

THAI PEOPLE'S ATTITUDES TOWARDS INFOGRAPHICS AND TEXTS
AS MEANS OF COMMUNICATION FOR SOCIAL CAMPAIGNS

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จุฬาลงกรณ์มหาวิทยาลัย

CHULALONGKORN UNIVERSITY

A Thesis Submitted in Partial Fulfillment of the Requirements
for the Degree of Master of Arts (Communication Arts) Program in Strategic
Communication Management
Faculty of Communication Arts
Chulalongkorn University
Academic Year 2013

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ทัศนคติของคนไทยที่มีต่อการสื่อสารในรูปแบบอินโฟกราฟิกและข้อความ
ในการรณรงค์เพื่อสังคม



นายรัชพล อินทรเทวี

จุฬาลงกรณ์มหาวิทยาลัย

CHULALONGKORN UNIVERSITY

วิทยานิพนธ์นี้เป็นส่วนหนึ่งของการศึกษาตามหลักสูตรปริญญาวิทยาศาสตรมหาบัณฑิต

สาขาวิชาการจัดการการสื่อสารเชิงกลยุทธ์

คณะนิเทศศาสตร์ จุฬาลงกรณ์มหาวิทยาลัย

ปีการศึกษา 2556

ลิขสิทธิ์ของจุฬาลงกรณ์มหาวิทยาลัย

Thesis Title	THAI PEOPLE'S ATTITUDES TOWARDS INFOGRAPHICS AND TEXTS AS MEANS OF COMMUNICATION FOR SOCIAL CAMPAIGNS
By	Mr. Tachapon Intaratayvee
Field of Study	Strategic Communication Management
Thesis Advisor	Associate Professor Worawan Ongkrutraksa, Ph.D.

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in Partial Fulfillment of the Requirements for the Master's Degree

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ธัชพล อินทรเทวี : ทศนคติของคนไทยที่มีต่อการสื่อสารในรูปแบบอินโฟกราฟิกและข้อความในการรณรงค์เพื่อสังคม. (THAI PEOPLE'S ATTITUDES TOWARDS INFOGRAPHICS AND TEXTS AS MEANS OF COMMUNICATION FOR SOCIAL CAMPAIGNS) อ.ที่ปรึกษาวิทยานิพนธ์หลัก: รศ. ดร. วรวรรณ องค์กรุชรักษา, 96 หน้า.

การสื่อสารในรูปแบบอินโฟกราฟิกและข้อความนั้น มีความแตกต่างกันตรงที่มีการใช้รูปภาพประกอบเพิ่มเข้ามาในช่วยในการสื่อสาร ปริมาณรูปภาพที่ใช้ในการสื่อสารอาจจะส่งผลกระทบต่อทัศนคติ ความเข้าใจ และความตั้งใจในการเปลี่ยนแปลงพฤติกรรมของผู้รับสาร งานวิจัยนี้จึงศึกษาเกี่ยวกับความสัมพันธ์ระหว่างทัศนคติ ความเข้าใจ และความตั้งใจในการเปลี่ยนแปลงพฤติกรรมที่มีต่อปริมาณรูปภาพที่ใช้ในการสื่อสาร โดยจะใช้ตัวสารทั้งในรูปแบบของอินโฟกราฟิกและข้อความล้วนเป็นเครื่องมือในการศึกษาเกี่ยวกับผู้รับสาร ในงานวิจัยดังกล่าวนี้จะใช้ทั้งการวิจัยเชิงปริมาณและการวิจัยเชิงคุณภาพ ในการเก็บข้อมูลความคิดเห็นจากกลุ่มตัวอย่างจำนวน 400 คน กลุ่มตัวอย่างทุกคนจะต้องผ่านคุณสมบัติที่กำหนดทั้งหมด เช่น กลุ่มตัวอย่างจะต้องมีอายุระหว่าง 15 ถึง 45 ปี จบการศึกษาระดับชั้นมัธยมศึกษาตอนต้น มีบัญชีในโซเชียลเน็ตเวิร์ค และใช้งานอย่างน้อยหนึ่งครั้งต่ออาทิตย์ กลุ่มตัวอย่างดังกล่าวจะได้รับแบบสอบถามโดยการดูรูปการนำเสนอข้อมูลทั้งหมด 3 รูปแบบคือ (1) การนำเสนอข้อมูลแบบข้อความล้วน (2) การนำเสนอข้อมูลแบบที่ประกอบไปด้วยรูปภาพร้อยละ 30 ถึง 60 (3) การนำเสนอข้อมูลแบบที่ประกอบไปด้วยรูปภาพมากกว่าร้อยละ 60 ผ่านทาง 3 ชุดข้อมูล

ผลของการวิจัยของกลุ่มตัวอย่างพบว่าระดับความสัมพันธ์ของทัศนคติ ความเข้าใจ และความตั้งใจในการเปลี่ยนแปลงพฤติกรรมหลังจากอ่านตัวสารในรูปแบบอินโฟกราฟิกนั้นมีระดับที่สูงกว่าตัวสารในรูปแบบข้อความ จากข้อมูลพบว่าการสื่อสารในรูปแบบที่ประกอบไปด้วยรูปภาพมากกว่าปกตินั้นเหมาะสมที่จะใช้ในการสร้างความสนใจเพื่อดึงดูดผู้รับสาร ในขณะที่การสื่อสารในรูปแบบที่มีข้อความเป็นจำนวนมากกว่าปกตินั้นเหมาะสมสำหรับการอธิบายความซับซ้อนเพื่อสร้างความเข้าใจได้ดีกว่า ดังนั้นการสื่อสารที่สมดุลซึ่งใช้ปริมาณรูปภาพร้อยละ 40 ถึง 60 ไม่มากหรือน้อยเกินไปนั้นจะสามารถสร้างความสนใจให้ และส่งผลกระทบต่อความตั้งใจที่จะเปลี่ยนแปลงพฤติกรรมของผู้รับสารได้ในทุกระยะของการรณรงค์ตามแนวคิดไอดา (AIDA Model) ทั้งหมดนี้จุดประสงค์ของการสื่อสารเป็นสิ่งจำเป็นอย่างยิ่งที่ต้องพิจารณาก่อนที่จะทำการสื่อสารใดๆต่อกลุ่มเป้าหมาย

สาขาวิชา การจัดการการสื่อสารเชิงกลยุทธ์

ลายมือชื่อนิสิต

ปีการศึกษา 2556

ลายมือชื่อ อ.ที่ปรึกษาวิทยานิพนธ์หลัก

5585007328 : MAJOR STRATEGIC COMMUNICATION MANAGEMENT

KEYWORDS: INFOGRAPHIC / INFORMATION GRAPHIC / VISUAL PERSUASION / VISUAL COMMUNICATION / COMMUNICATION DESIGN / CAMPAIGN / SOCIAL CAMPAIGN

TACHAPON INTARATAYVEE: THAI PEOPLE'S ATTITUDES TOWARDS INFOGRAPHICS AND TEXTS AS MEANS OF COMMUNICATION FOR SOCIAL CAMPAIGNS. ADVISOR: ASSOC. PROF. WORAWAN ONGKRUTRAKSA, Ph.D., 96 pp.

The objective of this research was to examine the relationship of Attitudes, Understanding and Intention to Change behavior towards in social campaigns among Thais mainly in the categories of (1) infographic stimulus and (2) text stimulus to gain a better understanding of both infographic and text contents. This research employed both quantitative and qualitative approach by online and pen-and-paper survey research from 400 sample population. The samples in this research are Thai males and females ages between 15-45 year old, graduated to at least lower secondary school level. They have registered social network accounts and are active on one social platform account at least once a week. The samples are presented with three types of presentation style: (1) pure text stimulus, (2) the graphic content of 30-60 percent stimulus and (3) the graphic content over 60 percent stimulus.

The research result shows that the association level of the samples' Attitude and Understanding towards Intention to Change behavior in the infographic stimulus is higher than the text stimulus. The data shows that excessive picture communication is useful for drawing attention while excessive text communication is more useful for explaining complex and detailed concepts. Therefore, the most balanced communication that will have the most effective impact on attractiveness and intention to change behavior in any stage of AIDA model is a message that contains graphic content of 40% to 60% of overall design. All in all, communication objective must be taken as the main consideration when forming a message campaign.

Field of Study: Strategic Communication Student's Signature

Management Advisor's Signature

Academic Year: 2013

ACKNOWLEDGEMENTS

First and foremost, I would like to express my sincere appreciation to my adviser Assoc. Prof. Worawan Ongkrutraksa, Ph.D. for her continuous support as well as her patience, motivation, encouragement and involvement in my thesis study and research. My research could not have been successful without her guidance throughout the time of the procedure and the writing of this thesis. I would also like to express my deepest gratitude to the rest of the thesis committee: my chairperson member Prof. Yubol Benjarongkij, Ph.D. and my examiner Mr. Jeremy Plotnick, Ph.D. for their insightful comments and thoughtful questions.

I'm also thankful for Ms. Thanomwong Poorisat and Ms. Proadpran Leelaprut who have offered valuable advice, and leading my research into the accurate direction. In addition, I thank all staffs at the Faculty of Communication Arts, Chulalongkorn University who had given me the priceless experience of studying and working together in the Masters of Strategic Communication Management Program.

I would like to thank all of my La Salle College friends, especially batch#24, Assumption University friends, batch#39 and Nitade friends who always light up my life, and my days and nights. As well as, I am appreciated to my senior friends, junior friends, all teachers and instructors for their teachings and assistants in my life.

Last but not least, I would like to thank my Intaratayvee family who has always supported me throughout the duration of this thesis research. I can't find words to describe how thankful I am for my superb family. At the same time, I don't know what I should do for them in return. However, one thing that I can do from here on is 'I will put all of my best for my family'.

Without all of you, I can't be here...

Loves,

Tachapon Intaratayvee

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CHAPTER 1

INTRODUCTION

1. Background

In this modern era of digital age and information technology, the world around us is constantly changing. The birth of the internet, up to its worldwide use and popularity, has enabled the world to become more connected. This has critically changed the way we think and communicate. We have ultimately introduced a culture of information sharing in order to improve society. The excessive amount of data sharing and raw information that flows within the internet for user consumption needs to be controlled and processed. This requires new methods of communication, in order for receivers and end users to be able to understand and make sense of the data easier. The overflowed information will be processed in such a way that can make it be able to understand more easily, clearly, and efficiently. *Information graphics*, or *Infographics*, are at the forefront of this new way of thinking. It is basically the visualization of information, which enables us to gain insight and understanding of the data more easily. For example, the use of Infographics in 'The Firm Campaign – Reduce Fat and Disease' created by the Thai Health Promotion Foundation (Figure 1.1), shows how Infographics can convey complex information in a manner that can be easily understood by their audience. This can help us unlock the incredible processing power of the human visual perception system. Knowing how to efficiently use Infographics is not only useful and valuable, but also necessary, as we are experiencing vast amounts of data presented to us in everyday life (Lankow, Ritchie, & Crooks, 2012).

Nowadays, Infographics are widely used in both traditional media and new media (Hulls, 2012). Even though Infographics are widely used, some people may not even be aware that they are being exposed to Infographics. Newspapers also commonly use Infographics to convey their data, such as through pie charts, statistics of industrial market sales and market shares, stock market reviews by the editors, and weather forecast, for example, in new media, Infographics

Figure 1 : Example of Infographic : You are now FAT



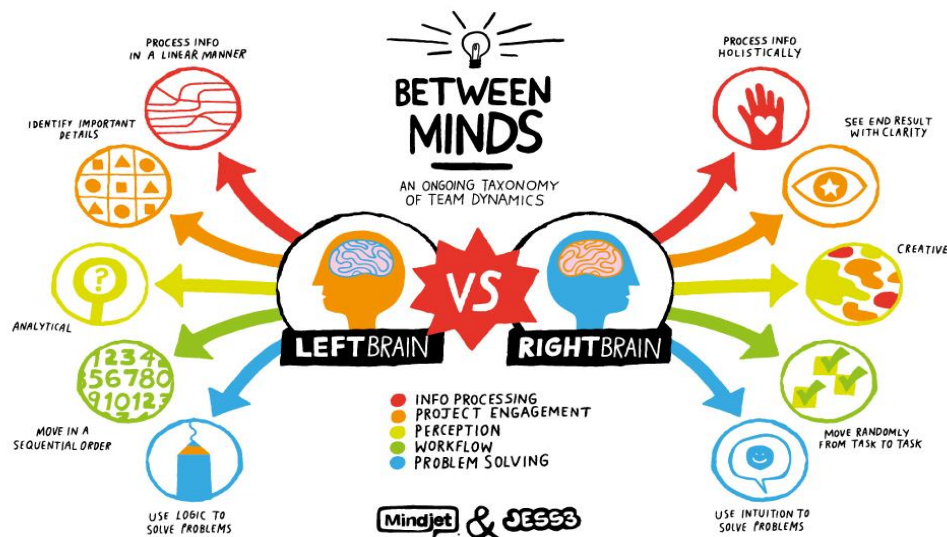
Source : Official Facebook Fanpage of 'The Firm Campaign' (<https://www.facebook.com/Thai.HealthyLifestyle>)

are mostly used on social networks due to the functions that allow photo posting and uploading, and usually comes in the form of pictures that contain knowledge and helpful information. Both profit and non-profit organizations are exploiting this feature in order to make their messages stand out and capture their target audience's attention. Common messages that are constantly being projected in new media include: benefits of certain products or services, disadvantages and weaknesses of competitors, social charity campaigns, and cooperation campaigns for the community. Overall, Infographics has been incorporated into our daily life and are widely exposed to the public, whether on sky-train maps, user manuals for electronic devices, tables and pictures in teaching materials, building plans, food and beverage menus, just to name a few. Infographics is all around us if we keep an eye out for them.

Using Infographics to communicate far outweighs the use of purely verbal or purely textual communication tools, if they are compared to each other. It is said that the "Human mind can perceive visual information transfer in a short period, much more effective and permanent way in comparison to written or verbal information transfer" (Dur, 2012). According to the research conducted by *Roger W. Sperry*, an American psycho-biologist who developed "The Left Brain – Right Brain Theory" in the late 1960s, the human way of thinking differs between the left and the right side of our brain (Idler, 2012). With the left part of our brain, we try to be objective, rational, logical, structural and verbal. We use this part of the brain for

processing numbers, logical thinking, analyzing patterns and learning languages. On the contrary, the right part of our brain is responsible for subjective, intuitive, emotional, creative, and imaginative thinking. The right part of our brain focuses on visual arts, colors, lights, aesthetic elements, imagination, and appeal. “Infographics are appealing to people because of the way we are wired” quoted Jim Confalone, the cofounder, principal, creative director and production and design manager at ProPoint Graphics (Confalone, 2012). When humans process information, we generally use the left side of our brain for verbal and written material, while the right brain tackles the more visual works. The messages and wordings portrayed through Infographics stimulate the left side of our brain, whilst the structured images, colors, and patterns stimulate the right side of our brain simultaneously (Figure 1.2). Hence, Infographics put the whole brain to work, making the information much easier for our brain to absorb. Clear, elaborate, thoughtful, well-designed and creative Infographics are ideal means of communication, as it speaks to both the left and right side of the brain simultaneously in order to fully engage cognition.

Figure 2 : Left Brain vs. Right Brain

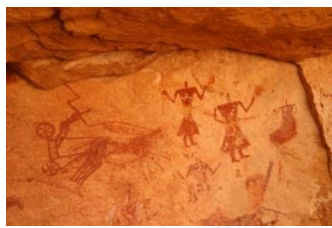


Source : (Kaykas, 2012)

1.1 History and the Rise of Infographics

In actual fact, Infographics is not a new means of communication that had recently been invented, but have been around for over 30,000 years ago (Smiciklas, 2012). Anytime key visuals are used to represent information, they are definitely classified as Infographics, claimed Visual.ly, the Infographic online community that was mentioned multiple times as one of the most promising companies in newspapers such as Business Insider, Forbes, TachCrunch, VentureBeat etc. (Visual.ly, 2010). Cave paintings and carvings on the stone from 30,000 BC (Figure 1.3), for instance, are examples of the use of Infographics in ancient times, as a means of communication.

Figure 3 : An Example of Cave Painting



Source : Roger Davies (Aug 23, 2009) - "Google as God, Evolution of Language and Ideas, Catalyst of the Human Condition"
(<http://rogerdavies.com/2009/08/google-as-god/>)

Figure 4 : An Example of Hieroglyphics



Source : Passion égyptienne- "Titulature des Pharaons"
(<http://www.passion-egyptienne.fr/titulature.htm>)

More examples that explain the history of Infographics are Egyptian hieroglyphics (Figure 1.4) and old Chinese characters (Figure 1.5). The Egyptian hieroglyphics is an ancient Egyptian language in the form of pictures that are used to tell stories of their lives, work, religion, and is therefore considered a kind of Infographics (Visual.ly, 2010). Same goes for old Chinese characters in oracle bone form; the pictures are used as a form to communicate with each other in the past and continuously develop to be the Chinese characters nowadays.

Fast-forwarding to the 18th century, a more modern era of Infographics, lived a man named *William Playfair* who was the founder of graphical methods of statistics and an early innovator in statistical graphics. He published the commercial and political atlas, which showed many bar charts, line graphs and histograms representing the economy in England because the newspaper had just started to use

Figure 5 : Examples of Chinese Characters and Its Evolutions

	oracle bone <i>jiaguwen</i>	greater seal <i>dazhuan</i>	lesser seal <i>xiaozhuan</i>	clerkly script <i>lishu</i>	standard script <i>kaishu</i>	running script <i>xingshu</i>	cursive script <i>caoshu</i>	modern simplified <i>jiantizi</i>
rén (*nin) human	𠄎	𠄎	𠄎	人	人	人	人	人
nǚ (*nraʔ) woman	𡗗	𡗗	𡗗	女	女	女	女	女
ěr (*naʔ) ear	𦊮	𦊮	𦊮	耳	耳	耳	耳	耳
mǎ (*mrāʔ) horse	𠂇	𠂇	𠂇	馬	馬	馬	馬	马
yú (*ŋa) fish	𩺰	𩺰	𩺰	魚	魚	魚	魚	鱼
shān (*srān) mountain	𠂇	𠂇	山	山	山	山	山	山
rì (*nit) sun	日	日	日	日	日	日	日	日
yuè (*ŋwat) moon	月	月	月	月	月	月	月	月
yǔ (*waʔ) rain	雨	雨	雨	雨	雨	雨	雨	雨
yún (*wan) cloud	云	云	云	云	云	云	云	云

Source : <http://www.ancientscripts.com/chinese.html>

colored ink for printing pictures at that time. Later in 1857, *Florence Nightingale*, an English nurse, changed the history by using a combination of stacked bar charts and pie charts to persuade Queen Victoria to improve conditions in military hospitals. Subsequently, another big development in Infographics occurred again when *Harry Beck*, an English engineering draftsman, created the first map of the London Tube, showing only lines to depict public transit routes and stations. This was an important development, since it incorporated visual diagrams into our daily life (Visual.ly, 2010).

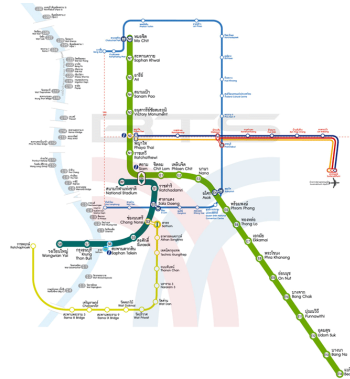
However, Infographics became incredibly popular globally because of *Otl Aicher*, a German graphic designer and typographer. Aicher created a set of pictograms for the Munich Olympics in 1972 that featured stylized human figures, and therefore influencing the design of many public signs nowadays, such as the generic stick figure crossing the street on a walkway sign. The Munich Olympic game triggered the booming of Infographics to be well-known all around the globe. Moreover, this style of sport Infographics is still currently in use, such as the Beijing Olympic Sport in 2008 (Figure 1.5).

Figure 6 : Infographics of Human Figures for Beijing Olympic Sports



Source : ABC Party Ideas for Girls “Sport Olympics”
 (<http://abcpartyideasforgirls.org/sports-olympics.html>)

Figure 7 : BTS Route Map



Source : Bangkok Mass Transit System Public Company Ltd.
 (<http://www.bts.co.th/customer/en/02-route-current.aspx>)

With the growth of the internet, people are being even more exposed to a vast amount of data and information. In 60 seconds, search engine ‘Google’ serves around 700,000 queries, whilst more than 6500 pictures are uploaded on ‘Flickr’. On social networking site ‘Facebook’, over 650,000 status updates, 75,000 wall posts and 500,000 comments are published in one minute (Shanghai, 2010). In addition, Infographics can be produced easier than in the past due to all the technological support available. With more advanced programs such as Photoshop, Illustrator, Software, and free Infographic websites, Infographics can be created much more easily. In this modern world, people have become busier and consequently have less and less time to capture others’ attention. A famous quote from the early 20th century is that “A picture is worth a thousand words.” This sentence highlights the efficiency and value of visual communication, and can still be related to today, because pictures can reach out to people even in this digital era (Smiciklas, 2012). The use of Infographics is increasingly being used in our daily life, sometimes without us noticing it, such as building plans, traffic signs, sky-train maps (Figure 1.6) and many others. This increase usage in Infographics is mainly caused by social media, seeing an explosion in the popularity of Infographics in this modern age. In this globalization and digital age, social media also supports “shareability”, which enables Infographics to be seen anywhere and everywhere. People have started to pay more attention to this ‘pictures-and-words’ approach, namely because of the social media’s picture-posting and sharing function, which even further popularizes the concept of Infographics.

2. Problem Justifications

“Between the birth of the world and 2003, there were five exabytes of information created. We now create five exabytes every two days” said by *Brett King*, a bestselling author and the founder of an exciting new banking concept at Movenbank (King, 2011). Nowadays, people are sinking in excessive amounts of information because of the invention of the internet. Every human being gets the same amount of time: 24 hours; an equal amount to their ancestors, but we have to consume more than ten times of information if we compare this era to that of our forerunners. To manage the overloaded information, humans create Infographics to make the information consumable in a less amount of time and easier method to understand. The use of Infographics is increasing day by day both in old media and new media and it seems that this growth in usage probably will not stop easily. This is due to the overwhelming advantages of Infographics that enable people to connect ideas, information and data together, to make understanding information an easier and clearer concept. People know that providing pictures in a message gives a clearer understanding than pure texts, but they still do not know how big of an impact Infographics have towards their understanding and intentions to change their behaviors.

3. Research Objectives

1. To examine the relationship between Thai people's attitudes and understanding towards Infographic stimulus, and the intention to change their behavior through social campaigns
2. To examine the relationship between Thai people's attitudes and understanding towards text stimulus, and the intention to change their behavior through social campaigns
3. To gain a better understanding of Infographics and texts

4. Research Questions

1. What is the relationship between Thai people's attitudes and understanding towards Infographic stimulus, and the intention to change their behavior through social campaigns?
2. What is the relationship between Thai people's attitudes and understanding towards text stimulus, and the intention to change their behavior through social campaigns?

