD affecting people than there are studies, there are lots of people who are constantly on their phone with some type of internet application open, occupying their fingers. For many people it is a form of distraction and habit, just like chewing a toothpick or smoking a cigarette would be. The sample population had almost 1/5 indicating that a lack of internet had an effect on them. Judging by what "neither true nor false" could be interpreted as, some of the individuals falling within those 34% could count themselves among those people that are restless without the internet. Those that do not fall in that category are part of the majority of people who indicated that they were mature and internet independent enough to cope without it for as long as necessary.

Once again, the issue subjectivity comes into play. An individual may have a harmless view of his daily/weekly internet usage and consider himself not nervous without internet connection, only because he is at ease because of its constant presence. He makes false guesses at his own ability.

These individuals would include Digital Immigrants who are certainly aware of the internet's existence and are active members on some level but do not require to use the internet daily for their lifestyle. This may mean that there is one email account and banking connections online but no social media, blogs or any other traffic. The other end of these individuals could comprise of people who work in facilities or areas where internet access is restricted due to signal weakness or remote location. Some individuals who work in the customer service sector may take hours at a time off because of their line of work. Other people however may willingly chose to opt out of

social media for a certain time and stay connected only via email which has established itself as a more professional contact medium.

5.0 Supporting research

The supporting research will concern itself with supporting Hypothesis 1, as Hypothesis 2 could not be proven.

Hypothesis 1: There exists a link between a short attention span and internet usage

The Pew Research Center published a report on today's teenagers, social media and technology working together. This is a recent paper and in it is one statistic that in particular supports Hypothesis 1. The report reads "A majority of teens - 71% - report using more than one social network site" (Pew Research, 2015, Absatz 6) . The connection that exists to Hypothesis 1 is that a short attention span is inevitable if someone is using multiple social media outlets. All social media accounts are likely to be used daily hence causing a frequent switching of attention between different online outlets. Coupled with the high ownership of digital devices apparent in the sample population, it is certain that the attention span of an individual needs to stay short to be applied effectively.

Another study carried out by the PEW Research Center is entitled "How Teens do Research in the Digital World". This study concerned itself amongst other things on teachers' views of the broad impacts of today's digital ecology. 87% were of the opinion that "Today's digital technologies are creating an easily distracted generation with [a] short attention span" (Pew Research, 2014, Absatz 26) due to their use of digital technologies. This statement found in the report resonates with Hypothesis 1 and directly supports it by stating that the teachers questioned about their students attention span claimed it was affected by digital technology. For the most part, digital technology comes hand in hand with the internet which gives students their short attention span.

A Paper entitled "Is Generation Y addicted to social media?" published by Elon University states that "Humans are now more anxious and their attention span is weakened by the over stimulation from technology" (Cabral, 2011, Absatz 9). Digital Technology tends to provide a large and enveloping stimulus which has increasingly taken over younger generations in our society. Digital Technology requires rapidly changing attention spans to concentrate on the fast moving digital world. An over

stimulation can most certainly take place easily and the length of the attention span is likely to suffer from it. The statement made agrees with Hypothesis 1 in that there is a consensus that the human attention span is shorter and weaker due to internet based technology.

These examples are merely three found in a plethora of other publications and studies concerning itself with the internet, technology and effects it has had on humans, a shortened attention span being one of them.

6.0 Evaluation

What becomes apparent immediately is that Hypothesis 1 could be proven true and Hypothesis 2 could not be proven.

Hypothesis 1: There exists a link between a short attention span and internet usage

Hypothesis 2: Through a short attention span, academic performance will be negatively impacted.

Overall, I am very satisfied with the results collected, the way data was analyzed and what extrapolations regarding the hypotheses I made. Considering the time frame of this dissertation, the topic and the goal to achieve a high number of participants the data collection was successful, helpful and orientated towards the two aspects and the (respective) clusters.

After the defining of relevant terminology for this paper, the data collection in form of the online survey was the correct survey form. It enabled me to reach a large number of people who gave me easily processable information which was in turn analyzed. Next to the supporting data of other publications, it can be stated that Hypothesis 1 is true.

However, Hypothesis 2 will be disproven. Although Hypothesis 1 is correct, a decrease in academic performance does not logically follow. Academic performance in whichever field it is being pursued does not suffer solely because of regular internet usage or a short attention span. Academic performance is determined by far more factors such as social environment, mental and physical health and motivation of the individual. A temptation exists to try and make a connection between a short attention span and decreased academic performance. This link is inconclusive and incorrect.

