EFFECT OF DATA SET AND HUE ON A CONTENT UNDERSTANDING OF INFOGRAPHIC

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ABSTRACT

Nowadays, communication technology has changed considerably from the past. Infographic plays an importance role in communication and is widely popular among the graphic designer. It is well known that infographic is effective in communication. Since it helps people to easily understand a content and is an outstanding among text, the infographic is used as an effective tool in communication media. Several factors are said to be responsible for an understanding of the content for instance data set of graphic design, hue of infographic and so on. The objective of this study, hence, was to investigate data set and hue of infographic that influence over a content understanding. Students, who studied in bachelor degree of mass communication technology, were participated in this study. Expected experimental results will explore an effect of data set and hue of infographic on response time and correct understanding of the content. Our result might be a useful tool for designer to choose the appropriate infographic.

INTRODUCTION

Numbers of information from presentation through different media resulted in human needs to consist of highly understanding in those details and knowledge evaluation [1], which caused strain in memory system and might lead to confusing and long memory system declination[2]. Therefore, data organizing is needed for receiver to get complete and correct data, and easy to understand. Nowadays, infographic has an important role in data organizing due to infographic is the behalf of data and information by using graphic in presentation which effective in attraction from user as well as able to easily and clearly explain the complicate data.

Infographic is always presented by charts, diagrams, graphs, tables, maps and lists, etc.[3][4] Interestingly, bar charts mostly used in designing the infographic [5] due to able to present quantitative or scientific data better than other format organization and also show result which easily and clearly understanding [6][7].

Presentation in several format needs to consider amount of data and direction in communication for understanding and interpreting of the receiver. Hence, data presentation by bar charts should not consist of more than 12 data sets [8] especially data number 4-9 will be kept in human memory unit immediately [9] and color is needed to use for attraction and presentation. Because, color causes picture more outstanding in which lead to easily sensitizing and feeling [10]. Also efficiently help to see and connect related data resulted in understanding in presentation. However, according to either inside country and abroad are still less studying

about infographic and studying variable of number of data set and interesting points to understanding of data of infographic picture.

EXPERIMENT 1

In Experiment 1, Test number of data set to content understanding of infographic by 30 testers who are students in faculty of mass communication technology, Rajamangala university of Technology Thanyaburi which age range between 18-25 years old with no eyes defective or improved eyes defective person. Testing 6 data sets of infographic consist of 2, 4, 6, 8, 10 and 12 data sets. Example of infographic in testing number of data set as shown in figure 1.

Content of data set in testing is comparative data by using a chance in unfamiliar relationship for protecting knowledge from tester experiences such as statistic of books with temperature in book store etc. Which present data by bar charts due to bar charts is the most famous in designing infographic as well as able to clearly present the number of data set.

Researcher has been designed 24 infographic pictures which consist of 2, 4, 6, 8, 10 and 12 data sets (6 data sets with 4 contents in each data set) and 24 question sets for checking content understanding, totally 24 marks which show in blue color of infographic to control color influence in content understanding.
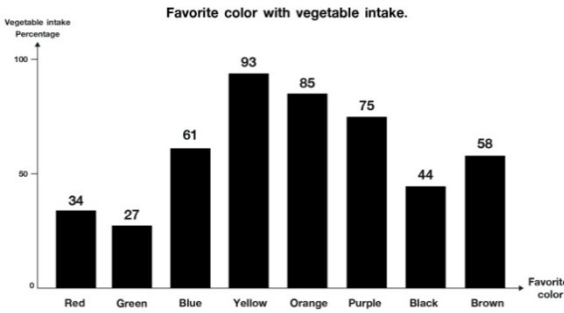
Figure 1. Example of 8 data sets presented as test stimulus.