5. Scope of Research

The purpose of this research in “*Thai people's attitudes towards Infographics and texts as a means of communication for social campaigns*” is to conduct a survey research in order to answer the research questions and gain a better understanding of Infographics and texts. In addition, the results of this study can be used to improve current communication methods in order to optimize the performance and efficiency of communication.

The research is limited to examinations based on Infographics and texts. It will focus only on limited presentation styles (Infographics more than 60%, Infographics 30-60%, and pure texts or no Infographics) and only Thai people's attitudes, understanding, and intention to change behaviors. The examination will use well-designed and colorful Thai Infographics materials in general sizes (640x960, 720x1080 pixels, A4) and consistent texts (size, color, use of vocabularies and information selection) to gather information. The research does not cover other tools of communication such as video clips, oral communication, compositions and designs of Infographics and texts. The target samples are 15-45 years old. *Purposive sampling technique* and *volunteer sampling techniques* are used to collect the information. The research uses *survey method* and *questionnaires* to collect both quantitative and qualitative data. The results from questionnaires will be evaluated and analyzed by *statistical methods* and presented by using *descriptive analysis* (percentage, means, median, standard deviation and frequency distribution) and *Regression Analysis*.

6. Terminology

1. Infographic : A type of picture that combines information both text and non-text together, along with creatively designed visual cues to make the complicated information and knowledge easier for people to understand.
2. Attitude : A type of picture that combines information both text and non-text together, along with creatively designed visual cues to make the complicated information and knowledge easier for people to understand.
3. Visual Communication : A method of communication to represent ideas, data, or information that can be seen or read, such as Infographics and texts

CHAPTER II

LITERATURE REVIEW

As a part of the study into “*Thai people’s attitudes towards Infographics and Texts as means of communication for social campaigns*”, the author will be discussing the following concepts and theories in depth, to lay the foundation for this research with regards to relevant literatures:

1. Visual Communication, Graphic Designs and Infographics
2. Verbal Communication (Written)
3. Information Exposure, Information Processing and Human Perception
4. Knowledge, Attitude and Behavior
5. Social Campaign
6. Related Literatures

1. Visual Communication, Graphic Designs and Infographics

1.1 Visual Communication

The art of using pictures to communicate is one of the first methods of communication known to man, which also has an ability to overcome time and language barriers. Humans are able to pass on messages to their next generations, starting all the way from cave paintings used in ancient times. Moreover, visual communication is the first communication tool used by humans to record their lifestyle and experiences; the reason being that vision, used to perceive and understand visual communication, is one of the basic five human senses that can be easily understood by the human brain.

The definitions of visual communication are many and diverse. Selecting from one of the trusted definitions, “visual communication is the communication that relies on vision” (Oxford Dictionaries, 1960). Expanding on this definition, “visual communications are the communications that represent ideas, data or information that can be read or seen for example, language symbols (all letters except for Braille), drawings, paintings, moving objects displayed in newspapers, magazines,

monitor screens, websites, short films, advertisings for marketing campaign, logos, packages, etc” (Pichedpan, 2011).

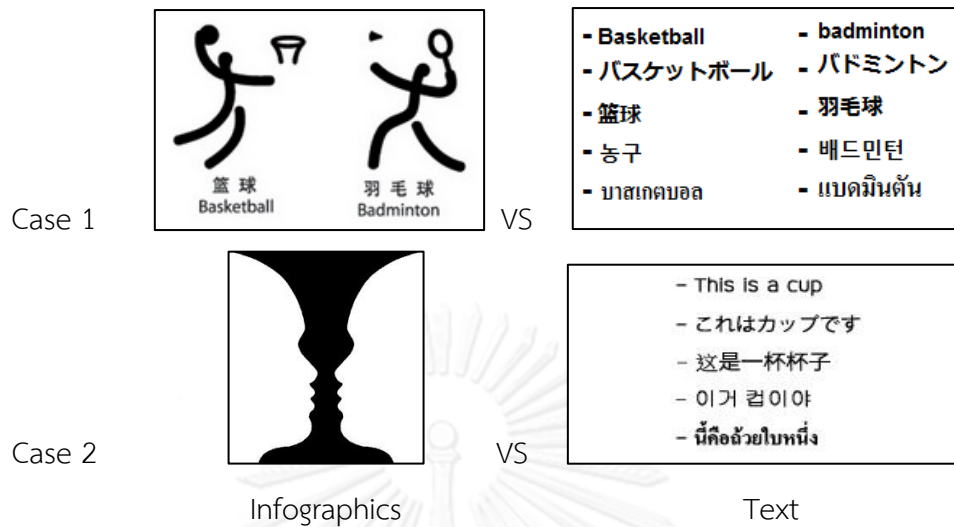
In order to measure the power of visual communication, we need to first consider it as a language, known as “Visual Language” (Messaris, 1997). Numerous scholars agree that visual communication can be considered a language, but with a different structure to that of verbal or written languages. The verbal language (in both spoken form and written form) is known as the conventional language, which means that there is a set of generally accepted grammatical rules and structures. On the other hand, the visual language that comprises of pictures and diagrams is not a conventional language, which means that there are no fixed rules and structures of exactly translating or interpreting the true meaning of a picture. Moreover, people have a tendency to change the way they interpret pictures over time (Pichedpan, 2011), which shows just how visual communication has greater flexibility and is more open to interpretation than verbal communication.

1.1.1 Visual Syntax

Visual syntax is an agreement made from a combination of codes that allow people to understand the meaning of a picture, according to what the sender wants to convey. Visual syntax and verbal syntax are notably different from each other, especially in terms of grammatical rules and structures. Verbal syntax is recorded clearly within the human society, enabling us to clearly communicate with others simply by following these grammatical rules and structures. Visual syntax, however, is not fixed and generally more ambiguous due to its flexibility (Figure 2.1). Messaris (1996: xix) noted that a key advantage to visual syntax is the ability to convey *tacit information*, which can be used to communicate sensitive issues such as sexual, educational, racial issues, etc.

For the image using Infographics shown in Case 2 (Figure 2.1), the reader will find that the picture can be interpreted more than one way, as there are no fixed rules of picture interpretation. The image can be interpreted either as two people facing each other, or a black cup.

Figure 8 : Examples of Infographics Communication vs. Pure Verbal Communication



Sources : Understanding Design& Layout: The 3 Levels of Visual Syntax, Gestalt Theory & Visual Techniques
 (http://www.dianastutz.com/article-understandingdesignandlayout.php)

Visual syntax, or visual communication structure, helps us correctly portray and represent a picture through the use of various elements such as size, shapes, colors, designs, editing, camera angles, lighting and effects etc. All of these things have an impact on the message that will be received by the audience, and their perception towards the message.

To analyze the exact meaning of visual communication, we need to explore these “three behind production codes” (O’Shaughnessy & Stadler, 2005) shown in Table 2.1.

Table 1 : Three Codes Behind Production by O’Shaughnessy and Stadler

3 behind production codes by O’Shaughnessy and Stadler, 2005		
Codes of Technical Representation	Codes of Content	Codes of Modality
<ul style="list-style-type: none"> ● Types of Paper ● Brightness ● Darkness ● Camera Angle ● Framing and Cropping ● Focus Point ● Lighting ● Blurring ● Etc. 	<ul style="list-style-type: none"> ● Colors ● Shapes ● Fonts ● Objects ● Settings ● Clothing or Ornaments ● Body languages ● What picture is represented? ● Etc. 	<ul style="list-style-type: none"> ● This code shows how realistic a picture is <p>E.g. Cartoon Pictures have low modality, whilst live action and real pictures have high modality.</p>

The three codes of visual communication presented in the table above are used to effectively send messages to the audience, both directly and indirectly. For example, in Thailand, bright lights are used to represent vividness and happiness, while blue light or dark light represents sadness and sorrow in the code of technical representation. Another example is the use of sex appeal in advertising to attract people to buy a product; this is categorized as the use of pornographic code of representation, under the code of content. The last example is an image of a cartoon giant character used in representing obese people as a code of content (Figure 2.2) by the Thai Health Promotion Foundation (Thai Healthy Lifestyle, 2011).

Figure 9 : Cartoon giant characters represent obese people under the code of content from 'The Firm Campaign – Reduce Fat and Disease'



Source: Thai Health Promotion Foundation Facebook Fanpage (<https://www.facebook.com/Thai.HealthyLifestyle>)

The code of modality has the ability to influence and convince the audience to either agree or disagree with the message, and also to create belief or disbelief in the message content. Carefully determining the code of modality can have an immense effect on a message's credibility.

To conclude, visual communication is immensely important in this research. Both infographics and texts are forms of visual communication, because they are physically seen by the audience. Learning the concepts of visual communication, such as its definition and syntax, is crucial to understanding the heart of this study.

1.2 Graphic Designs

Graphic design is one of the key factors of media production. The use of graphic design is especially important in media that are seen by the human eye such as books, magazines, journals, billboards, product packaging, brochures, handbills, advertising commercials, movies, etc. (Chaiyathip, 2001). It is considered a field of art, used in improving the effectiveness of visual communication, in order to achieve the communicator's desired goals and objectives. Graphic design is therefore a useful tool, as it directly improves the communication process by using illustrations, photographs, symbols and typography, assembled together to clearly present a set of information (Chaiyathip, 2001).

1.2.1 The Meaning of Graphic Design

Graphic design is a method of designing two-dimensional surfaces, to enhance messages that are being sent from one person to another by appealing to the human visual senses. Sight, one of human's five basic senses, is an incredibly crucial aspect of our everyday life in which all humans rely heavily upon (except visually impaired and blind people). Graphic designs are used to exploit this sensory system, and can be very effective not only in conveying ideas, but also appealing to emotions and convincing the human mind.

However, most graphics require creative design, material, and content to be fully complete and effective; it is up to the designers to be aware of these basic principles and components of art. Moreover, it is important for designers to enthusiastically find new experiences, knowledge, and techniques to constantly improve their work and keep up with the ever-changing world (Chaiyathip, 2001).

1.2.2 The Components of Graphic Design

A graphic work must reveal information, ideas and meanings to directly attract and convince the audience simultaneously (Suthamphitak, 2005). In addition, a graphic design should constitute of the following:

1. Be a medium that correctly and clearly communicates the true meaning of the message that is intended by the sender.
2. Be a medium that can provide knowledge to the target audience.

3. Create strong first-impressions that can draw people's attention, while still maintaining creditability and reliability.
4. Motivate and influence people's minds and attitudes that will trigger a quick decision making.
5. Be creative.
6. Be able to change the audience's behaviors and thoughts (Chaiyathip, 2001).

1.2.3 How Graphic Design Improves Communication

1. Sorts, arranges and organizes complicated information to facilitate understanding, while also improving the clarity and accuracy of the information.
2. Facilitates and increases the process of sending and receiving information.
3. Creates a social identity in communication (High and Low context information)
4. Improves the effectiveness and efficiency of communication
5. Improves creativity and elaborates further ideas
6. Enhances the business sector and develops the country through the use of effective communication tools
7. Supports human perception and changes human behaviors (Chaiyathip, 2001)

1.2.4 Influences of Basic Art Elements towards Graphic Design

To add value, reliability, and uniqueness to graphic work, the basic elements of art is an important aspect to be considered. Basic art elements have the ability to make graphics more significant and outstanding, which can lead to higher attractiveness. There are four basic art elements that can improve the effectiveness of the communication process (Suthamphitak, 2005).

1. *Font style and size* – A creative yet readable font can motivate people to respond quickly. A font size that is neither too big nor too small will allow people to consume the information without any pressure, hence more effectively and accurately.
2. *Space and Direction* – Providing free space is considered one of the basic elements of art. Good arrangement of free space will allow for cleaner and clearer graphics to be presented, which creates overall neatness and tidiness allowing for easier understanding.

3. *Color* – Color is another essential element in art that makes graphics more outstanding and attractive. The use of color depends on how designers want to convey their message, its mood, theme, and tone. It is important to note that the color of the background, texts, and others components should be selected appropriately to match with the goals and objectives of the message.
4. *Composition* – a balancing arrangement of all elements, including font size, font style, free space, information content, focus point, object shapes etc., is equally important in the overall design. Designers need to emphasize each aspect of their work appropriately, to enable an overall increase in reliability and attractiveness (Chaiyathip, 2001).

1.2.5 Graphic Design Guide

1. Concentrate on the objectives of the message, and make sure they are compatible with the art design
2. Keep the production process and method of conveying the message simple and appropriate
3. Use suitable materials and have good quality control
4. Costs, manpower, and time must be well-balanced
5. Must be appropriate regarding social values, cultures, technologies, time, and location (Chaiyathip, 2001)

1.2.6 The Elements of Graphic Design

There are essentially two key components of graphic design, typography and illustration. Both components need to be created and placed delicately side by side, to make graphics more interesting and applicable (Worachartudompong, 1996).

Typography accounts for all the texts and letters in a graphic, such as the heading, content, and any other information. It is the part that provides the audience with information and knowledge, and should therefore be interesting, readable, outstanding, and appropriate in relevance to the context. Typography can be divided into 2 sectors, which are heading (letters of the topic, name of products, name of events etc.) and content. For the heading sector, most designers will use a *display face* font style to emphasize the heading and make it more attractive. On the other hand, designers will usually use a *book face* font style for the content to make it

easier and more comfortable to read. For typography, there are 3 elements that need to be considered which are (1) Style, (2) Size and (3) Character

Illustration, on the other hand, is the part that decorates the message to make it more attractive and interesting to read, which unquestionably helps to improve the effectiveness of communication. The objectives of incorporating illustrations in to graphics design are as follows:

1. To attract people's attention and draw them to the message
2. To make the message more creative, outstanding, and worth reading, which will lead to the development of thoughts and emotions.
3. To make the message easier to digest and recall for future application due to the clearness, neatness and tidiness of the composition
4. To appropriately adapt the message to the communication channel; this can sometimes help to substitute materials with a high cost by giving off a similar texture or color etc. Therefore, using illustrations can focus people on the other aspects of the graphic rather than the flaws.
5. To increase the effectiveness and process of communication through the use of appropriate pictures. For example, it will be less time-consuming to understand and also makes the information clearer.

1.2.7 When Is It Appropriate to Use Illustrations?

1. To attract attention
2. To explain instructions
3. To explain concepts
4. To focus on the appearance of the message
5. To illustrate statistical information

1.3 Infographics

While many try to give an accurate definition for the term "Infographic", there is still no commonly accepted definition. This is because the terms Infographics, Data Visualization, Information Design, and Visual Content are not only overlapping, but also relatively abstract. The following list of definitions is a provided as guideline to give us a broad idea of what Infographics is:

“Infographics is a visual representation of information, data, or knowledge”

Visual.ly, the data visualization and infographic community

“Infographic (noun.) - a visual image such as a chart or diagram used to represent information or data”

Oxford Dictionaries, the world’s most trusted dictionaries, 2013

“An Infographic uses visual cues to communicate information.”

Jason Lankow, Josh Ritchie and Ross Crooks, 2012

“Infographic is a type of picture that blends data with design helping individuals and organization concisely communicate message to their audience, or a visualization of data or ideas that tries to convey complex information to an audience in a manner that can be quickly consumed and easily understood.”

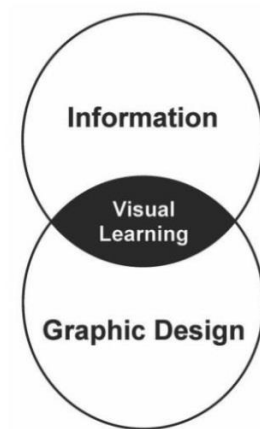
Mark Smiciklas, 2012

“A single-page vehicle detailed information, where graphics have been used to enhance the interpretation or retention of the information within it.”

John Bottom, 2010

Infographics combine data with design to enable visual learning. This communication process helps deliver complex information in a way that is more quickly and easily understood. Infographics is shown below as the part that overlaps between ‘Information’ and ‘Graphic Design’, hence enabling visual learning (Smiciklas, 2012) (Figure 2.3).

Figure 10 : Anatomy of Infographic



Source : The Power of Infographics: Using Pictures to Communicate and Connect with Your Audiences

Infographics are visual presentations intended to communicate complex information quickly and clearly. The tools include charts, diagrams, graphs, tables, maps and lists (Newsom, 2000). The basic material of an Infographic is the data, the information, or the knowledge that the graphic represents. Most Infographics are fun to read and provide valuable information.

With many definitions and explanations of the term 'Infographics', there are inevitably overlaps and similarities among the different sources. In the author's opinion, Infographics is defined as a type of picture that combines information, either textual or non-textual, together with creatively designed visual cues to make complicated information or knowledge easier for people to absorb and understand. Understanding these basic concepts and elements will enable the research to be more precise, and also help the author to design an effective questionnaire to gather information more accurately.

2. Verbal Communication (Written)

Verbal communication includes any type of communication that uses words, either in written or spoken form. However, in this section the author will only focus on the '*written*' part of verbal communication, as it will be directly used in explaining and forming the research question. Written language is considered as a part of verbal communication (Chaitammapakorn, 1987), whereby the following are features of written communication (Limphokar, 1983):

1. Written communication allows the audience to receive or read any messages freely, which means that they can read the message at any time or selectively read any part that they wish to.
2. The audience can repeatedly read the written language as many times as they wish to, either for enjoyment or clarity. Moreover, this type of communication is ideal to be used as a reference, as it can be referred to in the future for evidence, further interpretation, or reconsideration of its messages.
3. It gives the sender preparation time in writing the messages. For example, the sender can decide on how long or short the message should be, or which kind of vocabularies should be used in the message.
4. As it gives the sender time to prepare in advance, written communication has the opportunity to create new ways of presenting the message, such as creative written styles, techniques and vocabularies to better capture the audiences' attention.
5. Written communication can easily create belief through persuasion, as it can be used in evidence. Not only is written communication solidly written and tangible, it is also able to eliminate the limitation of time and place, as it can be read anytime and anywhere.

Although written communication has plenty of advantages, there are some drawbacks which are listed below:

1. Written communication takes more time to produce a clear message, whereby the reader also needs time to understand the message. This makes written communication more time-consuming when compared to speaking.

2. It is not possible to completely write everything related to a particular topic on to paper, without being repetitive and superfluous.
3. Written communication lacks the attractiveness needed to draw the audience's attention, especially when it comes to messages that do not directly affect or benefit the audience, such as messages in social campaigns.
4. The sender needs to carefully verify their written communication, as it can cause misunderstanding and create trouble if the wrong message was received. Furthermore, the sender can be directly affected and can be held liable for anything they write, as written communication can be used as evidence.
5. Written communication is also susceptible to having outdated information, especially due to long processing times or long publishing times.

2.1 Verbal Syntax

Although verbal language (written) and visual language are both a form of visual communication, there are some key differences in their syntax. As aforementioned in the 'visual communication' literature review section, verbal languages have their own fixed grammatical rules and structures that allow a sentence to make sense. Language Syntax allows people to define descriptive rules on how languages work (The University of Sheffield, 2011). The aim is to find out the factors involved in grammar, in regards to certain languages. Syntacticians believe that there are certain rules that are applicable to all languages over the world (The University of Sheffield, 2011). A random, unstructured order of words creates a sentence that does not make sense, or a sentence that has a different meaning altogether (Table 2.4); fixed grammatical and structural rules will help to define sentence structures and word arrangements that make sense to the reader.

Table 2 : Examples of Word Order Arrangements according to Syntax and Grammatical Structures

Language	Examples
English Language	Order words make sense need to. ❌ Unclear & Uncompleted Sentence
	Words need order to make sense. ✅ Clear & Makes Sense
Thai Language	ภาษาเป็นสิ่งสำคัญในหลายวากยสัมพันธ์ ❌ Correct Grammar, but Wrong Meaning
	วากยสัมพันธ์เป็นสิ่งสำคัญในหลายภาษา ✅ Correct Grammar & Correct Meaning

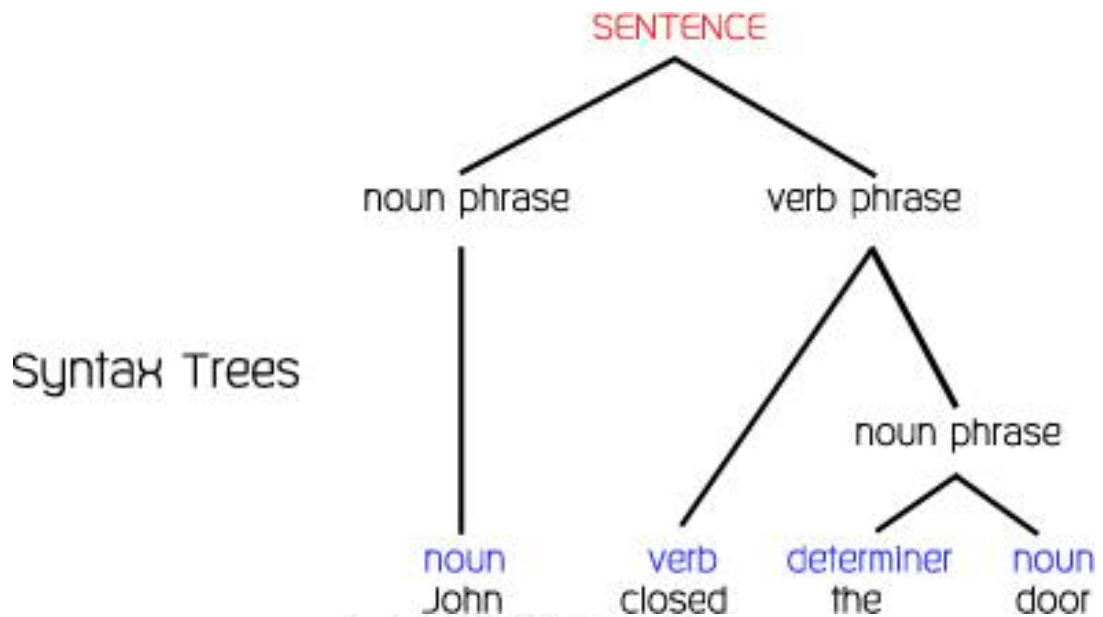
Sentences are made up of smaller phrases. Although there are several different types of phrases that can be used in a sentence, the two phrases that must be present in a sentence in order for it to make sense are *noun phrase* and *verb phrase*.

A *noun phrase* is usually a person or object that performs the verb in that sentence (active voice), or it may also be a person or object that the verb is being done to. A person or object doing the verb in the sentence is known as the ‘*subject*’, while a person or object that the verb is being done to is known as the ‘*object*’. The phrase also often needs ‘*determiners*’ to increase the accuracy of the sentence, and specify the person or object involved in the sentence.

A *verb phrase*, on the other hand, is usually an action of doing something, which has fixed rules of interpreting the meaning. The author will show only one of many examples, using a basic verb phrase to illustrate how verbal communication can be used to convey a fixed certain message.

To explain the verbal communication structure, the verbal syntax tree shown below can be used as guidance (Figure 2.4).