Hypothesis 1 is first proven with question 3. Through a high daily usage of the internet (73% of the population sample used the internet between one and seven hours), there is more potential for distraction through the constantly changing focus of attention. This is indicative of short attention span. The attention span is in (quick) succession changing its focus and devoting attention to a certain task. Question 5 shows that there is a high frequency of mobile devices with internet connection, with 98% owning two or more devices. Higher ownership will mean heavier usage and this coupled with multiple internet sources, assuming every mobile device is used for a different purpose, means a short attention span also to shift attention from one mobile device to another.

Question 9 inquires about the easiness of procrastination through the internet from a certain project. Someone with a short attention span is very likely to be engaging in this

regular internet procrastination. 68% of the sample population indicated that they procrastinated using the internet. Every time this happens, the concentration span is broken and renewed with a new target to focus on, proving Hypothesis 1. Hypothesis 2 is disproven with question 9 as it is untrue to say that all those who procrastinate online have decreased academic performance.

Question 10 shows that Hypothesis 1 is correct because it implies that even with the internet being a constant and ever-present presence and thus brings the lure of procrastination, productivity is not undermined in spite of a short attention span. Hypothesis 2 does not stand up to this question. Productivity is not low and it is something that would be considered "academic performance".

Equally with question 13, a high number of people being distracted by the internet specifically does not mutually make them poor students in their craft, disproving Hypothesis 2. On the other hand, this same question does prove Hypothesis 1 correct because an interruption of tasks points to a short attention span. This excludes the possibility of a short attention span affecting productivity.

Question 14 shows Hypothesis 1 to be valid because a short attention span is assumed but disproves Hypothesis 2 because no concrete evidence can be shown that the aforementioned difficulty leads to a decrease in academic performance.

In order for question 15 to take place with its frequent attention change taking place due to multiple screen usage, a rapid change in concentration is needed. This means that Hypothesis 1 is true but there can be no valid connection made between this question and Hypothesis 2. With its need to change concentration focus often, question 16 engages similar aspects of consideration as its predecessor. This proves Hypothesis 1.

7.0 Conclusion and prediction

The methodology for this paper consisted of two parts. Initially, the description of relevant terminology to introduce the reader to words, phrases and definitions which successfully acted as a framework for the whole paper. Secondly, the first and most significant part of the methodology was my own data collection method by way of online questionnaire and its resulting description and analysis. The second part of my methodology was using supporting numbers and quotes from other publications. Due to the two-fold approach in my methodology, I was able to paint a more complete picture of the correlation between internet usage and attention span in the form of Hypothesis 1.

Concluding on the entirety of this paper, Hypothesis 1 is true and Hypothesis 2 is untrue. Daily internet usage does lead to a short attention span (Hypothesis 1) but no true statements could be made regarding academic performance (Hypothesis 2).

In spite of Hypothesis 2 not being proved true through the methodology used in this paper, the overall knowledge and information gained during the creation of this paper was an overwhelming success and an enrichment.

With the plethora of publications that was reviewed during the process of this paper, no study had posed them same (true) Hypothesis that I had. Along with the satisfaction of having a scientifically sound hypothesis, I added value and knowledge to the scientific literature. My research along with Hypothesis 1 were truly unique and valid in their approach, completion and analysis.

For the next time I carry out a scientific survey, I know that I can improve some things from the onset to make certain aspects like data collection or analysis more efficient. Basing my statement on my results collected, I predict that with growing internet presence and digital technology infatuation in our lives, attention spans will continue to remain short. This is something that the individuals learn to deal with. If and when there is a task at hand that requires a prolonged attention span, the individual will muster a collected, prolonged span of attention to complete a given task at hand.

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Frankfurt, 24.06.2015

Der Zusammenhang zwischen täglichen Internetgebrauch und akademischer Leistung/Konzentrationsspanne

Seite 1

Hallo,

im Rahmen meiner Bachelorarbeit erhebe ich Daten über den Zusammenhang des Internets auf verschiedene alltägliche Aspekte. Die Umfrage wird nicht mehr als 5 Minuten eurer Zeit in Anspruch nehmen. Beantwortet die Fragen bitte ehrlich, alle Antworten werden anonym ausgewertet.