EXPECTED RESULTS EXPERIMENT 1

We hypothesis that data set might influences to content understanding of infographic picture when data set increased, content understanding decrease. 2 and 4 data sets have understood the content of infographic picture the most. In which related to studying of Kosslyn and Stephen which have found that data set number 4, data set in showing the data difference has the most efficiency in presentation [11]. And keep in short term memory only a few second [12] and 12 data sets has the least content understanding of infographic picture due to consist of many data in understanding and difficult to remember.

If expected result shows that data set influences to content understanding of infographic, testing hue improve to content understanding of infographic will be investigated because several studies found that hue contributes to a better understanding. In experiment 2, hence, the effect of hue on content understanding will be explored.

EXPERIMENT 2

Experiment 2; testing hue to content understanding of infographic by 30 testers who are students in faculty of mass communication technology, Rajamangala university of

Technology Thanyaburi which age range between 18-25 years old with no eyes defective or improved eyes defective person. Use 10 colors in designing the infographic including of red, green, blue, yellow, yellow- red, blue-green, purple, black and gray. As shown in figure 2.

Hue of infographic designation using hue or property in identifying color by equally controlling chroma and lightness in designation in which choose color theory of opposite color partner. Designation of each infographic picture will be decided for one color in designing the bar charts, but topic, explanation and edge of bar charts used black color and white back ground.

Researcher designed 40 infographic pictures. According to the result from experiment 1, brought the most efficiency of data set in content understanding by adding more hue in designation consist 10 colors including of red, green, blue, yellow, yellow- red, blue-green, purple, black and gray (10 hues with 4 content in each data set). And 40 question sets for testing content understanding, total 40 marks, which used one data set in infographic designing to control color influence in content understanding.
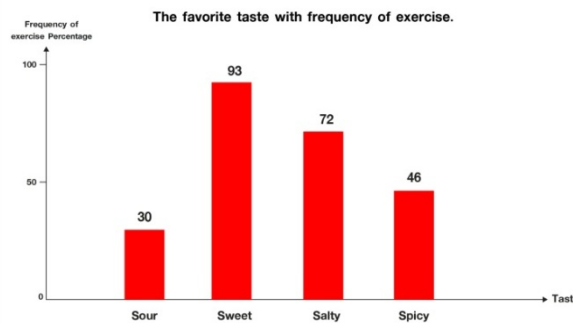

Figure 2. Example of red 4 data sets presented as test stimulus.

EXPECTED RESULTS EXPERIMENT 2

We hypothesis that hue of infographic might influences to content understanding of infographic picture which blue color has the most understanding of the content of infographic picture due to when use blue color for designing, mostly get the positive feedback and easier understand the data [13]. For yellow color, when designed white background and the appearance of the lightness of screen resulted in lesser acknowledge and also causing hardly understand the content of infographic picture.

Content understanding; a tester is able to answer in experiment correctly in which question needs to consist of understanding the content and analyze the data before answering, therefore can answer correctly including 4 choices.

Experimental room (2x2 meter), dark-closed room with covered by opaque materials which can control the lightness of room by use lightness at 500 lx as standard lightness of the room [14] and 1 set of computer, process of the experiment including;

1. The tester leanly sat on chair, perpendicular face to computer screen with space by 60 cm.

2. Keep on gray screen when sample set is ready, press 'enter' on keyboard to start the experiment

3. After that 1 second, infographic picture will be appeared at the same time, for the tester read and understand the infographic pictures. When decided time come resulted in show gray screen again. And change to question picture related to content.

4. The question will be the multiple choices. The tester press number 1, 2, 3 or 4 on keyboard, Hence, the process of the experiment has finished for 1 question.

5. The tester press 'enter' on keyboard for starting the next question. Repeat doing until complete the whole steps then completely finish.

SUMMARY

In this study, the relationship between data set and content understanding will be reported and also the effect of the hue will be investigated. Our result might give infographic designers for guideline tool of proper data set and hue of infographic. Hence, further study might properly change the infographic picture that has more detail. In the future, researcher expect to study the format of presentation and color tone to content understanding of infographic picture.

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