Figure 11 : Verbal Syntax Trees



Because of fixed grammatical rules of verbal language, the reader will be able to understand the above basic sentence 'John closed the door' exactly the way it was intended, as long as they understand the English language. The contrast between verbal language and visual language will allow readers to understand the differences between these two types of visual communication. By presenting detailed information on both infographics and texts as a means of communication, the author is able to gain in-depth understanding in order to effectively design questionnaires and correctly evaluate results for this research.

3. Information Exposure, Information Processing and Perception

3.1 Information Exposure

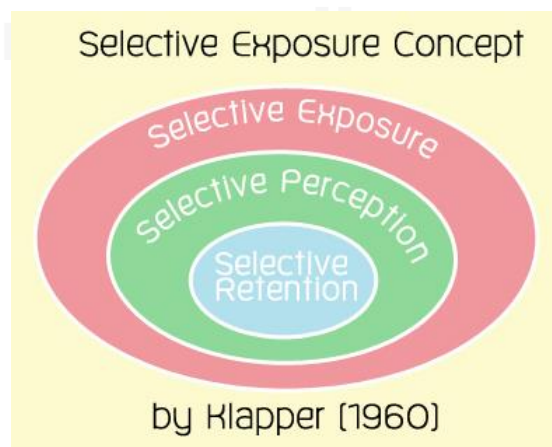
Information plays an important role in our lives, as people use information every day to communicate with one another. Information is crucial for making proper and informed decisions, and will increase dramatically when people are uncertain about something, especially since we are in such an information-rich society (Satavetin, 1996).

Human beings naturally need to exchange knowledge, information, data and experiences to communicate, convince, or influence other human beings. Moreover, being open to communication will enable us to achieve our goals (Choeypratub, 1985).

3.1.1 Selectivity Process

Charles K. Atkin (1973: 208) noted that a person who is open to information will have better and greater vision than a person who is not. There are many studies at present, which analyze individuals, to demonstrate that “audiences do not expose themselves to all messages”. Each individual reacts, remembers and responds to messages differently and individually. Mass communication does not influence people directly, but rather just motivate people’s predisposition (Klapper, 1960). Klapper also demonstrated how people are exposed to the information and media around them, using the “Selective Exposure” concept, which has three basic layers as shown in Figure 2.5.

Figure 12 : Selective Exposure Concept



Source : Klapper, J. T. (1960). *The Effects of Mass Communication*.

1. Selective Exposure

People expose themselves in order to choose and obtain the information they are interested in, fulfills their needs, or to solve problems. In other words, people keep away from communications opposite to their opinions and thoughts.

2. Selective Perception

People choose to interpret only particular parts of the information according to their own attitudes, knowledge and experiences. However, if the new information does not match with their own attitudes, knowledge, experiences and beliefs, people will distort that information to meet their fields of experience.

3. Selective Retention

After people have interpreted the information in the same way to their own frame of references, people will choose to remember only some parts of the information that they want to retain for later use. In addition, people just simply forget the rest of the information that they do not want to remember.

By communicating with others, or being exposed to information, there might be some changes to a person's knowledge, attitudes or behaviors. However, the results of communication can vary depending on the selective exposure concept and who the audiences are.

The more people expose themselves to useful information from a trusted source, the more will they understand, stay updated and modernized with the situation around them from all perspectives, compared to those who are not exposed to information or media. The environmental factors of individuals, such as demography (gender, age, education, income, occupation, race, religion, etc.) and geography (capital city, metropolis, rural, urban etc) can also affect how people will be exposed to the information and media channel. These factors can impact media exposures, media pleasure and the way they use the media channel (DeFleur & DeFleur, 1973).

These are the essential factors concerning how people choose to expose themselves to messages, information and media (Schramm, 1973).

- | | |
|--------------------------------------|--------------------------------------|
| 1. Experiences | 2. Physical and Psychological Status |
| 3. Benefits derived from the message | 4. Characteristics and Behaviors |
| 5. Background | 6. Mood and Emotion |
| 7. Education and Environment | 8. Attitudes |

Each person will have different information concerning these eight essential factors, as mentioned by Schramm (1973), which will make them choose to be exposed to the information varyingly. Hence, the information exposure concept is a concept that needs to be studied before approaching Thai people about their attitudes towards infographics and texts as a means of communication, as we first need to consider how people choose to be exposed to the information presented to them.

3.2 Information-Processing Model

The information processing model is another important model that needs to be studied in this research. This model focuses on a chronological sequence of steps which are necessary for persuasion or to change people's attitudes and behaviors. The information processing model was developed by William McGuire, a social psychologist at Yale and an expert in the art of persuasion. The model explains that after receivers are exposed to the persuasion message, such as advertising messages or campaign messages, they will process that message before making decisions, taking actions, or changing their attitudes (McGuire, 1968). There are 6 steps to the information processing model, as follows:

- | | |
|---------------------------------------|-------------------------------------|
| 1. Message Presentation (or Exposure) | 2. Attention |
| 3. Comprehension | 4. Message Acceptance (or Yielding) |
| 5. Retention | 6. Behavior |

After taking a look at the model, the information processing model can be divided into 3 levels of stimulus-response process, which are Learn, Feel and Do (Teepapal, 2012). The receiver is likely to 'learn' something from the message during steps (1) message presentation, (2) attention stage, and (3) comprehend stage. They will 'feel' the message in step (4) acceptance stage, and (5) retention stage, before lastly 'taking actions' in step (6) behavior stage (Belch & Belch, 1993).

Table 3 : Three Levels of Stimulus-Response process and Six Steps of Information-Processing Model

Information Processing Model	
Level of S-R process	Stage
Learn	1. Message Presentation Stage, 2. Attention Stage, 3. Comprehend Stage
Feel	4. Acceptance Stage, 5. Retention Stage
Do	6. Behavior Stage

Source : George E.Belch and Michael A.Belch, Introduction to advertising and promotion, 2nd ed. : 199

As this research is developed specifically for social campaigns, the messages from both Infographics and texts in social campaigns come under the art of persuasion. This model is significantly useful as a base guideline for the author to understand receivers' response, and to improve the questionnaire for collecting information, therefore increasing the reliability of the research.

3.3 Perception

“Perception is a process of evaluation and interpretation of all stimuli.

People will evaluate, interpret and behave towards one thing individually.

In addition, it is also the specification of interpersonal communication”

ChitapaSukplum (2005)

Perception means the process that people are willingly exposed by the information, attend to the information and interpret the meanings of messages. Perception has three stages, which are exposure stage, attention stage and comprehension stage.

Mowen and Minor (1998)

“Perception means the process that individuals choose to evaluate and interpret a stimulus to get the meaning about the world”

Schifman and Kanuk (1999)

To sum up what these scholars define perception to be, perception is the process of evaluation and interpretation of a stimuli, before the audience reacts and behaves towards a certain thing. When information or messages, either in the form of Infographics or texts which are considered as stimuli, are exposed to an audience it is important to anticipate their response and reaction. Learning the definition of ‘perception’ will ensure that the author conducts the research accurately and correctly.

3.3.1 Technical Factors Influencing on Human Perception

There are six technical factors that can influence and have an impact on human perception, which will be explained below (Wongmona, 2546).

1. Size – Size can have an influence on human perception. For example, a bigger font size in a poster can make the reader feel that it is an important ‘must-read’ section and will direct more focus and attention there e.g. headings and titles.
2. Color – Hot colors can draw people’s attention much more effectively than cool tones. The color red is mostly use to represent dangerous information as a caution, while green or blue colors are generally used to reveal safe information.
3. Intensity – Intensity, or frequency, is the amount of times that people are exposed to a message within a given amount of time. The more times that they see the campaign poster, the more likely they are to gradually start changing their perception.
4. Movement – Blurring can create a movement effect in a picture, which can have an impact on human perceptions. For example, blurring the background of a poster can create certain focus points that can have certain influences on the audience’s perception.
5. Position – The positioning of each picture, shape, information, and color setting within a message also has an influence on human perception. For example, the composition of the focus point should be according to the ‘Rule of Thirds’, which is a guideline on the process of composing visual images including designs, films, paintings, and photographs (Meech, 2007).
6. Contrast – Creating a contrast within a message to demonstrate the differences of things can also create a focus point to draw peoples’ attention and influence their perception.

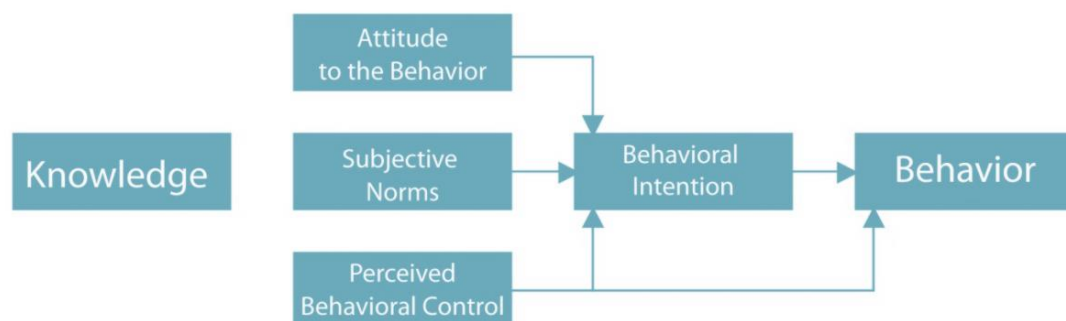
Information and media exposure, and perception are one of many important keys to this research. Understanding the relevant literatures will allow the author to know how people choose to allocate their attention to the messages we send, as well as how they translate, interpret, react and respond to each style of message presentation.

4. Knowledge, Attitude and Behavior

The human being cognitive system consists of knowledge, attitude, and behavior (Andrews, 2008). Receiving new knowledge can broaden and diversify our already existing knowledge, whereby old or incorrect knowledge can be changed and replaced. This new knowledge has the ability to change or strengthen our attitudes towards things; therefore a greater amount of knowledge is more likely to have a greater influence on our attitudes. Attitudes can be divided into 2 types, weak attitudes and strong attitudes. Strong attitudes are built up over time and are resistant to change therefore having more impact on our behavior, whereas weak attitude is less likely to guide action (Krosnick & Petty, 1995).

An estimated 5% of our behavior is planned, while the other 95% is automatic; these are the behaviors that we are not aware of. The theory of planned behavior (Ajzen, 1980) states that an individual's readiness to perform a given behavior, or behavioral intention, can be predicted (Figure 2.6). As we receive new knowledge, behavioral intention will be formed based on three types of consideration. First is how we evaluate the suggested behavior to be positive or not; second is how significantly others want us to perform the behavior; and third is the level of difficulty in performing the particular behavior. In order to create an effective Infographics campaign, all these three factors need to be carefully considered as they play important roles in motivating receivers to perform a given behavior.

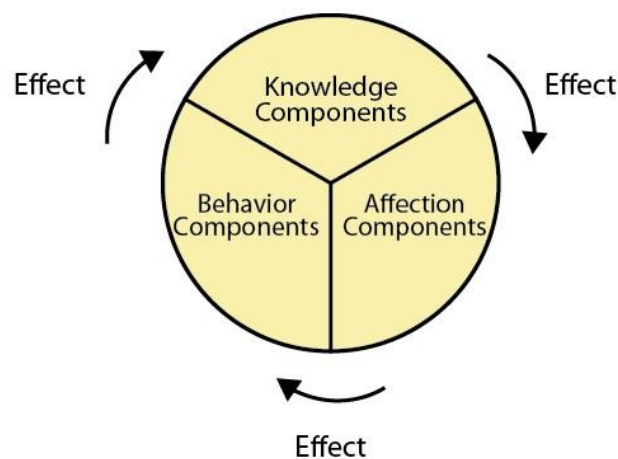
Figure 13 : Theory of Planned Behavior



Source : Ajzen (1991)

Figure 2.6 illustrates how Knowledge, Attitude, and Behavior are all interrelated. Furthermore, the works of Hanna and Wozniak (2001: p.183) also support that all 3 factors have a high level of relationship amongst each other, and a change in either one will subsequently affect the rest (Figure 2.7). However, although the three factors are related and dependent on each other, the level of susceptibility to change also depends on each person's characteristics, beliefs, backgrounds, and strong or weak attitudes. (Hanna & Wozniak, 2001)

Figure 14 : Three Components of Attitude



Source : Hanna and Wozniak (2001: 183)

In the research of *“Consumers’ attitudes towards Infographics and texts as a means of communication for social campaigns”*, the Infographics and texts are the medium for distributing knowledge to the audience. It is important to understand the concepts discussed above, as using Infographics and texts as a communication tool to distribute knowledge may have an influence on the receivers’ attitudes and behaviors. By understanding the different concepts and their relationships, the author is able to ask appropriately directed questions about people’s attitudes towards Infographics and texts as means of communication.

5. Social Campaign

A campaign is a series of coordinated activities, such as public speaking and demonstrating, designed to achieve a social goal, and to improve and develop the community in a particular period (Kendall, 1992). A social campaign is a large-scale attempt to communicate ideas and practices through mass media and interpersonal communication (Andrews, 2008). The objectives of these communication campaigns can be individual, or aimed to affect a whole society. Moreover, it can be used to stop undesired behaviors (such as smoking, drinking, drunk driving, and abortion) and support desirable ones (such as drink milk, use condoms, or use helmet for road safety) that will benefit both the individual and the society. Social campaigns are usually arranged by government offices or non-profit organizations aiming to create awareness and its *basic elements of a social campaign* should consist of the details below (Winichakul, 2007):

1. Goal(s)
 - Outcomes that the campaigner wants to see by the end of the campaign
2. Target Audiences
 - *Direct Audience* : The people that the campaigner wants to join the campaign, or to change their behaviors
 - *Indirect Audience* : Other groups of people that may possibly join the campaign, or help to promote the campaign in some way
3. Information and Content
 - Basic contents, Practical contents, and In-depth contents such as statistics, methodology, scientific research, testimonials, etc.
4. Communication Channel
 - Old media channel: TV, Radio, Newspaper, Magazine, etc.
 - New media channel: Internet, Social Media, Mobile Application, etc.
5. Communication Strategy
 - Content Strategy : Fear, Sexual Appeal, Sympathy, Motivational, Enjoyment
 - Communicative Strategy : Negative (Pressure), or Positive(Supporting)

6. Research and Evaluation

- Measuring the effectiveness of the campaign in order to improve future campaigns

This research measures the audience's attitudes from information received through social campaigns; therefore it is useful to know what a social campaign is. With this, the author can effectively select the contents from various social campaigns to be used in asking questions and developing the research.

6. Related Literatures

Stephen Few (2011) study on *"Infographics and the brain"* demonstrated that Infographics is a part of data visualization. Infographics should be designed in a way that allows it to get past people's eyes and visual cortex, and into the brain to be processed, resulting in understanding (Few, 2011). Stephen also added that the use of Infographics has improved the human brain's ability to understand. When communicators or designers want to create Infographics to communicate to their audiences, the audiences should be treated as 'reasonably intelligent', whereby focus should be placed on informing rather than just entertaining through pictures and colors. Whenever possible, Infographics should also maintain simplicity because thinking processes and communication are usually achieved through simplification. As Leonardo da Vinci quoted "Simplicity is the ultimate sophistication".

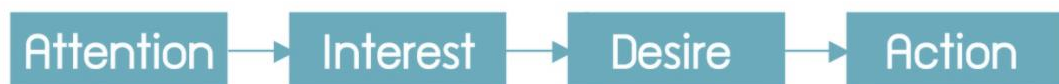
Tasama Thongpooswan (2011), who researched on *"The relationships of perception, recognition and interpretation of product logo"*, explained that the elements of art such as shapes, lines, points, colors and fonts, can affect human perception, recognition and interpretation in communication. People will perceive, interpret, analyze and respond to the brands differently according to the different art elements. However, religion, culture, beliefs and the ways of life in each country also have an impact on the relationships among human perception, recognition, interpretation and response. Therefore, to effectively communicate with the

audience, communicator and designers ought to combine national uniqueness with particular individual characteristics into the messages (Thongpooswan, 2011).

Pornteera Imsuwansakorn (2012: p.66), who studied the symbology development for warning signs in Thailand (also considered as Infographics), reported that shapes, colors, contexts and texts are factors that have a strong effect on Thai people's perception. They share some relationships of how people behave and react to messages after reading or watching the signs and messages (Imsuwansakorn, 2012). Thai people process all these factors together before responding according to what the message wanted to tell them.

Marc Andrews (2008: p.24), who researched about social campaigns and psychology of persuasion, explained how information from social campaigns can persuade people to cause actions. He used the simple linear model of persuasion called AIDA-reaction model, invented by Strong E.K. (1925), to explain about the process of how information is processed by audiences (Strong, 1925) (Figure 2.5).

Figure 15 : AIDA-Reaction Model



Source : Strong, E.K. (1925)

The AIDA-reaction model is usually practiced in marketing campaigns or contexts in order to trigger transactions, but it is also possible to adapt this model for social campaigns. The model has 4 processes: *attention, interest, desire and action*. When social campaigns are created, it firstly needs to draw people's attention by using many communicative tactics such as events, visual images, and messages, etc. Then, the communicators need to maintain people's attentions whilst at the same time creating interest to develop a desire. Finally, the target audiences are convinced to take action, as intended by the campaigner.

Chapter III

METHODOLOGY

The research methodology regarding the population, sample, sampling techniques down to the process before conducting the survey research will be discussed in this chapter. Moreover, the procedure for analyzing the data and evaluation process will be thoroughly explained in order to gain the most effective and accurate results for a better understanding of infographics and texts. In addition, the limitation of the survey research will be mentioned for future references. The results of this study can be used to improve the communication methods in order to optimize the performance and efficiency of communication. The methodology in the research of “*Thai people’s attitudes towards infographic and text as a means of communication for social campaigns*” is presented as follows.

1. Research Methodology Overview

This research is designed to use both quantitative and qualitative approaches with survey research by distributing 400 copies of questionnaires to collect efficient data from the sample population. The author decided to use *self-administration technique* or the method that allows the interviewees to answer the questions by themselves. In clarification, the questionnaires will be based on *online survey* and *pen-and-paper survey*. In terms of the research evaluation, both *descriptive analysis (percentage, means, median, standard deviation and frequency distribution)* and *regression analysis* will be used to investigate the findings.

2. Research Methodology

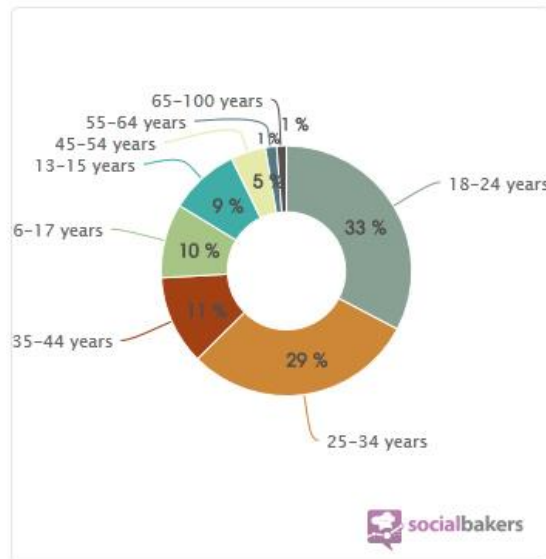
By approaching this research through both quantitative and qualitative methods, the author is confident that the consistency of results will be able to reveal the relationships or the correlations between the variables such as Attitude, Understanding and Intention to Change behavior. Moreover, the qualitative section of the research will help identify the numerous factors why all these correlations occurred. As the interviewees are allowed to answer the questions by themselves

according to the *self-administration* technique, therefore, the process of data collection will undergo 3 months' time to complete. For this research, it is conducted from May 2013, to August 2013. The research will use *online survey* and *pen-and-paper survey* together to target the samples broadly.

3. Population and Sample

The target samples for this survey are Thai males and females who were born during 1968-1998, more popularly known as Generation X and Y. The important criteria which the candidates must have includes; 1) 15-45 years old Thai residents 2) Graduated to at least lower secondary school level (Grade 9) 3) Thai native speakers. 4) Active on at least one social network account, like Facebook, Twitter, Instagram, YouTube or Flickr. 5) Must activate their social networks at least one time in a week. These principles which the author solely focuses on will guarantee the sample's reading literacy and understanding of the presentations in the questionnaire. Moreover, this group of population is chosen as the samples because they are the three biggest portion of Thailand Facebook users who both have the chance to see social campaign messages in both pure texts and infographics, and are also considered the direct target audience for many campaign marketers. Therefore, these sample groups are selected due to higher chances of exposure to infographics and text which eligible them to comprehend the concept. To support this, a study by the *Pew Research Center* about Facebook user's behavior in spending time on social media revealed that nearly 70% of its users are college students with almost 1 out of 3 people visiting Facebook several times a day. Furthermore, Visual.ly, the infographic online community, claimed that infographic's popularity is soaring because of social media. The largest group of Thai social network users is between 18 to 24 years old (33 percent), followed by 25-34 years old (29 percent) and 35-44 years old (11 percent) derived from *Socialbakers*, the well-known provider of *social media analytic tools, statistics and metrics* (Figure 3.1). In addition, the total population in the 15 to 45 year old age range is 32,509,773 according to The Office of The Basic Education Commission (*Socialbakers, 2013*) (Figure 3.2).

Figure 16 : User Age Distribution



Source : Socialbaker (<http://www.socialbakers.com/facebook-statistics/thailand>)

Table 4 : Total Population between 15 to 45 years old in Thailand

อายุ	คน	อายุ	คน
15	971,525	31	1,068,851
16	966,903	32	1,096,385
17	956,845	33	1,110,546
18	956,473	34	1,114,836
19	962,017	35	1,116,100
20	969,510	36	1,119,649
21	974,853	37	1,125,457
22	975,204	38	1,135,400
23	968,445	39	1,147,887
24	955,535	40	1,158,826
25	940,707	41	1,165,819
26	931,093	42	1,171,566
27	934,963	43	1,175,851
28	957,137	44	1,177,925
29	992,201	45	1,178,636
30	1,032,628	Total	32,509,773

Source : Office of The Basic Education Commission

The sample size of 400 people is selected based on the Yamane's formula (1967). According to Yamane's formula, the research provide the conditions at 95 percent confidence level and 5 percent margin of error which makes it one of the acceptable standard levels of accuracy and validity that are widely use in researches.

Yamane's Formula

$$n = \frac{N}{1 + (Ne^2)}$$

n = Sample Size
 N = Population Size
 e = Margin of Error

Applied to the research sample

$$N = \frac{32,509,773}{1 + [32,509,773 (0.05)^2]}$$

$$= 399.99$$

Therefore, the sample sizes that the author decided to use is 400 people.

4. Sampling Techniques

Non-probability sampling technique is applied to collecting the data of this research. In addition, Sampling techniques used are *purposive sampling* and *volunteer sampling*. In terms of purposive sampling, the author will select only samples who meet the criteria claimed in **Population and Sample** section to answer the questions. The advantage of using this kind of techniques is that the author will get the sample that match with the criteria if the author knows the sample characteristic well. As for the volunteer sampling, the author will post an announcement of this survey to invite people to the questionnaire link. However, the samples that do not pass the criteria will be cut from the evaluation procedure and the report findings. Moreover, a combination of *online survey* and *pen-and-paper survey* for data collection in each sampling techniques is used to enable wider range of the questionnaire distribution. In online research, the candidates need to answer the entire survey before submitting due to the program setting. The only the valid and completed questionnaire that meet the objectives answered by the respondents will be collected and count.