Vielen Dank

Andrew

Seite 2

Wie alt sind Sie? *

○ 14 - 18

○ 19 - 24

○ 25 - 30

○ 31 - 40

○ 41 - 50

○ 51

Geschlecht? *

○ Männlich

○ Weiblich

○ Keine Angabe

Seite 3

Wie viele Stunden am Tag verbringen Sie im Internet? *

○ 1 Min - 1,5 Stunden

○ 1,5 Stunden - 3 Stunden

○ 3 Stunden - 5 Stunden

○ 5 Stunden - 7 Stunden

○ > 7 Stunden

Seite 4

Wie viele internet-fähige Geraete besitzen Sie? *

○ 0 - 1

○ 1 - 2

○ 2 - 3

○ 3 - 4

○ 4 +

Seite 5

Fuer welche Zwecke benutzen Sie das Internet? *

☐ Kontakt

☐ Beruflich

☐ Navigation

☐ Anweisungen

☐ Entertainment

☐ Zeitverschwendung

☐ Information

☐ Andere [   ]

Seite 6

Die nächsten Fragen befassen sich mit der akademischen Leistung und dem Internetgebrauch. Mit akademischer Leistung ist der gesamte Aufwand, den ein Individuum in die schulische Arbeit steckt gemeint (z.B. Hausarbeiten, Noten bei Examen, Projekte o.Ä.)

Anmerkung: 'Schulische Arbeit' kann für die Leute die sich nicht mehr in dieser Lebenssituation befinden fuer andere Weiterbildungen/Scheine (z.B. Pilotenschein) o.Ä. gelten.

Seite 7

Benutzen Sie das Internet fü schulische Zwecke z.B. Studiengruppen? *

○ Ja

○ Nein

Seite 8

SInd Sie von dem Informationsangebot im Internet überwältigt? *

○ Trifft zu

○ Trifft oft zu

○ Manchmal

○ Trifft selten zu

○ Trifft nie zu

Seite 9

Finden Sie im Internet schnell die Information die Sie suchen? *

- ○ Trifft zu
- ○ Trifft oft zu
- ○ Trifft manchmal zu
- ○ Trifft selten zu
- ○ Trifft nie zu

Seite 10

Passiert es Ihnen, dass Sie vom Internet abgelenkt werden, wenn Sie versuchen einer bestimmten Aufgabe nachzugehen? *

- ○ Trifft zu
- ○ Trifft oft zu
- ○ Trifft manchmal zu
- ○ Trifft selten zu
- ○ Trifft nie zu

Seite 11

Ist das Internet eine Hilfe für Sie produktiver zu arbeiten/lernen? *

- ○ Trifft zu
- ○ Trifft oft zu
- ○ Manchmal
- ○ Trifft selten zu
- ○ Trifft nie zu

Seite 12

Welche der folgenden Punkte benutzen Sie bei der Internetrecherche? *

- ☐ Google
- ☐ Social Media
- ☐ Nachrichtenportale
- ☐ YouTube
- ☐ Bestimmte Studienseiten
- ☐ E-Lehrbücher
- ☐ Online Datenbank (z.B. JSTOR)
- ☐ Online Bibliothek
- ☐ Andere [ ]

Seite 13

Hinterfragen Sie kritisch die Information die Sie im Internet gefunden haben auf Intention, Informationsgehalt, Zutrefflichkeit usw? *

○ Trifft zu

○ Trift oft zu

○ Manchmal

○ Trifft selten zu

○ Trifft nie zu

Seite 14

Unterbrechen Sie Aufgaben um Emails/Social Media zu checken oder einer anderen Internetablenkung ihrer Aufmerksamkeit zu schenken? *

○ Trifft zu

○ Trifft oft zu

○ Manchmal

○ Trifft selten zu

○ Trifft nie zu

Seite 15

Finden Sie es schwierig ein Buch oder Artikel bis zum Ende durchzulesen? *

○ Trifft zu

○ Trifft oft zu

○ Manchmal

○ Trift selten zu

○ Trifft nie zu

Seite 16

Wann benutzen Sie mehr als einen Bildschirm? *

☐ Bei der Arbeit

☐ Beim Entspannen

☐ Immer

☐ Andere

Seite 17

Werden Sie ohne Internet auf längere Zeit nervös oder unruhig? *

- ○ Trifft zu
- ○ Trifft oft zu
- ○ Manchmal
- ○ Trifft selten zu
- ○ Trifft nie zu

Leere Seite

Die Umfrage ist beendet. Vielen Dank für die Teilnahme.