5. Research Instrument

Questionnaire is the appropriate instrument for data collection in this research as it will allow the respondents to answer all questions by themselves (Self-Administration). The questions in the survey will mainly revolve on the contents of social campaigns. This category of infographics is chosen because; 1) This category contains complicated terms and vocabularies, 2) it is currently the popular trend in Thailand and 3) the information on this category is useful for the general society. It is also important to pointed that this survey will include three social-related infographics as follows; 1) social health content – “ Fresh Water’ is the best ” by Thai Health Promotion Foundation, 2) social safety content – “ Helmet saves life ” by Matichon Newspaper (Infographic Thailand, 2011) and 3) social green conservative content – “ How long does it take to dispose ? ” by Sciencelearn Organization (InfographicMOVE, 2012). All three campaigns will be used to examine the samples’ Attitude, Understanding and Intention to Change behavior in this study. Additionally, both informative and persuasive messages will be contained within these infographics. The questionnaire is divided into 3 parts explained in the paragraphs below.

For the *first* part of the questionnaire (Demographic and General Information), the questions ask about the respondent’s personal profile such as gender, education, age, income and social media account. It will also look into their social media behavior such as how many times they use social network in a week. The purpose of this section is to screen out the interviewees that do not match the objectives/criteria given in the methodology (Screening Questionnaire). The *check lists* technique is applied to this personal information part therefore allowing the candidates to choose only one answer from the question’s given choices.

For the *second* part of the questionnaire (People’s attitudes towards Infographic and Texts), the questions are constructed towards Perception which are Attitude, Understanding, and Intention to Change behaviors. In this section, the respondents will decide from three campaign pictures of the same contents, differentiate only by the amount graphics contained in each

pictures (Graphic Content over 60%, Graphic Content of 30-60% and Graphic Content of 0% or pure texts). The Rating Scale (5-point scale) will be used to measure the Attitudes sections, allowing answers to be chosen through given rates after viewing all three infographic level of pictures.

For the *third* part of the questionnaire (People's opinions towards infographic and Text), the respondents will answering open-ended questions about their opinions on the infographic style that they considered to be the most effective for stimulating Understanding and Intention to Change behaviors.

Justifying the quality of the questionnaire in terms of validity and reliability, the questions are adapted from related topics, consulted by statistical research experts to review the content validity, language and vocabularies before its data collecting distribution. Moreover, a pilot survey was conducted to test the questions and eliminate mistakes which may occur in the real test. After the pilot survey was tested, the reliability of each variable in the questionnaire is calculated by The Statistical Package for the Social Sciences with the outcomes as follows:

The reliability score for the main information part "People's attitudes towards infographics and texts" (45 items) is 0.895.

All A presentation style (Pure Text) social campaigns; the reliability score of attitude A question (6 items) is 0.81, the reliability score of understanding A (6 items) is 0.89 and the reliability score of intention to change behavior A (3 items) is 0.82.

All B presentation style (Graphic Content of 30-60%) social campaigns; the reliability score of attitude B question (6 items) is 0.71, the reliability score of understanding B (6 items) is 0.79 and the reliability score of intention to change behavior (3 items) B is 0.85.

All C presentation style (Graphic Content over 60%) social campaigns; the reliability score of attitude C question (6 items) is 0.84, the reliability score of understanding C (6 items) is 0.82 and the reliability score of intention to change behavior C (3 items) is 0.70.

6. Procedures for analyzing data and Data Presentation

After the data collection of 400 samples is completed, the raw data is analyzed using SPSS. The statistical calculation is conducted by using ‘*descriptive statistics*’ and ‘*inferential statistics*’ which allow the information to be sorted, arranged into statistical analyses such as Percentage, Means, Standard Deviation and Frequency Distribution. Moreover, the data analyzing process is divided into four parts; firstly, Demographic and General Information, Attitude, Opinions and Multiple Regression Analysis. It is important to note that all questions in the questionnaire are coded in order to categorize the variables before calculating in SPSS. The results from SPSS will be presented in the form of descriptive statistical analysis, for example, the questions regarding demographic information will be analyzed by using statistic Graphs, tables and pie charts. As for the Attitude results, the author will summarize and display statistical data such as Means, Standard Deviation and Percentage with explanations. And lastly, the opinionated answers to the open-ended questions section will be listed with each picture. In addition, analytical explanation for the respondent’s preferred presentation style will be given together with the score ranking of each picture.

The research of “Thai people’s attitudes toward infographic and Text as a mean of communication for social campaigns” will use one independent variable and four dependent variables.

Dependent Variables : Intention to change behaviors

Independent Variable : Attitude and Understanding

7. Evaluation

The statistic results that were calculated by the program will be used to make evaluations in the form of *descriptive statistical analysis* and *inferential statistic*. The below will show the explanation of what the finding will be analyzed and the indicator scale that will use in the research.

1. For *descriptive statistical analysis*, the author will show the results by using Frequency, Percentage, Mean and Standard Deviation of each question in order to explain the general information of the findings.

2. The second part of the statistical calculation is the *inferential statistical analysis*. The use of the multiple regression analysis help strengthen the findings and result reliability to look into the relationships between certain groups of variables before analyzing and summarizing the final result. Moreover, 5-point Likert Scales is used to determine the result as shown below:

5-Point Likert Scales

Level of Satisfaction	Score
Strongly Agree	5.00
Agree	4.00
Neutral	3.00
Disagree	2.00
Strongly Disagree	1.00

After the data collection undergo calculation from SPSS computer software, the results from SPSS are needed for inferential statistic which is calculated by Best (1977), another scoring scale to decode the data. Best's (1997) formula specified the highest score to the lowest score with interval as follows:

Scoring Scale with Interval for inferential

Definition	Scoring Range
Strongly Agree	5.00 – 4.21
Agree	4.20 – 3.41
Neutral	3.40 – 2.61
Disagree	2.60 – 1.81
Strongly Disagree	1.80 – 1.00

Subsequently, the relationship between the groups of the result is determined by using Multiple Regression Analysis's score displaying the relations between each variable as the table below:

Pearson Product-Moment Correlation coefficient Measurement (R)

Scoring Scale	Meaning
1.00 – 0.80	<i>Very High Association</i>
0.79 – 0.60	<i>High Association</i>
0.59 – 0.40	<i>Normal Association</i>
0.39 – 0.20	<i>Low Association</i>
0.19 – 0.00	<i>Very Low Association</i>

Lastly, the supportive reasons for the correlation of each variable received in the 4th part of the questionnaire (open-ended question) will be combined from all the findings to further explaining the result of the relationships of the variables.

8. Limitations

Several problems have surfaced during the research's data gathering procedures. Firstly, high costs became an issue for producing the questionnaires as the infographic styles in the survey is needed to be printed out on full-color pages for pen-and-paper survey. Secondly, for the online survey, some of the respondents commented that they could not access the survey's website due uncooperative internet speed. Thirdly, as the research is based on graphic pictures, different computer monitors (displayed screen) could not display the same pixel and accurate colors. Moreover, candidates using computer monitors less than 19 inches commented on the size of the pictures being relatively small for them to read the infographic details. Fourthly, a "zoom-in" function cannot be provided for the pictures as the infographics are presented in the form of images on the questionnaire paper or screen. And finally, the author provide only Samsung Galaxy S4 infographic theme which is the smartphone that can provide the display screen that not too big or small for reading the infographics and texts. The other people that do not use this phone or similar mobile phone series may have bias when answering the question.

Chapter IV

ANALYSIS OF COLLECTED DATA

This chapter discusses the findings from the data collection gathered from the questionnaire survey of 400 samples. They are divided mainly in 4 parts where descriptive analysis and regression analysis are used to interpret the information. In addition, Frequency, Means, Standard Deviation, Percentage and other relevant methods are used to illustrate the descriptive analysis findings. For the regression analysis, the author will examine and approach the data by looking into the relationships among the three variables which are; Attitude, Understanding and how the two factors influence on Intention to Change behavior variable with a 0.05 level of significant. Lastly, the results of the qualitative research section will be used to elaborate on the results gained from the descriptive and regression analyses.

Therefore, the research results consisting of 4 relevant parts are divided as the following:

Part 1 : Demographic and General Information

Part 2 : People's attitudes towards Infographics and Texts

Part 3 : People's opinions towards Infographics and Texts

Part 4 : Multiple Regression Analysis

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Part 1 : Demographic and General Information

Table 5 : The Percentage of Group Sample by Gender

Gender	Frequency	Percent
Male	211	52.7
Female	189	47.3
Total	400	100.0

Table 4.1 summarizes the information of the 400 samples participated in the research. There are 211 males (52.7 percent) and 189 female (47.3 percent). Therefore, the number of males participated in this research is slightly higher than the number of females.

Figure 17 : The Percentage of Group Sample by Gender

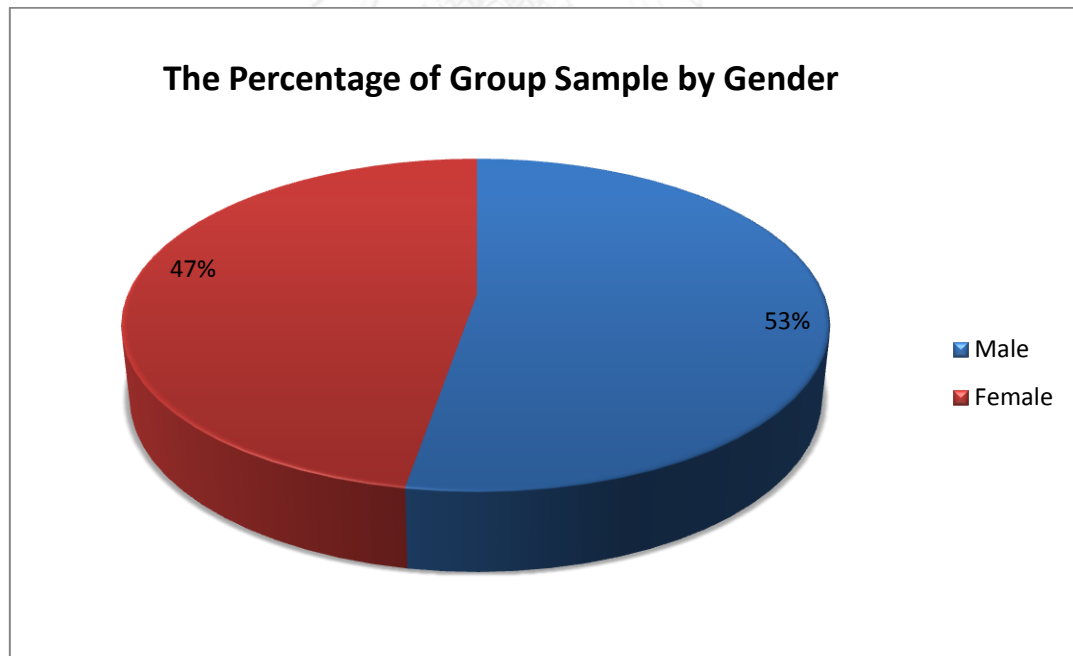


Table 6 : The Percentage of Group Sample by Age

Age	Frequency	Percent
15 – 22 years old	113	28.2
23 – 30 years old	196	49.0
31 – 38 years old	52	13.0
39 – 45 years old	39	9.8
Total	400	100.0

Table 4.2 displays 4 different sample groups categorized primarily by age ranges. The results show that almost half of the samples are between the age range of 23 – 30 year-olds or 49.0 percent (196 people). The second place belongs to the 15-22 year-olds age group with 28.2 percent (113 people). While the two last groups consisted of over 30 year-olds can be combined to 22.8 percent (91 people).

Figure 18 : The Percentage of Group Sample by Age

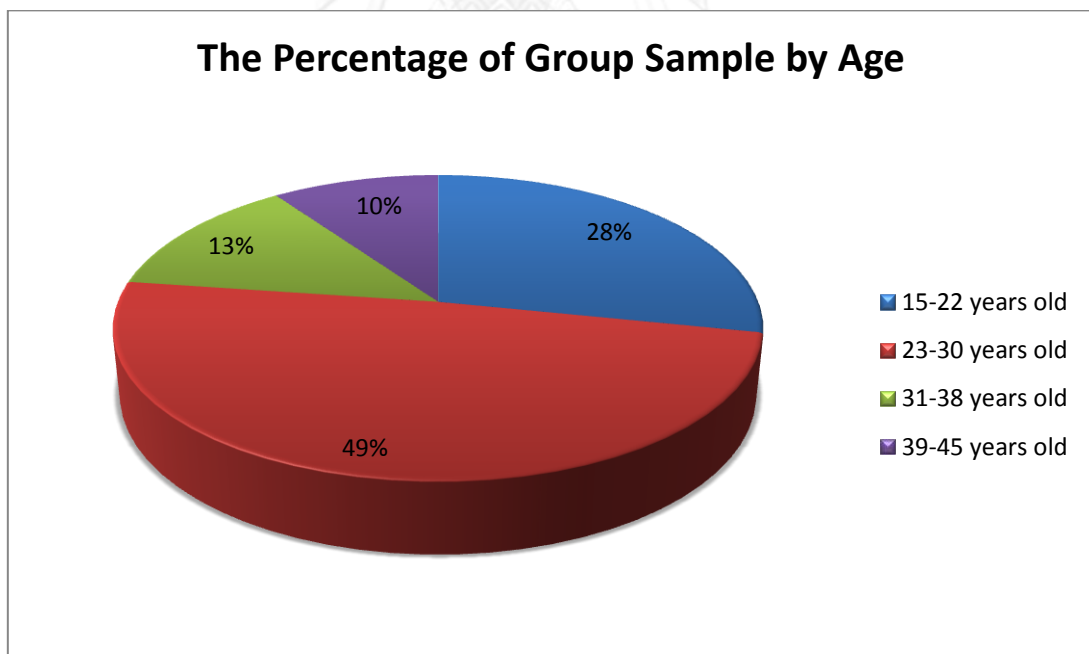


Table 7 : The Percentage of Group Sample by Education Level

Education Level	Frequency	Percent
High School	41	10.3
Bachelor's Degree	248	62.0
Master's Degree	69	17.2
Doctor's Degree	14	3.5
College or Vocational Diploma	28	7.0
Total	400	100.0

Table 4.3 displays 4 different sample groups categorized primarily by education. The majority of the samples are people who are studying or have graduated at Bachelor's Degree (62 percent) followed by 17.2 percent in Master's Degree, 10.3 percent in High School, and 7 percent in Vocational Diploma. The smallest group is Doctor's Degree with only the percentage of 3.5. This information is used to guarantee an acceptable level of literacy.

Figure 19 : The Percentage of Group Sample by Education Level

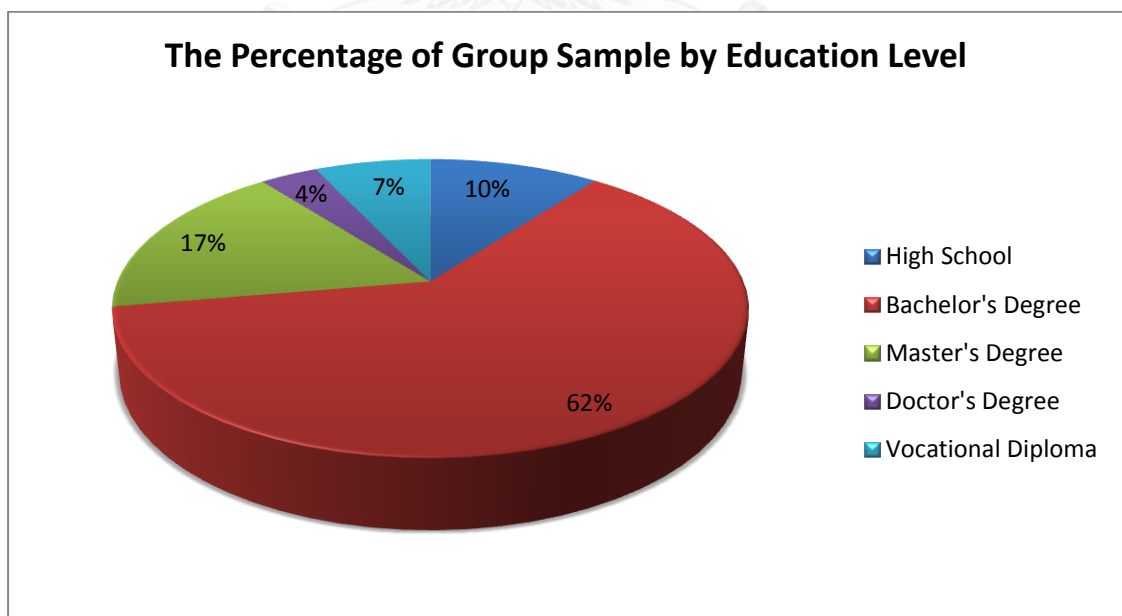


Table 8 : The Percentage of Group Sample by Occupation

Occupation	Frequency	Percent
Student	160	40.0
Government Officer	30	7.5
Office Worker	120	30.0
Business Owner	40	10.0
Trader	28	7.0
Others	22	5.5
Total	400	100.0

Table 4.4 shows the percentage of group sample categorized by their careers. The majority group of the respondents is made up of students with the percentage of 40. It is important to note that the student group in this research includes High School Level, Undergraduate level, Graduate Level and Ph.D. Level. The 2nd most common group is office workers with the percentage of 30 followed by 10 percent of business owners. Government officers, Traders and other minor groups made up less than 10 percent.

Figure 20 : The Percentage of Group Sample by Occupation

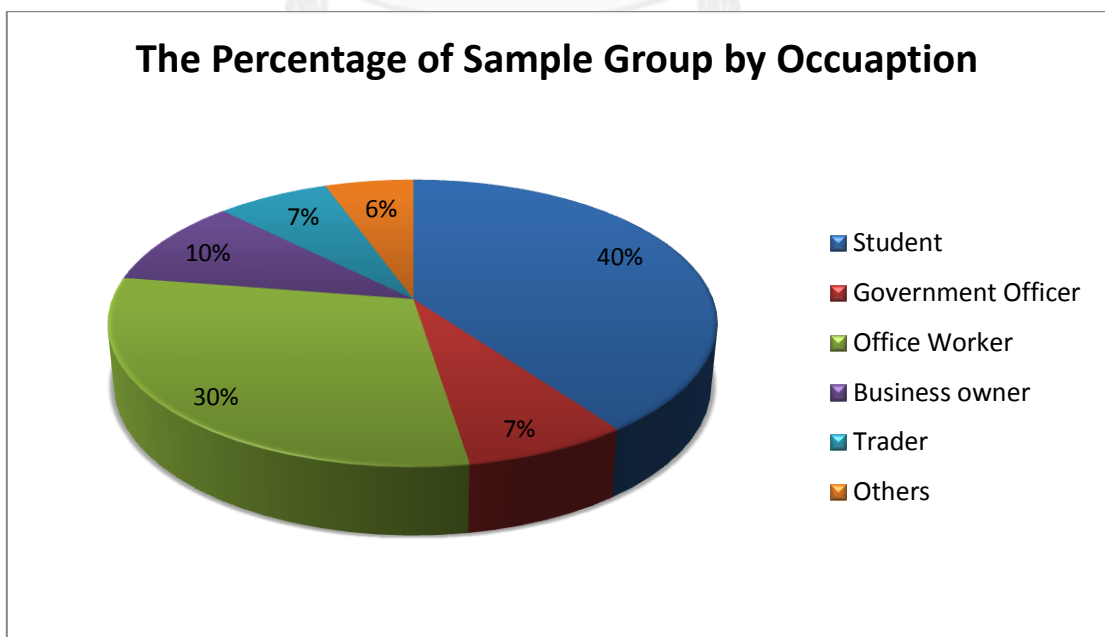


Table 9 : The Percentage of Group Sample by Income Per Month (Baht)

Income Level (Baht)	Frequency	Percent
Less than 5,000	57	14.3
5,000 – 10,000	77	19.2
10,001 – 15,000	58	14.5
15,001 – 20,000	64	16.0
20,001 – 25,000	57	14.2
More than 25,000	87	21.8
Total	400	100.0

Table 4.5 displays the respondents' monthly income level in Thai baht currency. The majority group consisted of 21.8 percent of samples with income over 25,000 baht followed by the 19.2 percent of people with income between 5,000-10,000 baht and 16 percent of people earning 15,001-20,000 baht per month. The three remaining groups consisted of 14 percent of the overall samples are those with income less than 5,000 baht, 10,001-15,000 baht, and 20,001-25,000 baht .

Figure 21 : The Percentage of Group Sample by Income Per Month (Baht)

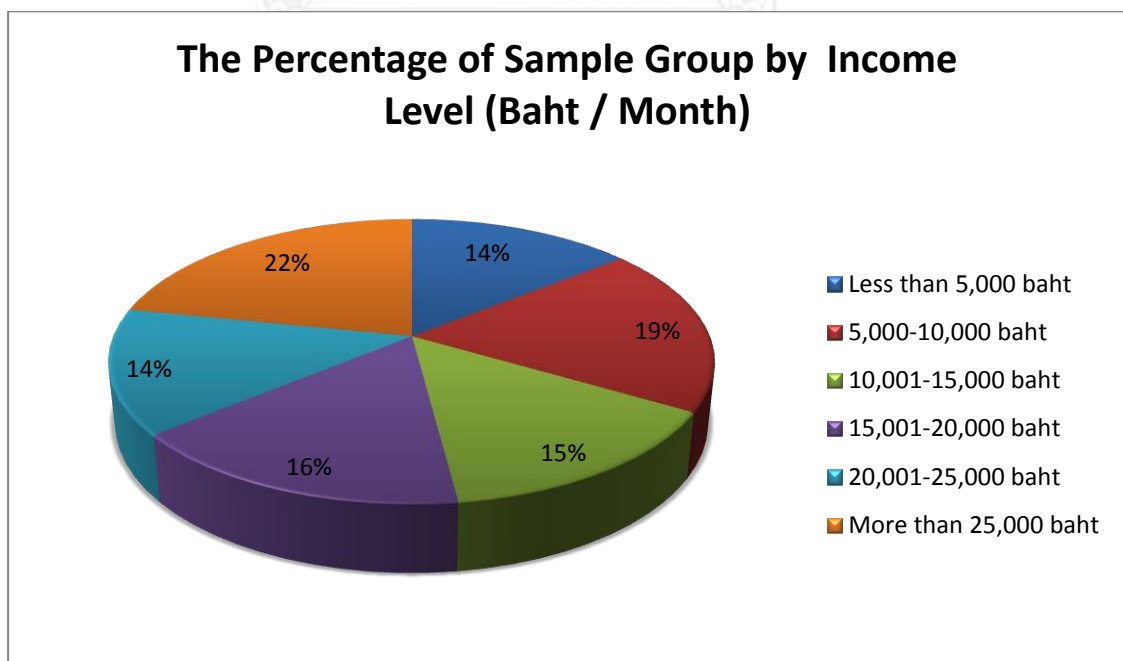


Table 10 : The Percentage of Group Sample by Social Media Experience

Social Media Experience	Frequency	Percent
Yes	400	100.0
No	0	0.0
Total	400	100.0

Table 4.6 confirms that all respondents have experience with social media. Significantly for this research, “social media experience” means the samples they have used social media or have at least one individual account on social media platform.

Figure 22 : The Percentage of Group Sample by Social Media Experience

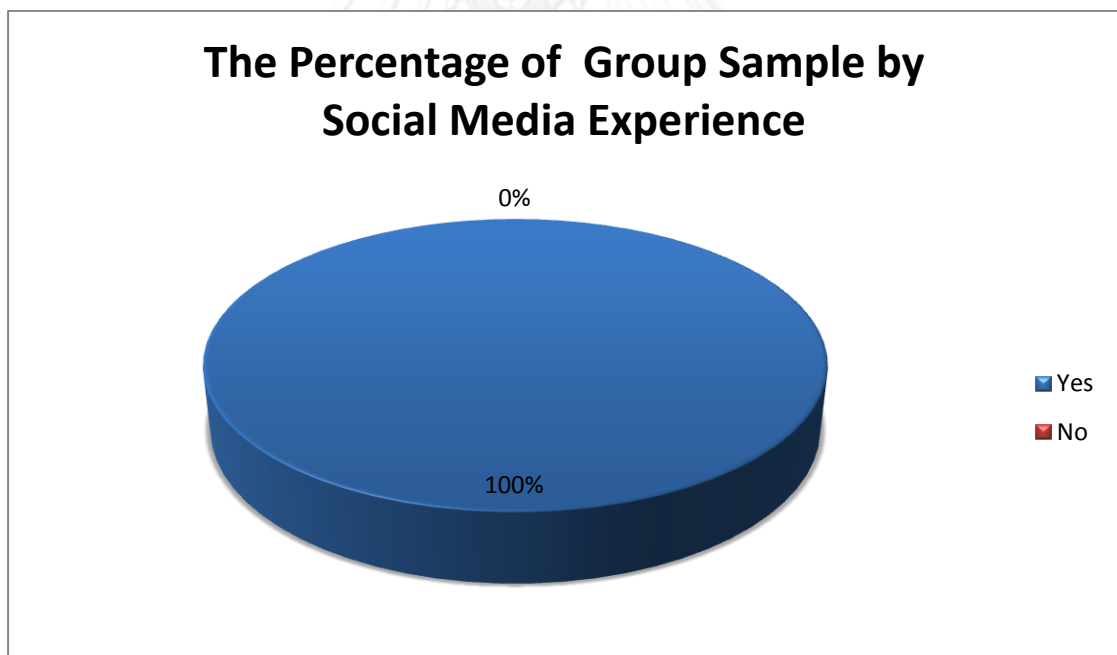


Table 11 : The Percentage of Social Media Account Owned by the Group Sample

Social Media Account	Frequency	Percent of Cases	Overall Percent
Facebook	396	99.0	33.5
Instagram	225	56.3	19.1
YouTube	262	65.5	22.2
Twitter	124	31.0	10.5
MySpace	22	5.5	1.9
Flickr	10	2.5	0.8
Tumblr	25	6.3	2.1
Hi5	76	19.0	6.4
Weblog or Blog	25	6.3	2.1
Others	16	4.0	1.4
Total	1,181 (Accounts)	(n = 400)	100.0

Table 4.7 displays the total number of social media accounts owned by the respondents. The maximum frequency of each account is 400 equivalent to the number of sample (n). There are a total of 1181 social media accounts out of all 400 respondents. Facebook is the most popular social media account in this research, as counted 396 frequencies (99.0 %), followed by YouTube (65.5%), Instagram (56.3%) and Twitter (31.0%) respectively. As for the rest of result, Hi5, My Space, Flickr, Tumblr and Blog gathered less than 10 percent. Other noteworthy social platforms which the respondents suggest are Google+, Path and Line (Timeline).

Figure 23 : The Percentage of Social Media Account Owned by the Group Sample

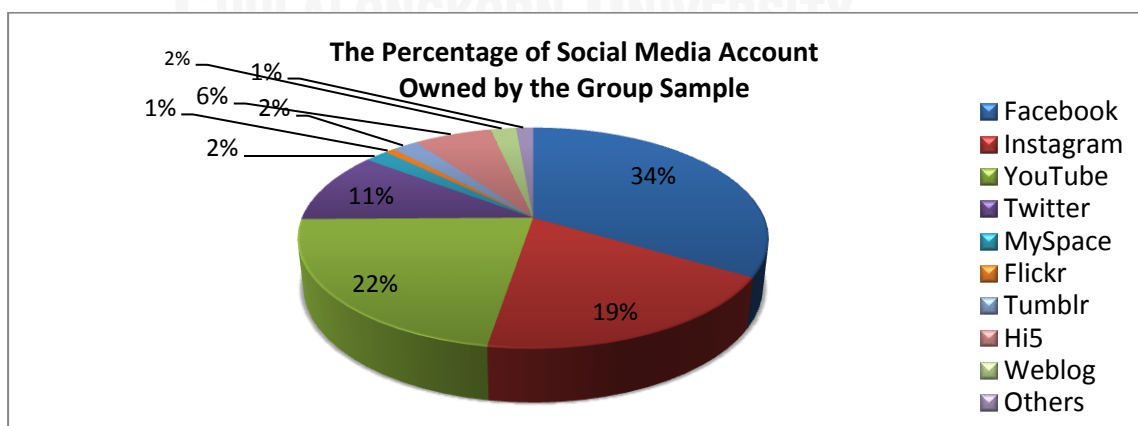


Table 12 : The Percentage of Group Sample by Frequency Use of Social Media within a Week

Day	Frequency	Percent
Everyday	329	82.2
5 – 6 days per week	55	13.7
3 – 4 days per week	13	3.3
1 – 2 days per week	3	0.8
Total	400	100.0

Table 4.8 illustrates weekly frequency use of social media of all respondents. Most respondents use social media everyday as a result of 329 people or 82.3 percent. Second most common response is 5-6 days (13.7%), followed by 3-4 days (3.3%) and 1-2 days (0.8%).

Figure 24 : The Percentage of Group Sample by Frequency Use of Social Media within a Week

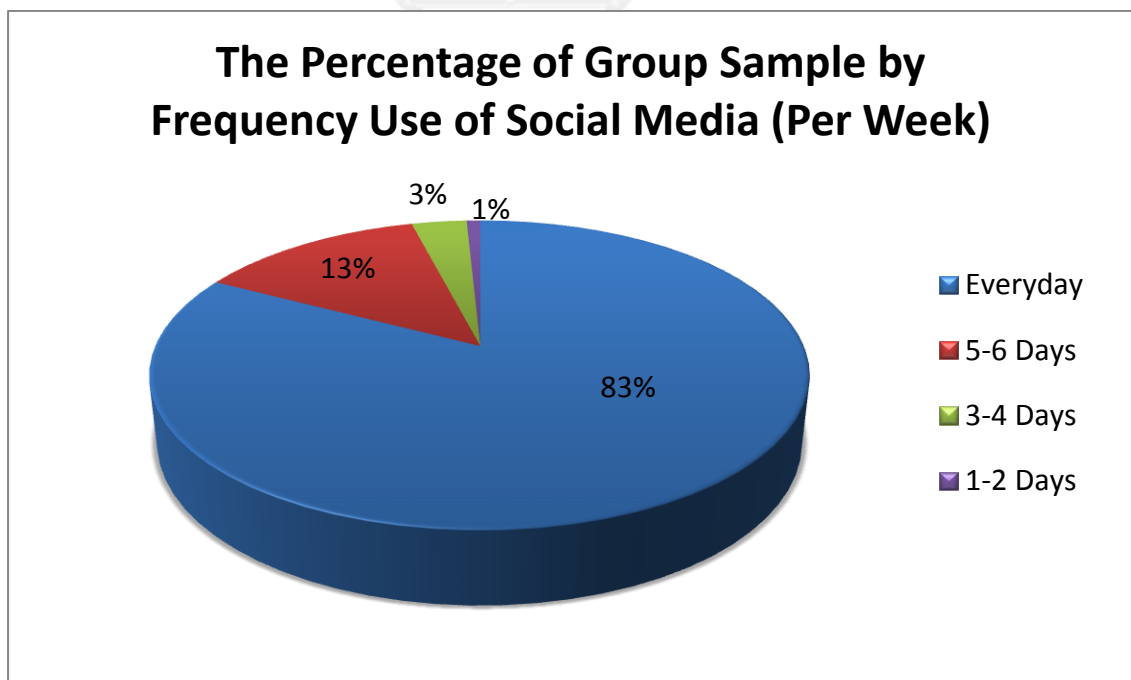


Table 13 : The Percentage of Group Sample by the Most Frequency Use of Social Media

Social Media Account	Frequency	Percent
Facebook	348	87.0
Instagram	30	7.5
YouTube	14	3.5
Twitter	3	0.7
MySpace	0	0.0
Flickr	0	0.0
Tumblr	0	0.0
Hi5	1	0.3
Weblog or Blog	1	0.3
Others	3	0.7
Total	400	100.0

Table 4.9 indicates that from 400 samples participated in the survey, Facebook received the highest frequency (87%) followed by Instagram (7.5) and YouTube (3.5). The remaining social media platforms scored less than 1 percent while some didn't have any frequency at all.

Figure 25 : The Percentage of Group Sample by the Most Frequency Use of Social Media

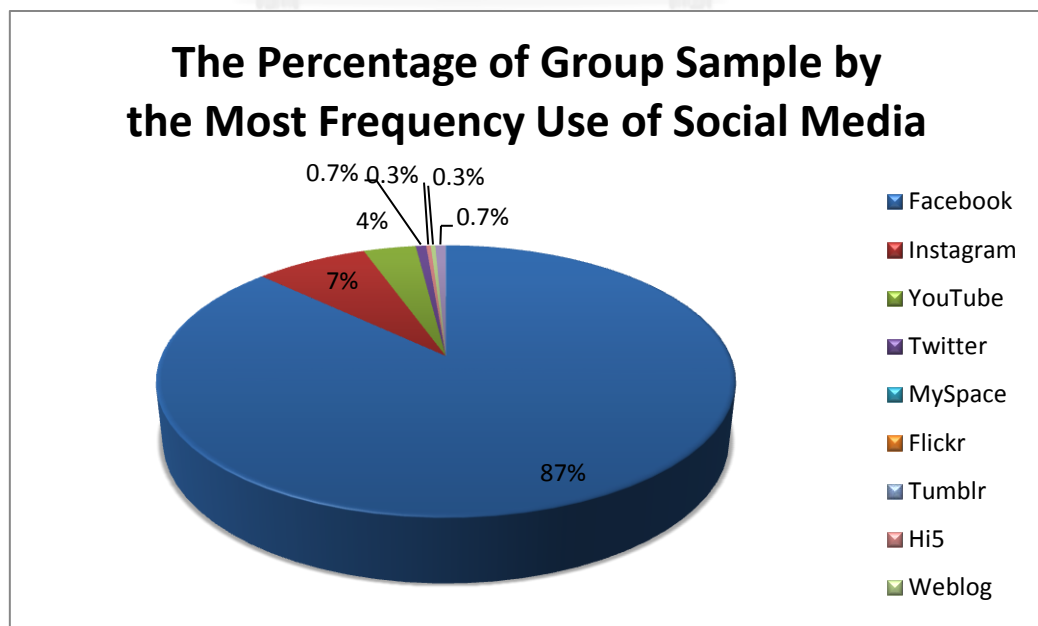
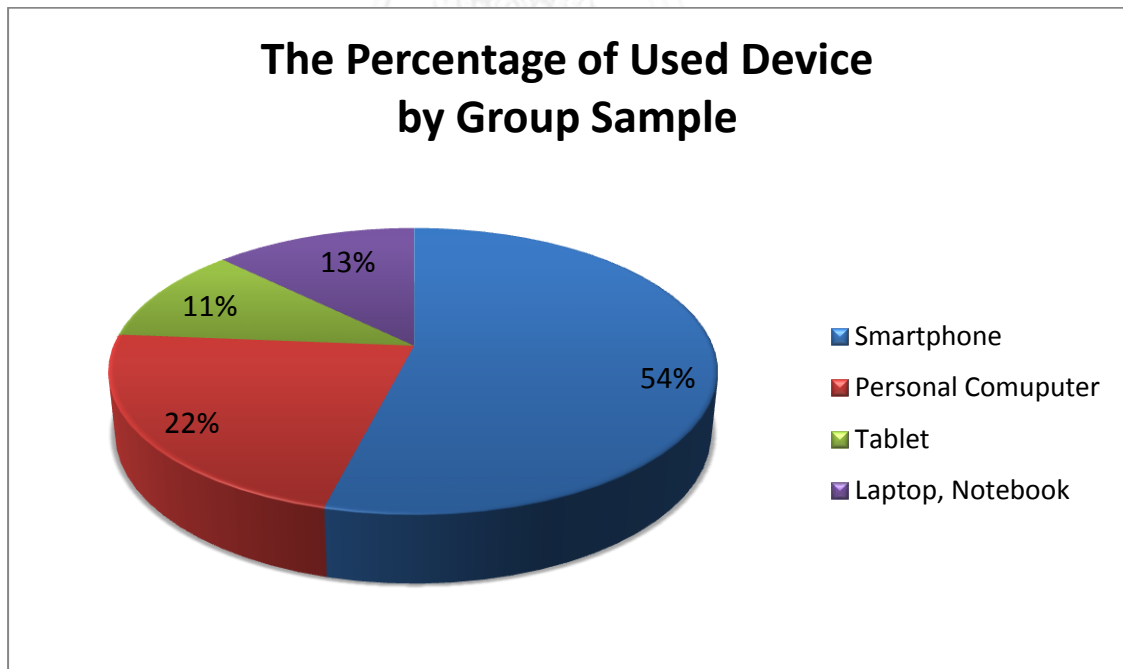


Table 14 : The Percentage of Used Device by Group Sample

Device	Frequency	Percent
Smartphone	216	54.0
Personal Computer (PC)	89	22.3
Tablet	44	11.0
Laptop, Notebook	51	12.7
Total	400	100.0

Table 4.10 displays the percentage of the most commonly-used device which the samples used to access social media. The most popular device is revealed to be Smartphone (54 %) followed by Personal Computer (22.3%). Laptop (notebook) and Tablet scored similarly with 12.7 and 11.0 percent.

Figure 26 : The Percentage of Used Device by Group Sample



Part 2 : People's Attitudes towards Infographics and Text

Table 15 : The Results from Social Health Content - " Fresh Water is the best " by Thai Health Promotion Foundation

No	Question	Attitude Level* (Likert Scale)					Total	Mean (\bar{X})	Standard Deviation (S.D.)	Meaning
		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree				
		1	2	3	4	5				
1	You want to read the picture A	74	141	121	45	19	400	2.49	1.06	Disagree
		18.5	35.2	30.2	11.3	4.8	100%			
2	You can quickly understand the picture A	45	134	139	58	24	400	2.71	1.04	Neutral
		11.3	33.5	34.7	14.5	6.0	100%			
3	You can clearly and easily understand the picture A	39	110	140	80	31	400	2.89	1.08	Neutral
		9.7	27.5	35.0	20.0	7.8	100%			
4	You like the picture A	64	126	124	66	20	400	2.63	1.09	Neutral
		16.0	31.5	31.0	16.5	5.0	100%			
5	You intend to change your behavior following the picture A (Drink more fresh water)	29	105	115	89	62	400	3.13	1.18	Neutral
		7.3	26.3	28.8	22.3	15.5	100%			
Overall Mean of The picture A – Pure Text or Graphic Content of 0 %							2.77	1.09	Neutral	
6	You want to read the picture B	1	13	60	172	154	400	4.16	0.81	Agree
		0.3	3.2	15.0	43.0	38.5	100%			
7	You can quickly understand the picture B	2	9	55	195	139	400	4.15	0.77	Agree
		0.5	2.3	13.8	48.7	34.7	100%			
8	You can clearly and easily understand the picture B	3	8	61	173	155	400	4.17	0.81	Agree
		0.8	2.0	15.3	43.2	38.7	100%			
9	You like the picture B	3	9	49	158	181	400	4.26	0.82	Strongly Agree
		0.8	2.3	12.3	39.4	45.2	100%			
10	You intend to change your behavior following the picture B (Drink more fresh water)	6	20	89	138	147	400	4.00	0.96	Agree
		1.5	5.0	22.3	34.5	36.7	100%			
Overall Mean of The picture B – Graphic Content of 30-60 %							4.15	0.83	Agree	
11	You want to read the picture C	63	106	111	72	48	400	2.84	1.24	Neutral
		15.8	26.5	27.7	18.0	12.0	100%			
12	You can quickly understand the picture C	54	120	109	69	48	400	2.90	1.21	Neutral
		13.5	30.0	27.2	17.3	12.0	100%			
13	You can clearly and easily understand the picture C	49	107	132	60	52	400	2.90	1.19	Neutral
		12.3	26.7	33.0	15.0	13.0	100%			
14	You like the picture C	69	94	126	65	46	400	2.81	1.23	Neutral
		17.2	23.5	31.5	16.3	11.5	100%			
15	You intend to change your behavior following the picture B (Drink more fresh water)	47	79	148	72	54	400	3.02	1.18	Neutral
		11.8	19.7	37.0	18.0	13.5	100%			
Overall Mean of The picture C – Graphic Content over 60%							2.89	1.21	Neutral	

According to Table 4.11, it shows the data from Social Health Content section which is “Fresh Water is the best” campaign from Thai Health Promotion Foundation. The social health content involves three forms of presentation style which are the Picture A (Pure Text), the Picture B (Graphic Content of 30-60%) and the Picture C (Graphic Content over 60%). Most questions regarding picture A scored lower than 3 as the means presented, except for the last question involving their behavior (drink more fresh water) with the means of 3.13. The respondents explained that they did not want to read picture A as question No.1’s mean scored 2.49 (Disagree). However, the overall mean of the picture A is 2.77 (Neutral). For the picture B, the questions from no. 6 to no.10 received the mean score over 4. The respondents mostly preferred this kind of picture in the social health content as the mean score of the no.9 question is 4.26 (Strongly Agree). Moreover, it is the only picture in the social health content that scored in the Agree level in the overall mean of the picture with 4.15 points. As for the picture C, the results from the questionnaire are similar to picture A result. However, the overall of the picture C scored more positively than the picture A with the score of 2.89.

5-Point Likert Scales

Level of Satisfaction	Score
Strongly Agree	5.00
Agree	4.00
Neutral	3.00
Disagree	2.00
Strongly Disagree	1.00

Scoring Scale with Interval for inferential

Definition	Scoring Range
Strongly Agree	5.00 – 4.21
Agree	4.20 – 3.41
Neutral	3.40 – 2.61
Disagree	2.60 – 1.81
Strongly Disagree	1.80 – 1.00

Table 16 : The Results from Social Safety Content - “ Helmet saves life ” by Matchon Newspaper

No	Question	Attitude Level* (Likert Scale)					Total	Mean (\bar{x})	Standard Deviation (S.D.)	Meaning
		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree				
		1	2	3	4	5				
1	You want to read the picture A	34	111	158	78	19	400	2.84	0.99	Neutral
		8.5	27.7	39.5	19.5	4.8	100%			
2	You can quickly understand the picture A	27	127	152	73	21	400	2.84	0.98	Neutral
		6.8	31.7	38.0	18.2	5.3	100%			
3	You can clearly and easily understand the picture A	23	89	166	91	31	400	3.05	1.00	Neutral
		5.8	22.3	41.4	22.7	7.8	100%			
4	You like the picture A	23	94	179	85	19	400	2.96	0.93	Neutral
		5.8	23.4	44.7	21.3	4.8	100%			
5	You intend to change your behavior following the picture A (Always wear the helmet)	18	77	153	100	52	400	3.23	1.05	Neutral
		4.5	19.3	38.2	25.0	13.0	100%			
Overall Mean of The picture A – Pure Text or Graphic Content of 0 %								2.98	0.99	Neutral
6	You want to read the picture B	2	16	87	182	113	400	3.94	0.84	Agree
		0.5	4.0	21.8	45.4	28.3	100%			
7	You can quickly understand the picture B	1	18	81	192	108	400	3.97	0.82	Agree
		0.3	4.4	20.3	48.0	27.0	100%			
8	You can clearly and easily understand the picture B	1	17	83	168	131	400	4.03	0.85	Agree
		0.3	4.3	20.7	42.0	32.7	100%			
9	You like the picture B	1	16	85	148	150	400	4.08	0.88	Agree
		0.3	4.0	21.2	37.0	37.5	100%			
10	You intend to change your behavior following the picture B (Always wear the helmet)	3	17	94	139	147	400	4.03	0.92	Agree
		0.8	4.3	23.5	34.7	36.7	100%			
Overall Mean of The picture B – Graphic Content of 30-60 %								4.01	0.86	Agree
11	You want to read the picture C	20	80	109	115	76	400	3.37	1.15	Neutral
		5.0	20.0	27.3	28.7	19.0	100%			
12	You can quickly understand the picture C	12	107	107	113	61	400	3.26	1.10	Neutral
		3.0	26.8	26.7	28.2	15.3	100%			
13	You can clearly and easily understand the picture C	13	80	135	107	65	400	3.33	1.07	Neutral
		3.3	20.0	33.7	26.7	16.3	100%			
14	You like the picture C	18	81	129	97	75	400	3.33	1.13	Neutral
		4.5	20.3	32.2	24.2	18.8	100%			
15	You intend to change your behavior following the picture B (Always wear the helmet)	11	67	134	117	71	400	3.43	1.05	Agree
		2.8	16.8	33.4	29.2	17.8	100%			
Overall Mean of The picture C – Graphic Content over 60%								3.34	1.10	Neutral

According to Table 4.12, it shows the data from Social Safety Content section which is “ Helmet saves life” campaign from Matichon Newspaper. Like the first section, the content involves three forms of presentation style which are Picture A (Pure Text), Picture B (Graphic Content of 30-60%) and Picture C (Graphic Content over 60%). However, the numbers of infographic used are not exactly the same. 3 out of 5 questions in Picture A scored lower than 3 as the means are presented which are the results from the question no.1, no.2 and no.4. Even though the respondents took the time to read Picture A, they understand what Picture A wanted to convey in the message as shown in the result from question no.3. In the last question involving their behavior (Always wear the helmet) the means score is 3.23. However, the overall mean of the picture A is 2.98 (Neutral). For the picture B, the respondents mostly preferred this kind of picture in the social safety content because the overall mean of Picture B is the only picture in the social safety content that reached the Agree level in the overall mean of the picture with 4.01 points. For the picture C, the average results from the question are ranged from 3.2 to 3.5 with only question no.15 asking about Intention to Change behavior reaching the Agree level. While Picture C scored more positively than Picture A nevertheless the overall mean of Picture C is neutral like Picture A.