Das Fenster kann nun geschlossen werden.

○ Trifft zu

○ Trifft oft zu

○ Manchmal

○ Trifft selten zu

○ Trifft nie zu

The relationship between internet usage and academic performance/attention span

Page 1

Hello people,

I would ask you to give me no more than five minutes of your time. I am writing my Bachelor paper for university and would like to get some information regarding your internet use and the effect it has on your academic performance.

Thanks very much for your time,

Andrew

Page 2

Gender? *

○ Male

○ Female

○ Prefer not to say

How old are you? *

○ 14 - 18

○ 19 - 24

○ 25 - 30

○ 31 - 40

○ 41 - 50

○ 51 +

Page 3

How many minutes/hours daily do you use the internet? *

○ 1 min - 1.5 hours

○ 1.5 hours - 3 hours

○ 3 hours - 5 hours

○ 5 hours - 7 hours

○ Other: [   ]

Page 4

What do you use the internet for? *

- ☐ Shopping
- ☐ Contact
- ☐ Navigation
- ☐ Instructions
- ☐ Entertainment
- ☐ Information
- ☐ Procrastination
- ☐ Other: [   ]

Page 5

How many devices with an internet connection do you own? *

- ○ 1
- ○ 2
- ○ 3
- ○ 4
- ○ >5

Page 6

The next section of this questionnaire concerns itself with internet usage and academic performance. For the purposes, "academic performance" will be defined as the work an individual does in and outside of the learning institution e.g. high school, college or any other type of school.

NOTE: For those not in a school setting any more, consider "academic performance' your work towards a different dedication e.g. Pilot license

Page 7

Do you use the internet for academic purposes such as study groups? *

- ○ yes
- ○ no

Page 8

Do you find the amount of information online overwhelming? *

- ○ Absolutely true
- ○ Somewhat true
- ○ Neither true nor false
- ○ Somewhat false
- ○ Absolutely false

Page 9

Do you find that you can quickly find the information that you are looking for? *

- ○ Absolutely true
- ○ Somewhat true
- ○ Neither true nor false
- ○ Somewhat false
- ○ Absolutely true

Page 10

Do you find that you are easily distracted from a certain project and procastinate on the internet? *

- ○ Absolutely true
- ○ Somewhat true
- ○ Neither true nor false
- ○ Somewhat false
- ○ Absolutely false

Page 11

Do you find the presence of the internet makes you more productive? *

- ○ Absolutely true
- ○ Somewhat true
- ○ Neither true nor false
- ○ Somewhat false
- ○ Absolutely false

Page 12

Which of the following will you use when doing research online? *

- ☐ Google
- ☐ YouTube
- ☐ Social Media (Facebook, Twitter etc.)
- ☐ Specific study websites (e.g. Cliffnotes)
- ☐ News websites
- ☐ E -Textbooks
- ☐ Online Libraries
- ☐ Online Databases (e.g. JSTOR)
- ☐ Other

Page 13

Do you critically consider who is the author of information found online? *

- ○ Absolutely true
- ○ Somewhat true
- ○ Neither true nor false
- ○ Somewhat false
- ○ Absolutely false

Page 14

Do you find yourself interrupting tasks to check emails, social media or other internet related interruptions? *

- ○ Absolutely true
- ○ Somewhat true
- ○ Neither true nor false
- ○ Somewhat false
- ○ Absolutely false

Page 15

Do you find it difficult to focus on finishing a traditional newspaper article or a book? *

- ○ Absolutely true
- ○ Somewhat true
- ○ Neither true nor false
- ○ Somewhat false
- ○ Absolutely false

Page 16

**Do you find yourself using multiple screens when... ** *

- ☐ working
- ☐ relaxing
- ☐ all the time
- ☐ Other: [_____]

Page 17

Do you find yourself multi-tasking, doing many things at one time? *

- ○ Absolutely true
- ○ Somewhat true
- ○ Neither true nor false
- ○ Somewhat false
- ○ Absolutely false

Page 18

Do you get nervous when you are without an internet connection for a prolonged period of time? *

○ Absolutely true

○ Somewhat true

○ Neither true nor false

○ Somewhat false

○ Absolutely false

You have completed the survey. Thank you very much for your participation.

You can now close the window.