5-Point Likert Scales

Level of Satisfaction	Score
Strongly Agree	5.00
Agree	4.00
Neutral	3.00
Disagree	2.00
Strongly Disagree	1.00

Scoring Scale with Interval for inferential

Definition	Scoring Range
Strongly Agree	5.00 – 4.21
Agree	4.20 – 3.41
Neutral	3.40 – 2.61
Disagree	2.60 – 1.81
Strongly Disagree	1.80 – 1.00

Table 17 : The Results from Social Green Conservative Content - “ How long does it take to dispose ? ” by Sciencelearn ORG

No	Question	Attitude Level* (Likert Scale)					Total	Mean (\bar{X})	Standard Deviation (S.D.)	Meaning
		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree				
		1	2	3	4	5				
1	You want to read the picture A	48	115	136	81	20	400	2.78	1.06	Neutral
		12.0	28.7	34.0	20.3	5.0	100%			
2	You can quickly understand the picture A	27	107	142	92	32	400	2.99	1.04	Neutral
		6.8	26.8	35.4	23.0	8.0	100%			
3	You can clearly and easily understand the picture A	33	84	148	92	43	400	3.07	1.10	Neutral
		8.3	21.0	37.0	23.0	10.7	100%			
4	You like the picture A	36	98	146	92	28	400	2.95	1.06	Neutral
		9.0	24.5	36.5	23.0	7.0	100%			
5	You intend to change your behavior following the picture A (Use less foam and plastic material)	27	64	139	100	70	400	3.31	1.14	Neutral
		6.8	16.0	34.8	25.0	17.5	100%			
Overall Mean of The picture A – Pure Text or Graphic Content of 0 %								3.02	1.08	Neutral
6	You want to read the picture B	2	11	82	174	131	400	4.05	0.83	Agree
		0.5	2.8	20.5	43.4	32.8	100%			
7	You can quickly understand the picture B	1	13	64	188	134	400	4.10	0.80	Agree
		0.3	3.3	16.0	47.0	33.4	100%			
8	You can clearly and easily understand the picture B	1	9	68	158	164	400	4.19	0.81	Agree
		0.3	2.3	17.0	39.4	41.0	100%			
9	You like the picture B	1	11	70	154	164	400	4.17	0.83	Agree
		0.3	2.8	17.5	38.4	41.0	100%			
10	You intend to change your behavior following the picture B (Use less foam and plastic material)	3	19	74	148	156	400	4.09	0.91	Agree
		0.8	4.8	18.4	37.0	39.0	100%			
Overall Mean of The picture B – Graphic Content 30-60 %								4.12	0.84	Agree
11	You want to read the picture C	13	40	124	122	101	400	3.65	1.06	Agree
		3.3	10.0	30.9	30.5	25.3	100%			
12	You can quickly understand the picture C	3	59	121	124	93	400	3.61	1.02	Agree
		0.8	14.8	30.2	30.9	23.3	100%			
13	You can clearly and easily understand the picture C	8	39	135	129	89	400	3.63	1.00	Agree
		2.0	9.8	33.7	32.2	22.3	100%			
14	You like the picture C	9	48	127	119	97	400	3.62	1.05	Agree
		2.3	12.0	31.7	29.7	24.3	100%			
15	You intend to change your behavior following the picture B (Use less foam and plastic material)	7	32	131	125	105	400	3.72	1.00	Agree
		1.8	8.0	32.7	31.3	26.2	100%			
Overall Mean of The picture C – Graphic Content of 60%								3.65	1.03	Agree

Table 4.13 shows the data from Social Green Conservative Content section which is “How long does it take to dispose?” campaign from Sciencelearn Organization. Similarly, the content involves three forms of presentation style which are Picture A (Pure Text), Picture B (Graphic Content of 30-60%) and Picture C (Graphic Content over 60) but the numbers of infographic used are not exactly the same. For Picture A, the respondents voted for the neutral level with the overall mean of 3.02 (Natural). For Picture B and C, both reached the Agree level for all questions. Nevertheless, the overall mean of Picture B scored more positively than Picture C as shown in Table 4.13 with 4.12 points for Picture B and 3.65 point for Picture C. The means of all questions from Picture B scored over 4 points while the means of all question from Picture C scored less than 3 points. However, two of them are calculated to be in the Agree level.

5-Point Likert Scales

Level of Satisfaction	Score
Strongly Agree	5.00
Agree	4.00
Neutral	3.00
Disagree	2.00
Strongly Disagree	1.00

Scoring Scale with Interval for inferential

Definition	Scoring Range
Strongly Agree	5.00 – 4.21
Agree	4.20 – 3.41
Neutral	3.40 – 2.61
Disagree	2.60 – 1.81
Strongly Disagree	1.80 – 1.00

Table 18 : The Summarization of All Campaigns focusing on the Variables of the All Presentation Styles

Presentation Style	Question Code	Variable	Social Healthy Content	Social Safety Content	Social Green Conservative Content	Mean (\bar{X})	Meaning
Picture A (Pure Text)	Intend to Change Behavior A	Intention to change behavior A	3.13	3.23	3.31	3.22	Neutral
	Want to read A	Attitude A	2.56	2.90	2.86	2.77	Neutral
	Like to read A						
	Quickly Understand A	Understanding A	2.76	3.00	3.01	2.92	Neutral
Clearly Understand A							
Picture B (Graphic 30-60%)	Intend to Change Behavior B	Intention to change behavior B	4.00	4.03	4.09	4.04	Agree
	Want to read B	Attitude B	4.22	4.02	4.12	4.12	Agree
	Like to read B						
	Quickly Understand B	Understanding B	4.16	4.00	4.14	4.10	Agree
Clearly Understand B							
Picture C (Graphic over 60%)	Intend to Change Behavior C	Intention to change behavior C	3.02	3.43	3.72	3.39	Neutral
	Want to read C	Attitude C	2.82	3.35	3.63	3.27	Neutral
	Like to read C						
	Quickly Understand C	Understanding C	2.90	3.28	3.61	3.26	Neutral
Clearly Understand C							

Table 4.14 shows the result of all the campaigns solely focusing on the variables of the all presentation styles. The sum of the scores is counted as or under the same variables together before it is used to find the correlation. For example, the question that asks about “want to read” and “like to read” in the question code column are under the same attitude variable, therefore the scores of these two questions are summed up together and divided by the number of the questions. After this step is applied to all campaigns and the result is then divided by each kind of presentation style as shown in the table above. The result is then later used for SPSS to find the correlation among the dependent variable which is Intention to Change behavior and the independent variables, Attitude and Understanding.

Part 3 : People's Opinions towards Infographic and Text

Table 19 : The Percentage of Thai People's Opinions towards the Presentation Styles of Each Social Content

Kinds of Social picture	Presentation Style	Frequency	Percentage
Social Health Content	Picture A – Pure Text	15	3.8
	Picture B – Graphic 30–60 %	339	84.7
	Picture C – Graphic over 60 %	46	11.5
	Total	400	100
Social Safety Content	Picture A – Pure Text	35	8.8
	Picture B – Graphic 30–60 %	256	63.9
	Picture C – Graphic over 60 %	109	27.3
	Total	400	100
Social Green Conservative Content	Picture A – Pure Text	21	5.3
	Picture B – Graphic 30–60 %	260	65.0
	Picture C – Graphic over 60 %	119	29.7
	Total	400	100
Overall Social Content (Summary)	Picture A – Pure Text	71	5.9
	Picture B – Graphic 30–60 %	855	71.3
	Picture C – Graphic over 60 %	274	22.8
	Total	1200	100

Table 4.15 displays the percentage of Thai people's opinions towards the presentation styles (infographic and text) of all three social contents. For the social health content, the result shows that 339 people (84.7 percent) thought Picture B (Graphic Content 30 – 60%) is the most effective presentation style to communicate about social health content followed by Picture C with the percentage of 11.5 (46 people) and Picture A with the percentage of 3.8 (15 people). For the social safety content, the respondents also voted Picture B as the most effective presentation style with the percentage of 63.9 percent (256 people) followed by the picture C (27.3%) and Picture A (8.8%). For the social green conservative content, the majority (65%) has chosen Picture B as the most effective presentation style as well followed by Picture C (29.7%) and Picture A (5.3%). Lastly, the table shows the overall social content calculated by total sum of the three social contents above. From the 1200 frequencies (400 respondents), 855 frequency points (71.3%) voted Picture B as the most effective for social campaigns, followed by Picture C (22.8%) and Picture A (5.9%).

There are varieties of reasons which supported the result for Picture B. The respondents explained that Picture B has an appropriate mixed between the number of information texts and graphic images unlike Picture A which contains too much information texts or Picture C which has over-used graphic pictures.

Therefore, the result suggested Information texts and graphical pictures have their own advantages and disadvantages. Texts provide clearer information in comparison to the use of some graphical pictures. At the same time, clearer information from texts takes more time to read and is only slightly appealing to their attention. However, some of the respondents mentioned that the use of texts creates credibility and formality than the use of picture as they have strict grammar structures and rules of interpretation. Moreover, texts can specifically display a large number of data than graphical pictures that must display exact number of graphics. In contrast, the respondents noted that graphical pictures can draw people's attention much more than texts. They pointed out that the pictures can also make complicated information easier to understand as it can support texts information or can be self-explanatory, however, it can only be achieved with some types of graphics because one picture may be defined in many different ways. Other suggestions from respondents are that "even though using pictures to represent words can be appealing, people do not favor interpreting a lot of pictures, for example, the large number of teaspoons from the social healthy content - Picture C". Moreover, if the information involves large amount of picture explanation, it is better to use numerical texts to indicate it. Moreover, pictures have less language barrier that makes similar pictures widely used in many locations around the world.

To sum up the opinions from the samples group of 15-45 year-olds with the acceptable level of literacy and are constantly activate on their social media, the graphic content of 30-60 % (Picture B) is the best presentation style that received the most score. They suggested that both texts and graphic pictures will give the best performance if use them at the right place and time while using too much of both texts and pictures can cause negative effects of communication.

Part 4 : Multiple Regression Analysis

4.1 Multiple Regression Analysis (STEPWISE) : Picture A (Pure text)

Table 20 : Descriptive Statistics of the A Presentation Style

	Mean	Std. Deviation	N
Intention to change behavior A	3.22	.89	400
Attitude A	2.77	.70	400
Understanding A	2.92	.74	400

Table 4.16 shows the descriptive statistics of A presentation style in all social campaigns. For the all campaigns in this style, the average variable of Intention to Change behavior is 3.22, the average variable of Attitude is 2.77 and the average variable of Understanding is 2.92.

Table 21 : Correlations of the A Presentation Style

	Intention to change behavior B	Attitude A	Understanding A
Pearson Correlation	Intention to change behavior A	1.000	.516
	Attitude A	.516	1.000
	Understanding A	.461	.870
Sig. (1-tailed)	Intention to change behavior A	-	.000
	Attitude A	.000	-
	Understanding A	.000	.000
N	Intention to change behavior A	400	400
	Attitude A	400	400
	Understanding A	400	400

Table 4.17 shows the correlations of the A presentation style. The correlations of Attitude and Understanding towards Intention to Change behavior are *positive correlation*, or their relationship is direct variation. For Attitude variable, the level of correlation towards the dependent variable (intention to change behavior) is 0.516 with 0.01 level of significant. Understanding variable's level of correlation is 0.461 with 0.01 level of significant. Based on these numbers, we can concluded that there is a "normal association" or "normal relationship" among two independent variables and the dependent variable in the A presentation style and that there are statistically significant correlations between the variables.

Table 22 : Variables Entered / Removed of the A presentation Style

Model	Variables Entered	Variables Removed	Method
1	Attitude A	.	Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).

a. Dependent Variable: Intention to change behavior A

Table 23 : Model Summary of the A Presentation Style

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.516 ^a	.266	.264	.76206

a. Predictors: (Constant), Attitude A

Table 24 : ANOVA of the A Presentation Style

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	83.764	1	83.764	144.238	.000 ^a
	Residual	231.133	398	.581		
	Total	314.898	399			

a. Predictors: (Constant), Attitude A

b. Dependent Variable: Intention to change behavior A

Table 25 : Coefficients of the A Presentation Style

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.399	.156		8.955	.000
	Attitude A	.656	.055	.516	12.010	.000

a. Dependent Variable: Intention to change behavior A

Table 26 : Excluded Variables of the A Presentation Style

Model		Beta In	t	Sig.	Partial Correlation	Collinearity Statistics
						Tolerance
1	Understanding A	.051 ^a	.589	.556	.030	.243

a. Predictors in the Model: (Constant), Attitude A

b. Dependent Variable: Intention to change Behavior A

A stepwise multiple regressions above is conducted to evaluate whether both Attitudes and Understanding are necessary to predict the Intention to Change behavior after reading A presentation style (A stimulus). From the table 4.18, in Model 1, the analysis of Attitude entered into the regression equation. It is significantly related to Intention to Change behavior as the p value of the equation from the ANOVA table is less than 0.001 (Sig). The multiple correlation coefficients is 0.516 (R), indicating approximately 26.6% (R Square) of the variance of Intention to Change behavior could be accounted by Attitudes. Understanding does not continue to enter into the equation in Model 2 of the analysis because the p value (Sig.) of the Understanding variable in the A presentation style is 0.556. Therefore, the regression equation for predicting Intention to Change behavior of the A presentation is:

$$\text{Intention to Change behavior A} = 1.399 + (0.656 \times \text{Attitude A})$$

4.2 Multiple Regression Analysis (STEPWISE) : Picture B (Graphic Content of 30-60%)

Table 27 : Descriptive Statistics of the B Presentation Style

	Mean	Std. Deviation	N
Intention to change behavior B	4.04	.78	400
Attitude B	4.12	.60	400
Understanding B	4.10	.60	400

Table 4.23 shows descriptive statistics of the B presentation style in all social campaigns. For all campaigns of the B presentation style, the average variable of Intention to Change behavior is 4.04, the average variable of Attitude is 4.12 and the average variable of Understanding is 4.10.

Table 28 : Correlations of the B Presentation Style

	Intention to change behavior B	Attitude B	Understanding B
Pearson Correlation			
Intention to change behavior B	1.000	.639	.636
Attitude B	.639	1.000	.903
Understanding B	.636	.903	1.000
Sig. (1-tailed)			
Intention to change behavior B	.	.000	.000
Attitude B	.000	.	.000
Understanding B	.000	.000	.
N			
Intention to change behavior B	400	400	400
Attitude B	400	400	400
Understanding B	400	400	400

Table 4.24 shows the correlations of the B presentation style. The correlations of Attitude and Understanding towards Intention to Change behavior are positive correlation, or their relationship is direct variation. For the Attitude variable, the level of correlation towards the Intention to Change behavior is 0.639 with 0.01 level of significant. For the Understanding variable, the level of correlation towards the dependent variable is 0.636 with 0.01 level of significant. Based on these numbers, we can conclude that there is a “high association” or “strong relationship” among two independent variables and the dependent variable in the B presentation style and there are statistically significant correlations between the variables.

Table 29 : Variables Entered/Removed of the B Presentation Style

Model	Variables Entered	Variables Removed	Method
1	Attitude B	.	Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).
2	Understanding B	.	Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).

a. Dependent Variable: Intention to change behavior B

Table 30 : Model Summary of the B Presentation Style

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.639 ^a	.408	.407	.59695
2	.653 ^b	.427	.424	.58827

a. Predictors: (Constant), Attitude B

b. Predictors: (Constant), Attitude B, Understanding B

Table 31 : ANOVA of the B Presentation Style

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	97.941	1	97.941	274.842	.000 ^a
	Residual	141.829	398	.356		
	Total	239.771	399			
2	Regression	102.382	2	51.191	147.922	.000 ^b
	Residual	137.389	397	.346		
	Total	239.771	399			

a. Predictors: (Constant), Attitude B

b. Predictors: (Constant), Attitude B, Understanding B

c. Dependent Variable: Intention to change behavior B

Table 32 : Coefficients of the B Presentation Style

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.629	.208		3.027	.003
	Attitude B	.828	.050	.639	16.578	.000
2	(Constant)	.489	.208		2.344	.020
	Attitude B	.457	.115	.353	3.981	.000
	Understanding B	.407	.114	.317	3.582	.000

a. Dependent Variable: Intention to change behavior B

The table of multiple regressions is conducted to evaluate whether Attitude and Understanding are necessary to predict Intention to Change behavior after reading the B presentation style (B stimulus). From the table 4.25, the analysis of Attitude variable only gets into the equation in Model 1 because its p-value (sig.) is less than the Understanding variable. However, both analysis of Attitude variable and Understanding variable entered into the model 2 regression equation. Model 2 shows that both variables were significantly related to Intention to Change behavior (dependent variable) as the p value of the equation from the ANOVA table is less than 0.001 (Sig) (Table 4.27). The multiple correlation coefficients of Model 2 was 0.653 (R), indicating approximately 42.7% (R Square) of the variance of Intention to Change behavior could be accounted by Attitude and Understanding. In addition, Attitude variable has higher power with 0.457 (B) to predict Intention to Change behavior if it was compared with Understanding. Therefore, the regression equation for predicting Intention to Change behavior of the B presentation is :

$$\text{Intention to Change behavior B} = 0.489 + (0.457 \times \text{Attitude B}) + (0.407 \times \text{Understanding B})$$

4.3 Multiple Regression Analysis (STEPWISE) : Picture C (Graphic Content over 60%)

Table 33 : Descriptive Statistics of the C Presentation Style

	Mean	Std. Deviation	N
Intention to change behavior C	3.39	.81	400
Attitude C	3.27	.84	400
Understanding C	3.26	.83	400

Table 4.29 show descriptive statistics of the C presentation style in all campaigns. For all the campaigns of the C presentation style, the average variable of Intention to Change behavior is 3.39, the average variable of Attitude is 3.27 and the average variable of Understanding is 3.26.

Table 34 : Correlations of the C Presentation Style

		Intention to change behavior C	Attitude C	Understanding C
Pearson Correlation	Intention to change behavior C	1.000	.632	.650
	Attitude C	.632	1.000	.916
	Understanding C	.650	.916	1.000
Sig. (1-tailed)	Intention to change behavior C	.	.000	.000
	Attitude C	.000	.	.000
	Understanding C	.000	.000	.
N	Intention to change behavior C	400	400	400
	Attitude C	400	400	400
	Understanding C	400	400	400

Table 4.30 shows the correlations of the C presentation style. The correlations of Attitude and Understanding towards Intention to Change behavior are positive correlation, or their relationship is direct variation. For Attitude, the level of correlation towards the dependent variable (intention to change behavior) is 0.632 with 0.01 level of significant. For Understanding variable, the level of correlation towards the dependent variable is 0.650 with 0.01 level of significant. Based on these numbers, we can conclude that there is a “high association” or “strong relationship” among two independent variables and the dependent variable the C presentation style and there are statistically significant correlations between the variables.

Table 35 : Variables Entered/Removed of the C Presentation Style

Model	Variables Entered	Variables Removed	Method
1	Understanding C	.	Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).
2	Attitude C	.	Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).

a. Dependent Variable: Intention to change behavior C

Table 36 : Model Summary of the C Presentation Style

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.650 ^a	.423	.422	.61664
2	.657 ^a	.431	.429	.61293

a. Predictors: (Constant), Understanding C

b. Predictors: (Constant), Understanding C, Attitude C

Table 37 : ANOVA of the C Presentation Style

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	111.006	1	111.006	291.928	.000 ^a
	Residual	151.340	398	.380		
	Total	262.346	399			
2	Regression	113.197	2	56.598	150.653	.000 ^b
	Residual	149.149	397	.376		
	Total	262.346	399			

a. Predictors: (Constant), Understand C

b. Predictors: (Constant), Understanding C, Attitude C

c. Dependent Variable: Intention to change behavior C

Table 38 : Coefficients of the C Presentation Style

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.305	.126		10.377	.000
	Understanding C	.639	.037	.650	17.086	.000
2	(Constant)	1.257	.127		9.930	.000
	Understanding C	.434	.093	.442	4.690	.000
	Attitude C	.219	.091	.228	2.415	.016

a. Dependent Variable: Intention to change behavior C

The table of multiple regressions is conducted to evaluate whether both Attitude and Understanding are necessary to predict Intention to Change behavior after reading the C presentation style (C stimulus). From the table 36, only the analysis of Understanding variable gets into the equation in Model 1 while both analyses of Understanding variable and Attitude variable entered into Model 2 regression equation. This shows that both variables were significantly related to Intention to Change behavior (dependent variable) as the p value of the equation from the ANOVA table is less than 0.001 (Sig) (Table 37). The multiple correlation coefficients of Model 2 is 0.657 (R), indicating approximately 43.1% (R Square) of the variance of Intention to Change behavior could be accounted by Understanding and Attitude. In addition, Understanding variable has higher power with 0.434 (B) to predict Intention to Change behavior if it was compared with Attitude variable. Therefore, the regression equation for predicting Intention to Change behavior of the C presentation is :

$$\text{Intention to change behavior C} = 1.257 + (0.434 \times \text{Understanding}) + (0.219 \times \text{Attitude})$$

Chapter V

Contribution to Body of Knowledge

The research's purposes of " Thai's people attitudes towards infographic and text as a means of communication for social campaigns " are not only to examine the relationships among Thai people's attitudes, understandings and intention to change behaviors towards infographic and text stimulus in social campaigns, to gain a better understanding of infographics and texts, but also to answer the research questions shown below :

1. What is the relationship among Thai people's attitudes and understanding towards infographic stimulus and intention to change their behavior in social campaigns?
2. What is the relationship among Thai people's attitudes and understanding towards text stimulus and intention to change their behavior in social campaigns?

For the methodology approach, both qualitative and quantitative techniques are used. Survey research with a questionnaire is used to collect the information. The author divided the messages into 3 cases as follows (1) Pure Text, (2) graphic content of 30-60% and (3) graphic content over 60%. In addition, each case provides 3 different social campaigns which are (1) the social healthy campaign (" Fresh Water' is the best "), (2) the social safety campaign (" Helmet saves life ") and (3) the social green conservative campaign (" How long does it take to dispose ? "). The total number of samples collected in the research is 400 samples. Firstly, in gathering the information, it is important to note the methods of choosing the questionnaire's respondent samples are non-probability sampling techniques which are purposive sampling and volunteer sampling method. The sample profiles include; (1) age range 15-45 years old, (2) have at least one active social media account, and (3) must activate one of their accounts at least once time a week. The samples that didn't meet one of the requirements will be excluded from the result of findings.

After the data gathering procedure, the collected information was calculated using SPSS and presented in form of percentages, means, standard deviations,

frequency distributions, pie charts and tables for basic information analysis. For the correlation, multiple regressions were used to show the relationships among the independent variables (attitudes and understandings) and the dependent variable (intention to change behavior). The conclusion of the research and suggestions will be discussed as follows:

1. Summary

Part 1 : Demographic and General Information

The results revealed that the 400 samples involved in the research are divided into 52.7 percent male and 47.3 percent female. Approximately half of the samples (49 percent) are ranged between 23-30 years old. 62 percent of the samples are either currently studying or have graduated at Bachelor's Degree level. The two most common demographic groups from samples are students and office workers together which combine up to 70 percent. On the other hand, the monthly income level of samples varies from around less than 5,000 baht to exceeding 25,000 baht. All of them have confirmed to have experienced with the social media, especially the popular social platform Facebook (99 percent). Over 90 percent of the samples regularly activate their social account every day or 5-6 days per week. With the confirmation from over half of the samples, smartphone is ranked as the general tool used to access the social media.

Part 2 : People's Attitudes towards Infographics and Texts

The research showed that Thai's attitudes towards the B presentation style (Graphic Content of 30-60%) received the highest overall mean score with 4.15 for social healthy campaign, 4.01 for social safety content and 4.12 for social green conservative content. The C presentation style (Graphic Content over 60%) is ranked with the second highest score of the overall mean with 2.89 for social health content, 3.34 for social safety content and 3.65 for social green conservative content. However, the A presentation style scored the lowest overall mean when compared to the previous two styles. It received 2.77 for the social healthy content, 2.98 with the social safety content and 3.02 with social green conservative campaign. For the average sum of all variables with the meaning for evaluation, the below table will

show you the summarization of each variable in the research by the presentation style of all campaigns.

Table 39 : Summarization of Each Variable in the Research by the Presentation Style of All Campaigns

Presentation Style	Variable	Mean	Meaning
Picture A (Pure Text)	Intention to change behavior A	3.22	Neutral
	Attitude A	2.77	Neutral
	Understanding A	2.92	Neutral
Picture B (Graphic 30-60%)	Intention to change behavior B	4.04	Agree
	Attitude B	4.12	Agree
	Understanding B	4.10	Agree
Picture C (Graphic over 60%)	Intention to change behavior C	3.39	Neutral
	Attitude C	3.27	Neutral
	Understanding C	3.26	Neutral

Intention to change variable (Dependent Variable) – 3.22 is the average sum of the ‘intention to change behavior’ A which suggests the variable is ‘Neutral’. In B Presentation Style (Graphic Content of 30-60%), the average sum for ‘intention to change behavior’ B equals 4.04, translating the variable as ‘Agree’. Lastly, C Presentation Style (Graphic Content over 60%) scored an average sum of 3.39, thus ranking the variable as ‘Neutral’ like A Presentation Style.

To elaborate, the average sum from each campaign style is calculated from each total sum of ‘intention to change behavior’ questions divided by the total number of questions for each A, B, C presentation styles drew from all three contents (social health content, social safety content, social green conservative content)

Attitude (Independent Variable) – Attitude A is considered neutral with the score of 2.77 for its average sum. On the other hand, Attitude B is ‘Agree’ with the average sum of 4.12 and Attitude C is ‘Neural’ with 3.27.

In clarification, the average sum of Attitude A is calculated from the total sum of the all campaign questions regarding attitude ‘A’ such as “Want to read A” and “Like to read A” divided by the total number of all attitude-related questions.

The results related to attitude in each campaign are then summed up to create Attitude A average sum. The same procedure is performed on Attitude B and Attitude C variables to generate their average sum scores.

Understanding (Independent Variable) – The average sum of the Understanding A variable is Neutral (2.92). In turn, Understanding B variable scored Agree (4.10) and Understanding C variable scored Neutral (3.26) respectively.

The average sum for each Understanding variable is retrieved from the total sum of questions regarding each Understanding variable divided by the total sum of all questions concerning Understanding from all campaigns. For example, Understanding A's average sum (2.92) is analyzed from the total sum of the questions regarding "Quickly understanding A" and "Clearly understanding A" in the all campaigns divided by the total number of the Understanding questions. As a result, the average sum of Understanding A is drawn from the sum of 'Understanding' result in each campaign.

Part 3 : People's Opinion towards Infographics and Texts

From 400 respondents and 1200 points for all social campaigns, the majority of respondents agreed that the B presentation style serves as the most effective communication for all social campaigns with a total score of 855 points and the percentage of 71.3. The second highest score belongs to the the C presentation style with a total score of 274 points and the percentage of 22.8. In last place, the A presentation style gathered 71 points and the percentage of 5.9 respectively. In addition, the summarization of all three campaigns is shown in the table 5.2 below.

Table 40 : Summarization of People's Opinion towards Infographics and Texts for All Campaigns

Kind of Social Campaign	Presentation Style	Frequency	Percent
Overall Social Content	Picture A – Pure Text	71	5.9
	Picture B – Graphic 30 – 60%	855	71.3
	Picture C – Graphic over 60%	274	22.8
	Total	1200	100

In term of opinion towards the style, various reasons are given for each kind of presentation style. Many of respondents suggested that the use of texts and graphic picture has its own advantages and disadvantages. Hence, they reasoned, if the sender can balance the use of the texts and the picture appropriately, the most

effective means of communication can be created and presented to capture the audience's mind. Consequently, the respondents vote the picture B (graphic content of 30-60%) to be the best for social campaigns. The advantages and the disadvantages that the respondent shared about graphic pictures and texts in this part are shortly summarized and shown in the table below (Table 5.3).

Table 41 : Summarization of People's Opinion towards The Use of Graphic Pictures and Texts

Type Opinion	Graphic Pictures	Texts
PROS	<ul style="list-style-type: none"> - Ability to enhance the complicated information for understanding - Attractiveness - Shorten words - Universal (less language barrier) - More flexible size - Able to represent sensitive issues in some countries such as death, sex or race (tacit) 	<ul style="list-style-type: none"> - Ability to explain complicated terms for understanding - High credibility - Appropriate for official communication styles - Strict grammar structures and rules of interpretation - Ability to clearly represent the large amount of things by numerical letter and ratio
CONS	<ul style="list-style-type: none"> - No fixed rules of interpretation - Can create confusion and frustration if misuse or too much use - Poor to represent a large number of things accurately if compare with numerical texts 	<ul style="list-style-type: none"> - Take time for interpretation - Language Barrier - Unattractive - Font size creates serious problems (unreadable if too small or crowded)

Part 4 : Multiple Regression Analysis

In order to examine the relationship between the dependent variable which is intention to change behavior and the independent variables which are attitude and understanding, the author used multiple regressions to calculate their relationship. From the result calculated by SPSS, all of the variables in each presentation style, which are the A presentation style (Pure text), the B presentation style (graphic content of 30-60%) and the C presentation style (graphic content over 60%) have relationships with each other. Significantly, the variable of attitude and the variable of understanding in each presentation style have a *very high association* or *very strong relationship* with each other because the correlation coefficients (r) of them are in the range of 0.80 - 1.00.

4.1 A Presentation Style (Pure Text)

Table 42 : Summarization of the Correlation Coefficient of the A Presentation Style

Variable	Intention to change behavior A	Attitude A	Understanding A
Intention to change behavior A	-	(r) = 0.516	(r) = 0.461
Level of Association	-	Normal Association	Normal Association
Attitude A	(r) = 0.516	-	(r) = 0.870
Level of Association	Normal Association	-	Very High Association
Understanding A	(r) = 0.461	(r) = 0.870	-
Level of Association	Normal Association	Very High Association	-

The table 5.4 above presents the summarization of relationships among all variables involved in the A presentation style. Statistically, all variables are related to each other. The dependent variable, which is the Intention to change behavior A, has a “normal relationship” with the two independent variables, which are Attitude A and Understanding A. Whereas the result claims a “very high association” between Attitude A variable and the Understanding A variable.

Table 43 : Prediction of Intention to Change Behavior of the A Presentation Style

Variables	Attitude A	Understanding A
Intention to change behavior A	✓✓	✗

✓✓ High Influence Power ✓ Normal Influence Power ✗ No Influence Power

From the table 5.5, it is the conclusion from multiple regression analysis (stepwise) of the A presentation style. The table shows the influence power of the independent variables which are Attitude and Understanding to predict the intention to change behavior which is the dependent variable. The high or low intention to change behaviors mainly depends on their attitude or feeling, when they read the same kind of the A presentation style (pure text stimulus). The understanding has no influential power to impact on intention to change people’s behavior in this presentation style because while most respondents seem to understand the message very well, but they lack the desire to follow the message. All things considered, in order to increase the intention to change people’s behavior in the pure text stimulus or the message that contain texts more than pictures, factor like attitude and feeling of the receivers must be taken into one of the considerations.

4.2 B Presentation Style (Graphic content of 30-60%)

Table 44 : Summarization of the Correlation Coefficient of the B Presentation Style

Variable	Intention to change behavior B	Attitude B	Understanding B
Intention to change behavior B	-	(r) = 0.639	(r) = 0.636
Level of Association	-	High Association	High Association
Attitude B	(r) = 0.639	-	(r) = 0.903
Level of Association	High Association	-	Very High Association
Understanding B	(r) = 0.636	(r) = 0.903	-
Level of Association	High Association	Very High Association	-

The table 5.6 displays the summarization of relationships among all the variables in the B presentation style. The variables statistically affect each other. The dependent variable, which is the Intention to change behavior B, has a “high relationship” with the two independent variables, which are Attitude B and Understanding B. Additionally, the Attitude B and the Understanding B reports of having a “very high association” bond.

Table 45 : Prediction of Intention to Change Behavior of the B Presentation Style

Variables	Attitude B	Understanding B
Intention to change behavior B	✓✓	✓

✓✓ High Influence Power ✓ Normal Influence Power ✗ No Influence Power

From the table 5.7, it is the conclusion from multiple regression analysis (stepwise) of the B presentation style. The table shows the influence power of the independent variables which are the Intention to change behavior is the dependent variable which can be predicted upon the Attitude and Understanding’s calculation. These two factors can influence the higher or lower intention to change behavior. The high or low intention to change people’s behaviors depends on both attitude and understanding when they read the same kind of the B presentation style (graphic content of 30-60%). The Attitude variable has higher influential power than the Understanding variable on the intention to change behavior in this presentation style. The model 1, which contains only the attitude variable, showed the influential level is at 40.8% while the mixed use of both attitude and understanding variables in Model 2 has resulted 42.7% (increased by 1.9%). Likewise, in order to increase the intention to change behavior in the graphic content of 30-60% stimulus, the factors of attitude and understanding have to be considered.

4.3 C Presentation Style (Graphic content over 60%)

Table 46 : Summarization of the Correlation Coefficient of the C Presentation Style

Variable	Intention to change behavior C	Attitude C	Understanding C
Intention to change behavior C	-	(r) = 0.632	(r) = 0.650
Level of Association	-	High Association	High Association
Attitude C	(r) = 0.632	-	(r) = 0.916
Level of Association	High Association	-	Very High Association
Understanding C	(r) = 0.650	(r) = 0.916	-
Level of Association	High Association	Very High Association	-

The above table (Table 5.8) shows the summarization of relationships among the all variables in the C presentation style. All variables report to have influenced one another statistically. The dependent variable, which is the Intention to change behavior C, has a “high relationship” with the two independent variables, which are Attitude C and Understanding C. The independent displayed a very high association.

Table 47 : Prediction of Intention to Change Behavior of the C Presentation Style

Variables	Attitude C	Understanding C
Intention to change behavior C	✓	✓✓

✓✓ High Influence Power ✓ Normal Influence Power ✗ No Influence Power

The table 5.9 shows the influence power of Attitude and Understanding that have over the intention to change behavior for the C presentation style. The table is derived from multiple regression analysis (stepwise) of the C presentation style. While respondents are exposed to the same kind of the message that contain graphic content over 60 percent, both factors affect the higher or lower intention to change behavior. The understanding variable has higher impact on the intention to change behavior. This can be seen from Model 1 where the understanding variable scored an influential level of 42.3% while Model 2 scored 43.1% (increased by 0.8%). This indicates that respondents are likely to be attracted by the messages that contain a lot of graphics. The feeling or attitude of willingness to read is not the main factor to change their intention. However, if the senders want to increase the impact on the intention to change behavior, they should not overlook their understanding of the message. Therefore, both factor of understanding and attitude must be considered in increasing impact in the infographic with more than 60% stimulus.

2. Research Discussion

This research was conducted in determination to explore “Thai people’s attitudes towards infographics and texts as a means of communication for social campaigns“. The results gained from this study have been interesting and valuable in the regards to answering the two research questions stated earlier. Firstly, “What is the relationship among Thai people’s attitudes and understanding towards *infographic stimulus* and intention to change their behavior in social campaigns,” and secondly, “What is the relationship among Thai people’s attitudes and understanding towards *text stimulus* and intention to change their behavior in social campaigns“.

The variables in the study are related to each other differently in every presentation styles. To begin with, in the text stimulus, the relationship between Attitude and Understanding towards Intention to Change Behavior is considered *normal association*. For the infographic stimulus category (both graphic content of 30-60% and graphic content over 60 percent), the relationship is discovered to have *high association*.

In terms of the relationships between the independent variables, Attitude and Understanding in all presentation styles have shown *very high association*. Although with this result, they are measured as two different variables. Belch (1993: 199)’s Information Processing Model previously explains one variable is regarded in the Learning category and the other falls in the Feeling category. Moreover, the respondents are more willing to read the attractive messages that suit with their preferences. They are also more positive to try and understand well-arranged messages with enough information provided for them to grasp the idea.

The overall result in this research also supports the relationships forming between knowledge, attitude and behavior, a concept which was already clarified by Hanna and Wozniak (2001: 183), and Ajzen (1991). Although it is important to note that while there are associations among these factors, the relationships level of the dependent variable and independent variables between infographic and text stimulus are different. As a result, this research proves concisely that both Attitude and Understanding are two of the important factors that can influence people’s Intention to Change behaviors. The details are discussed below.

For the text stimulus (*The A presentation style*), the majority of respondents felt the style is not the most effective option to reach the communication goal of influencing intention to change behaviors for both supporting a good actions and stopping unfavorable behaviors. Furthermore, text stimulus scored 71 (5.9 percent) which is less than the two infographic-based styles. In contrast, the average sum of all three variables regarding Intention to Change behavior, Attitude and Understanding are in the neutral level. Therefore, the text stimulus has an ability to explain complicated term because it has the strict grammar structures and rules of interpretation. Human create rules that apply to all languages over the world (The University of Sheffield, 2012: Online) and that also make people can create mutual understanding to get the same Ideas when they communicate. The text stimulus has high credibility which makes the style appropriate for official types of communication and announcements. However, as this type of stimulus involves knowledge on grammar rules and structures, it can be time consuming for readers for interpretation. It also has language barrier which require the reader's necessity to learn that particular language before they could understand the message's meanings and ideas. Finally, the text stimulus lacks visual attraction as it cannot be distinguished from other messages.

In the discussion towards the relationship level between Attitudes and Understanding towards intention to change behavior in the text stimulus, the result is *a normal association*. The Attitude correlation (r) towards intention to change behavior of the text presentation style is 0.516 and the understanding correlation (r) towards intention to change behavior of the text presentation style is 0.461. According to the correlation, it shows that the relationship of Attitude is higher than the Understanding variable. Moreover, it also links to the influential strength of the independent variables. For coefficients, the text presentation style has only one model which only attitude get into the equation to predict intention to change behavior. Therefore, in the text presentation style, Attitude (feeling) is pointed out as the factor that has impact on intention to change behavior while Understanding (learning) has no influence. This is because the text presentation style is not attractive enough to draw people's attention to read for the message. Most of

people said that they do not like to read through the message as it is lack of attractiveness. On one hand, the respondents pointed out that text can help present large amount of information and the numerical data. It works especially well in statistical analysis, while graphs can only display the overall data in blocks and line. In addition, pure text can completely explains descriptions within itself. However, Andrews (2008: 24) reflected that text presentation style is not appropriate to use in the earlier stage (Attention Stage) of campaigns to draw people's attention. This is evident from the AIDA model which shows it is better to use text stimulus in later stages (the second, third or fourth stage). Therefore, if we would like to create an impact on the receiver's intention to change behavior in this kind of presentation, it is essential to focus on their Attitude to enable the feeling that urges them to read the message.

For the infographic stimulus, this research uses two infographic pictures; the graphic content of 30-60 percent (*The B presentation style*) and graphic content over 60 percent (*The C presentation style*). The infographic or picture stimulus has the ability to enhance understanding on complex information because it allows the receiver to illustrate and depicts that information in their minds which is the same understanding as what the sender tries to convey (Smiciklas, 2012: 4). Most of the respondents suggest that the use of visual cues in the message can increase the message's appeal to help it stand out. Likewise, pictures can shorten words, stands by itself, flexible to adjust in shape and size when compared to the limitation of texts and sentences. In addition, the advantages of images include acting as a universal representation that most people can understand, while they may be separated by different languages. Images are in the sensitive issues as it has no fixed rules of interpretation unlike text language and grammar structures which may create misunderstanding from the sender (Messaris 1996: xix). Nevertheless, the respondents reflect negative feeling towards the over-used visual cues that can create frustration, especially when they are used to represent large amount of objects such as the number of spoons in the A presentation style from social health content, or the similar length and portion of graphs such as bar graph, pie charts, etc. Hence, the

following discussion on the two remaining infographic-based presentation styles is aim to give emphasis to these topics stated.

Beginning with the graphic content of 30-60 percent stimulus (*The B presentation style*), the majority of the respondents viewed this is the most effective presentation style to capture people's attention. Not only does the style provide clear information for them. It also helped them to understand the message which impacts their behavioral changes towards a good role model and preventing unfavorable action. The 30-60 percent stimulus scored the highest with 855 points (71.3 percent). Furthermore, the average score of three variables (Intention to Change behavior, Attitude and Understanding) are all in the Agree level ranging from 4.20 to 3.41.

The relationships between the three variables for the 30-60 percent stimulus are revealed to be in high association. While, in this presentation style, the Attitude correlation (r) scored 0.639 and the Understanding correlation (r) scored 0.636. According to the correlation, it showed that the relationship of the attitude variable is higher than the understanding variable and it also links to the influential power of the independent variables towards the dependent variable. The graphic content of 30-60 percent presentation style has two models referring to the stepwise multiple regressions from the finding. The second model showed that the Attitude and Understanding calculation can lead to predictions on Intention to Change behavior. In the graphic content of 30-60 percent presentation style, the factor of Attitude has a higher impact on Intention to Change behavior than the Understanding factor. The respondents reflected that when the graphical supports of information match with the message, it can increase appeal and comprehensibility of that message. This viewpoint is previously confirmed by Stephen Few (2011) who stated infographic should be designed in the way that gets past both human eyes and brain process, thus treating the receivers as reasonably intelligent subjects. Consequently, using 30-60 percent graphic in messages can increase a chance of drawing higher attention from receivers. Moreover, according to the AIDA model, the graphic content of 30-60 percent presentation style can be properly used during any stages of a social campaign; whether it will be Attention stage, Interest stage, Desire stage or Action

stage. In conclusion, when aiming to increase receiver's Attention and Intention to Change behavior; human attitude and understanding are the two main priorities that must apply to any communication campaigns involving 30-60 Infographic presentation style

The research revealed that the second most effective presentation style is the graphic content over 60 percent stimulus (*The C presentation style*). First for all, it is important to note that while the prominent point of this presentation style draws in attention like the graphic content of 30-60 percent, however, the ability to explain and portray the information in the message is lower than the previous one. The respondents' opinion, the style scored with 274 points (22.8 percent).

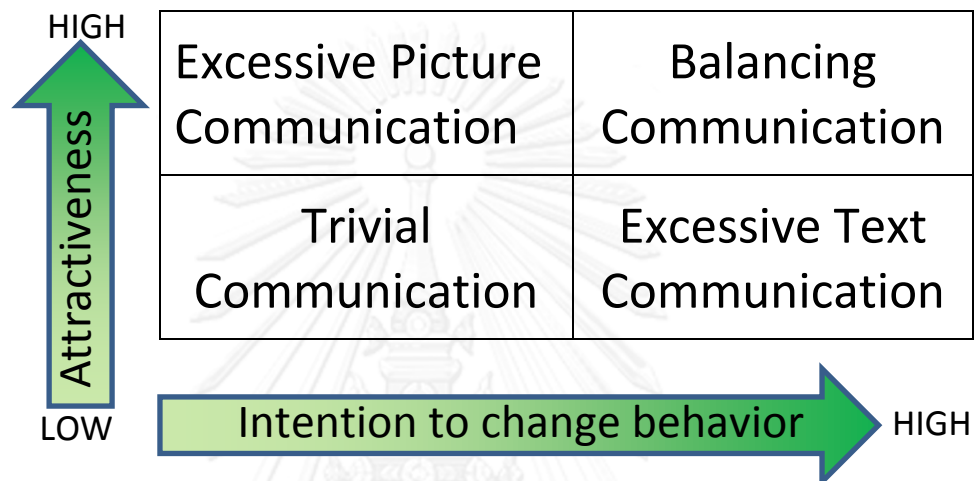
High association is the result of the relationships between Attitudes and Understanding towards Intention to Change Behavior for the graphic content over 60 percent stimulus. The Attitude correlation (r) towards the intention to change behavior of the graphic content over 60 percent presentation style is 0.632 and the Understanding correlation (r) of this presentation style is 0.650. In regards to the correlation, this shows the relationship of the Understanding variable is higher than the Attitude and it also links to the influential power of the independent variables that impact on the dependent variable. In the multiple regression analysis in this presentation calculated by using stepwise method, the graphic content over 60 percent presentation style has two models like the style earlier discussed. The style however, differs in its influential power of the variables. The second model of the graphic content over 60 percent showed that the equation of both Understanding and Attitude variables can forecast the Intention to Change behavior. Noticeably, in this presentation style, Understanding is discovered to be the factor with higher impact than Attitude on Intention to Change behavior. This suggests that the greater amount of picture used in the message, the increase level of attention it will receive. However, even though the graphic content over 60 percent has more pictures contained than the former style, results showed this feature does not improve how people comprehend the message. As some of the respondents reflected, the strategy of using great amount of pictures to present information can cause confusion, frustration and extensive measure of time to process the message. Most

respondents pointed out they still require text presentation style to explain information in the message. This finding can be supported by the idea that while people are easily lured in by pictures, but Understanding is needed to influence the Intention to Change behavior (Chaithip, 2001). Nevertheless, this type of presentation style can create positive capability for drawing attention when it is used in the early stage of AIDA, especially Attention Stage and Interest stage. Therefore, if it is needed to use the graphic content over 60 percent to communicate with mass in a campaign and it also need to influence people intention to change behavior with this kind of presentation, it is important to focus on understanding of the message that is designed.

Taking everything into account, the study of all three types of presentation style which includes the pure text stimulus, the graphic content of 30-60 percent stimulus and the graphic content over 60 percent stimulus uncovers that Attitude, Understanding and Intention to change behavior, have associations among each other. The influential level which these variables have towards Intention to change behavior varies depending on the message that individuals read and the relationship within the independent variables of all presentation style is very high association. The research result demonstrates that the relationship level of their Attitude and Understanding towards Intention to change behavior on infographic stimulus is *higher* than the text stimulus. This discovery is very useful for applying strategy to future campaigns with goals to communicate to demographical groups between 15 to 45 years old that possess acceptable level of literacy, constantly active on their social media every week as well as receiving income around 0-25,000 baht per month. Furthermore, the findings reported that high attractive messages do not always have higher influential power on receiver's behavioral change intentions. On the other hand, messages that individuals can easily understand and can greatly impact their behaviors do not mean they are the same as messages which is able to draw in high amount of attention. Therefore, communication objective is one of the main essentials of consideration when deciding upon message creation because the different objectives and the campaign stage of AIDA may contribute to different message designs. For the other areas that senders must consider, they include the

purpose, task and expected outcome of message would create in a campaign. As a result, the table below (Table 5.10) shows the research's suggestion on the use of each type of infographic presentation style (information texts and graphic pictures) in terms of visual appeal and Intention to Change behavior that can be adapt and apply to future visual communication campaigns.

Table 48 : Attractiveness and Intention to change behavior for Infographic Communication Model



Excessive Picture Communication – It is the use of a message that contains pictures more than 60% of overall information texts. It is very useful to draw receiver's attention due to visual appeal.

Excessive Text Communication – It is the use of a message that contains information texts more than 60% of overall pictures. It is very useful for explaining complex concepts and providing detailed information to call for an action.

Balancing Communication – It is the use of a message that contains either information texts or pictures around 40% to 60% of overall design. This strategy provide a safe ratio that can both capture attention and provide enough information in an acceptable level to create impact on individual's Intention to Change behavior. It's also the effective model for senders to reach their communication goal and objectives.

Trivial Communication – It is the use of a message that provides limited information on both texts and pictures. Not only does this type of presentation style have low visual appeal, it also likely to result in low impact on behavior change intention.

3. Suggestion for Research Development

After conducting the research on “Thai people’s attitudes towards infographics and texts as means of communication for social campaigns”, it is discovered that the relationship levels among attitude, understanding and intention to change of each presentation style are various depending on depending on the message that individuals read. In terms of limitation, this research focuses on the general type of sample group. For suggestion, future researches should take a chance to explore other equally relevant sub groups and topics. Separate data collection from each representative groups can deepen the research in terms of identifying further difference between demographic such as gender, education, income, occupation, etc. This is because the different demographic groups of people may give the different attitudes, understandings and intentions to change behavior differently. Moreover, recall is another interesting variable that should be added in the research. People may recall the information from a single message differently according to the different amounts of pictures that contain in the message.

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APPENDIX

จุฬาลงกรณ์มหาวิทยาลัย
CHULALONGKORN UNIVERSITY

แบบสอบถาม

เรื่อง "ทัศนคติของคนไทยที่มีต่อการสื่อสารในรูปแบบ อินโฟกราฟิก และ ข้อความ
ในการรณรงค์แก้ไขปัญหาทางสังคม"

คำชี้แจง : แบบสอบถามชุดนี้เป็น ส่วนหนึ่งของการทำวิทยานิพนธ์

ในการศึกษาระดับปริญญาโท สาขาการจัดการการสื่อสารเชิงกลยุทธ์ คณะนิเทศศาสตร์ จุฬาลงกรณ์มหาวิทยาลัย


ผู้วิจัยจะนำข้อมูลจากท่านมาประมวลผลและนำเสนอในภาพรวมเพื่อประโยชน์ทางการศึกษาเท่านั้น


คำแนะนำ : โปรดทำเครื่องหมาย ✓ ลงในช่องว่างหน้าข้อความที่ตรงกับตัวเลือกและความคิดเห็นของท่านมากที่สุด

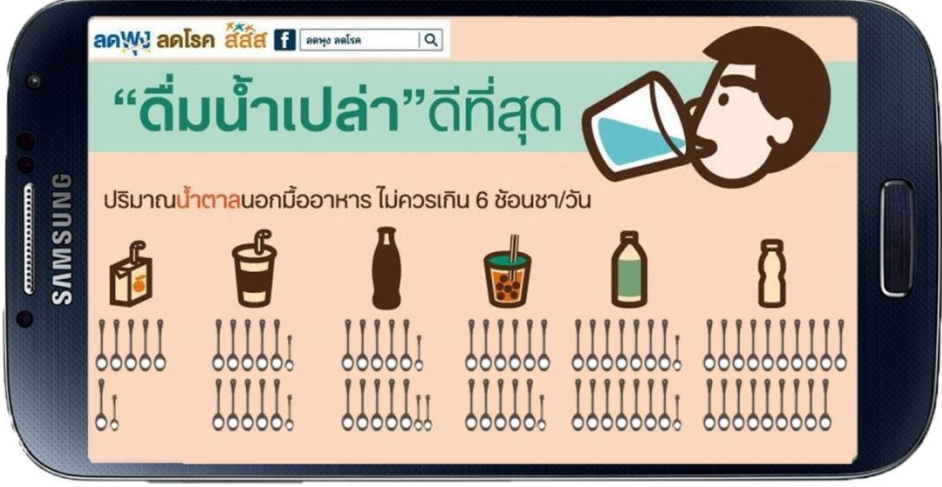
ส่วนที่ 1 ข้อมูลทั่วไปเกี่ยวกับลักษณะทางประชากร

- เพศ ชาย หญิง
- อายุ น้อยกว่า 15 ปี 15-22 23-30
 31-38 39-45 มากกว่า 45 ปี
- ระดับการศึกษา มัธยมปลาย วิทยาลัย / ปวช. ปวส. ปริญญาตรี
(รวมทั้งที่กำลังศึกษาอยู่) ปริญญาโท ปริญญาเอก อื่น ๆ โปรดระบุ.....
- อาชีพ นักเรียน นิสิต นักศึกษา รับราชการ/รัฐวิสาหกิจ พนักงานบริษัทเอกชน
 ธุรกิจส่วนตัว ค้าขาย อื่นๆ โปรดระบุ.....
- รายได้ต่อเดือน (บาท) น้อยกว่า 5,000 5,001-10,000 10,001-15,000
 15,001-20,000 20,001-25,000 มากกว่า 25,000
- คุณเคยใช้งาน Social Media ไซหรือไม? (เช่น Facebook, Instagram, Twitter, etc.) ใช่ ไม่ใช่
- ในปัจจุบันคุณมี Social Media Account ใดบ้างดังต่อไปนี้? (เลือกตอบได้มากกว่า 1 ข้อ)
 Facebook Instagram YouTube Twitter
 MySpace Flickr Tumblr Hi5
 Weblog, Blog อื่นๆ โปรดระบุ.....
- คุณใช้งาน Social Media ต่าง ๆ โดยเฉลี่ยบ่อยแค่ไหนในหนึ่งสัปดาห์? (เลือกตอบเพียงข้อเดียว)
 ทุกวัน 5-6 วัน / สัปดาห์ 3-4 วัน / สัปดาห์ 1-2 วัน / สัปดาห์
- คุณใช้งาน Social Media ใดบ่อยที่สุดในปัจจุบัน? (เลือกตอบเพียงข้อเดียว)
 Facebook Instagram Youtube Twitter
 MySpace Flickr Tumblr Hi5
 Weblog, Blog อื่นๆ โปรดระบุ.....
- คุณใช้งาน Social Media ผ่านอุปกรณ์ใดบ่อยที่สุด? (เลือกตอบเพียงข้อเดียว)
 Smartphone Personal Computer Tablet Laptop อื่นๆ โปรดระบุ.....

ส่วนที่ 2 ทักษะคิดของคนไทยที่มีต่อการสื่อสารในรูปแบบ อินโฟกราฟิก และ ข้อความ ที่มีต่อสารรณรงค์คำแนะนำ :
 โปรดพิจารณารูปภาพ A B และ C จากนั้น โปรดทำเครื่องหมาย ✓ ลงในช่องว่างหน้าข้อความที่ตรงกับตัวเลือกและความคิดเห็น
 ของท่านมากที่สุดเพียงช่องเดียว

A


B


C


Infographic A Data:

เครื่องดื่ม	ปริมาณ (มล.)	จำนวนช้อนชา
น้ำผลไม้	200 มล.	6.25 ช้อนชา
กาแฟสด	475 มล.	10.5 ช้อนชา
น้ำอัดลม	450 มล.	10.75 ช้อนชา
ชาสมุนไพร	350 มล.	11.25 ช้อนชา
ชาเขียว	500 มล.	14.5 ช้อนชา
นมเปรี้ยว	400 มล.	19 ช้อนชา

Infographic B Data:

เครื่องดื่ม	ปริมาณ (มล.)	จำนวนช้อนชา
น้ำผลไม้	200 มล.	6.25 ช้อนชา
กาแฟสด	475 มล.	10.5 ช้อนชา
น้ำอัดลม	450 มล.	10.75 ช้อนชา
ชาสมุนไพร	350 มล.	11.25 ช้อนชา
ชาเขียว	500 มล.	14.5 ช้อนชา
นมเปรี้ยว	400 มล.	19 ช้อนชา

Infographic C Data:

เครื่องดื่ม	ปริมาณ (มล.)	จำนวนช้อนชา
น้ำผลไม้	200 มล.	6.25 ช้อนชา
กาแฟสด	475 มล.	10.5 ช้อนชา
น้ำอัดลม	450 มล.	10.75 ช้อนชา
ชาสมุนไพร	350 มล.	11.25 ช้อนชา
ชาเขียว	500 มล.	14.5 ช้อนชา
นมเปรี้ยว	400 มล.	19 ช้อนชา

สารวจนงศ์เพื่อสังคคเก็ยวกับ “สุขภาพ”

ข้อ	คำถาม	ระดับความคิดเห็นและพึงพอใจ				
		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
		1	2	3	4	5
โปรดพิจารณาตัวสารรูปแบบ A – ข้อความล้วน (อินโฟกราฟิก0%)เพียงอย่างเดียว						
1	คุณรู้สึกอยากอ่านตัวสารใน รูปแบบ A					
2	คุณใช้เวลาในการทำความเข้าใจตัวสารใน รูปแบบ A ได้รวดเร็ว					
3	คุณเข้าใจตัวสารใน รูปแบบ A ได้อย่างชัดเจนและง่ายตาย					
4	คุณมีความชอบตัวสารใน รูปแบบ A					
5	คุณมีความตั้งใจที่จะเปลี่ยนแปลงพฤติกรรมตามที่ตัวสารใน รูปแบบ A ระบุไว้ (ดื่มน้ำเปล่ามากขึ้น)					
โปรดพิจารณาตัวสารรูปแบบ B – อินโฟกราฟิก 30% - 60 เพียงอย่างเดียว						
6	คุณรู้สึกอยากอ่านตัวสารใน รูปแบบ B					
7	คุณใช้เวลาในการทำความเข้าใจตัวสารใน รูปแบบ B ได้รวดเร็ว					
8	คุณเข้าใจตัวสารใน รูปแบบ B ได้อย่างชัดเจนและง่ายตาย					
9	คุณมีความชอบตัวสารใน รูปแบบ B					
10	คุณมีความตั้งใจที่จะเปลี่ยนแปลงพฤติกรรมตามที่ตัวสารใน รูปแบบ B ระบุไว้ (ดื่มน้ำเปล่ามากขึ้น)					
โปรดพิจารณาตัวสารรูปแบบ C – อินโฟกราฟิกมากกว่า 60% เพียงอย่างเดียว						
10	คุณรู้สึกอยากอ่านตัวสารใน รูปแบบ C					
12	คุณใช้เวลาในการทำความเข้าใจตัวสารใน รูปแบบ C ได้รวดเร็ว					
13	คุณเข้าใจตัวสารใน รูปแบบ C ได้อย่างชัดเจนและง่ายตาย					
14	คุณมีความชอบตัวสารใน รูปแบบ C					
15	คุณมีความตั้งใจที่จะเปลี่ยนแปลงพฤติกรรมตามที่ตัวสารใน รูปแบบ C ระบุไว้ (ดื่มน้ำเปล่ามากขึ้น)					

ส่วนที่ 3 ความคิดเห็นของคนไทยที่มีต่อการสื่อสารในรูปแบบ อินโฟกราฟิก และ ข้อความ ที่มีต่อสารวจนงศ์

คำแนะนำ : หลังจากพิจารณารูปภาพ A B และ C เสร็จเรียบร้อยแล้ว โปรดทำเครื่องหมาย ✓ ลงในช่องว่างหน้าข้อความที่ตรงกับตัวเลือกและความคิดเห็นของท่านมากที่สุดและแสดงความคิดเห็นของท่านลงในช่องว่างที่กำหนด

19. คุณคิดว่าตัวสารในรูปแบบใดมีประสิทธิภาพสูงสุดในการสื่อสารนงศ์เพื่อสังคคเก็ยวกับ“สุขภาพ” (เลือกตอบเพียงข้อเดียว)

A - ข้อความล้วน (อินโฟกราฟิก 0%) B - อินโฟกราฟิก 30-60% C - อินโฟกราฟิกมากกว่า 60 %

20. จากข้อ 19 เพราะเหตุใดคุณจึงคิดว่าตัวสารในรูปแบบที่คุณเลือก จึงมีประสิทธิภาพสูงสุดในการสื่อสารนงศ์แบบนี้ ?

(เช่น ชอบดูรูปภาพ, ชอบอ่านเนื้อหา, ปริมาณข้อความเหมาะสม, ปริมาณรูปภาพเหมาะสม, ดูน่าเชื่อถือ, อ่านเข้าใจง่าย, ฯลฯ)

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ส่วนที่ 2 ทศนคติของคนไทยที่มีต่อการสื่อสารในรูปแบบ อินโฟกราฟิก และ ข้อความ ที่มีต่อสาธารณชน
 คำแนะนำ : โปรดพิจารณารูปภาพ A B และ C จากนั้น โปรดทำเครื่องหมาย ✓ ลงในช่องว่างหน้าข้อความที่ตรงกับตัวเล็อกและความคิดเห็นของท่านมากที่สุดเพียงข้อเดียว



A



B



C

สารบรรณรงค์เพื่อสังคมเกี่ยวกับ “ ความปลอดภัย ”

ข้อ	คำถาม	ระดับความคิดเห็นและพึงพอใจ				
		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
		1	2	3	4	5
โปรดพิจารณาตัวสารรูปแบบ A – ข้อความล้วน (อินโฟกราฟิก 0%) เพียงอย่างเดียว						
1	คุณรู้สึกอยากอ่านตัวสารใน รูปแบบ A					
2	คุณใช้เวลาในการทำความเข้าใจตัวสารใน รูปแบบ A ได้รวดเร็ว					
3	คุณเข้าใจตัวสารใน รูปแบบ A ได้อย่างชัดเจนและง่ายดาย					
4	คุณมีความชอบตัวสารใน รูปแบบ A					
5	คุณมีความตั้งใจที่จะเปลี่ยนแปลงพฤติกรรมตามที่ตัวสารใน รูปแบบ A ระบุไว้ (สวมใส่หมวกนิรภัย)					
โปรดพิจารณาตัวสารรูปแบบ B – อินโฟกราฟิก 30% - 60 เพียงอย่างเดียว						
6	คุณรู้สึกอยากอ่านตัวสารใน รูปแบบ B					
7	คุณใช้เวลาในการทำความเข้าใจตัวสารใน รูปแบบ B ได้รวดเร็ว					
8	คุณเข้าใจตัวสารใน รูปแบบ B ได้อย่างชัดเจนและง่ายดาย					
9	คุณมีความชอบตัวสารใน รูปแบบ B					
10	คุณมีความตั้งใจที่จะเปลี่ยนแปลงพฤติกรรมตามที่ตัวสารใน รูปแบบ B ระบุไว้ (สวมใส่หมวกนิรภัย)					
โปรดพิจารณาตัวสารรูปแบบ C – อินโฟกราฟิกมากกว่า 60% เพียงอย่างเดียว						
10	คุณรู้สึกอยากอ่านตัวสารใน รูปแบบ C					
12	คุณใช้เวลาในการทำความเข้าใจตัวสารใน รูปแบบ C ได้รวดเร็ว					
13	คุณเข้าใจตัวสารใน รูปแบบ C ได้อย่างชัดเจนและง่ายดาย					
14	คุณมีความชอบตัวสารใน รูปแบบ C					
15	คุณมีความตั้งใจที่จะเปลี่ยนแปลงพฤติกรรมตามที่ตัวสารใน รูปแบบ C ระบุไว้ (สวมใส่หมวกนิรภัย)					

ส่วนที่ 3 ความคิดเห็นของคนไทยที่มีต่อการสื่อสารในรูปแบบ อินโฟกราฟิก และ ข้อความ ที่มีต่อสารบรรณรงค์

คำแนะนำ : หลังจากพิจารณารูปภาพ A B และ C เสร็จเรียบร้อยแล้ว โปรดทำเครื่องหมาย ✓ ลงในช่องว่างหน้าข้อความที่ตรงกับตัวเลือกและความคิดเห็นของท่านมากที่สุดและแสดงความคิดเห็นของท่านลงในช่องว่างที่กำหนด

19. คุณคิดว่าตัวสารในรูปแบบใดมีประสิทธิภาพสูงสุดในการสื่อสารบรรณรงค์เพื่อสังคมเกี่ยวกับ “ความปลอดภัย” (เลือกตอบเพียงข้อเดียว)

A - ข้อความล้วน (อินโฟกราฟิก 0%) B - อินโฟกราฟิก 30-60% C - อินโฟกราฟิกมากกว่า 60 %

20. จากข้อ 19 เพราะเหตุใดคุณจึงคิดว่าตัวสารในรูปแบบที่คุณเลือก จึงมีประสิทธิภาพสูงสุดในการสื่อสารบรรณรงค์แบบนี้ ?

(เช่น ชอบดูรูปภาพ, ชอบอ่านเนื้อหา, ปริมาณข้อความเหมาะสม, ปริมาณรูปภาพเหมาะสม, ดูน่าเชื่อถือ, อ่านเข้าใจง่าย, ฯลฯ)

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ส่วนที่ 2 ทศนคติของคนไทยที่มีต่อการสื่อสารในรูปแบบ อินโฟกราฟิก และ ข้อความ ที่มีต่อสาธารณชน

คำแนะนำ : โปรดพิจารณารูปภาพ A B และ C จากนั้น โปรดทำเครื่องหมาย ✓ ลงในช่องว่างหน้าข้อความที่ตรงกับตัวเด็กและความเห็นของท่านมากที่สุดเพียงช่องเดียว



A



B



C

สารบรรณรงค์เพื่อสังคมเกี่ยวกับ “ สิ่งแวดล้อม ”

ข้อ	คำถาม	ระดับความคิดเห็นและพึงพอใจ				
		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
		1	2	3	4	5
โปรดพิจารณาตัวสารรูปแบบ A – ข้อความล้วน (อินโฟกราฟิก 0%) เพียงอย่างเดียว						
1	คุณรู้สึกอยากอ่านตัวสารใน รูปแบบ A					
2	คุณใช้เวลาในการทำความเข้าใจตัวสารใน รูปแบบ A ได้รวดเร็ว					
3	คุณเข้าใจตัวสารใน รูปแบบ A ได้อย่างชัดเจนและง่ายดาย					
4	คุณมีความชอบตัวสารใน รูปแบบ A					
5	คุณมีความตั้งใจที่จะเปลี่ยนแปลงพฤติกรรมตามที่ตัวสารใน รูปแบบ A ระบุไว้ (ลดการใช้พลาสติก)					
โปรดพิจารณาตัวสารรูปแบบ B – อินโฟกราฟิก 30 – 60% เพียงอย่างเดียว						
6	คุณรู้สึกอยากอ่านตัวสารใน รูปแบบ B					
7	คุณใช้เวลาในการทำความเข้าใจตัวสารใน รูปแบบ B ได้รวดเร็ว					
8	คุณเข้าใจตัวสารใน รูปแบบ B ได้อย่างชัดเจนและง่ายดาย					
9	คุณมีความชอบตัวสารใน รูปแบบ B					
10	คุณมีความตั้งใจที่จะเปลี่ยนแปลงพฤติกรรมตามที่ตัวสารใน รูปแบบ B ระบุไว้ (ลดการใช้พลาสติก)					
โปรดพิจารณาตัวสารรูปแบบ C – อินโฟกราฟิกมากกว่า 60% เพียงอย่างเดียว						
10	คุณรู้สึกอยากอ่านตัวสารใน รูปแบบ C					
12	คุณใช้เวลาในการทำความเข้าใจตัวสารใน รูปแบบ C ได้รวดเร็ว					
13	คุณเข้าใจตัวสารใน รูปแบบ C ได้อย่างชัดเจนและง่ายดาย					
14	คุณมีความชอบตัวสารใน รูปแบบ C					
15	คุณมีความตั้งใจที่จะเปลี่ยนแปลงพฤติกรรมตามที่ตัวสารใน รูปแบบ C ระบุไว้ (ลดการใช้พลาสติก)					

ส่วนที่ 3 ความคิดเห็นของคนไทยที่มีต่อการสื่อสารในรูปแบบ อินโฟกราฟิก และ ข้อความ ที่มีต่อสารบรรณรงค์

คำแนะนำ : หลังจากพิจารณารูปภาพ AB และ C เสร็จเรียบร้อยแล้ว โปรดทำเครื่องหมาย ✓ ลงในช่องว่างหน้าข้อความที่ตรงกับตัวเลือกและความคิดเห็นของท่านมากที่สุดและแสดงความคิดเห็นของท่านลงในช่องว่างที่กำหนด

19. คุณคิดว่าตัวสารในรูปแบบใดมีประสิทธิภาพสูงสุดในการสื่อสารบรรณรงค์เพื่อสังคมเกี่ยวกับ“สิ่งแวดล้อม”

(เลือกตอบเพียงข้อเดียว)

A - ข้อความล้วน (อินโฟกราฟิก 0%) B - อินโฟกราฟิก 30-60% C - อินโฟกราฟิกมากกว่า 60 %

20. จากข้อ 19 เพราะเหตุใดคุณจึงคิดว่าตัวสารในรูปแบบที่คุณเลือก จึงมีประสิทธิภาพสูงสุดในการสื่อสารบรรณรงค์แบบนี้ ?

(เช่น ชอบรูปภาพ, ชอบอ่านเนื้อหา, ปริมาณข้อความเหมาะสม, ปริมาณรูปภาพเหมาะสม, ดูน่าเชื่อถือ, อ่านเข้าใจง่าย, ฯลฯ)

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VITA

Tachapon Intaratayvee was born in Thailand on June 19th, 1988. His life towards the educational path began when he enrolled in Charoenpong Kindergarten, then he continued his study at La Salle College, Bangkok in the Arts-Math program. He graduated from the high school in 2007 and decided to continue his bachelor degree at Assumption University at the Faculty of Arts majoring in Business English.

After his graduation in the bachelor degree in year 2011, he took a short break for studying and starting his working life at the Nation Multimedia Group Co. Ltd, one of the most popular newspaper and publication companies in Thailand. Within few months, he continued to further his studies in the communication field.

In 2012, he enrolled in Chulalongkorn University in the faculty of communication arts (Nitade) majoring in strategic communication management. He plans to apply his knowledge which he received from both his working experiences and multi-functional background to work in a challenging position for both international and local organizations in the future.

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