Societal Acceptance toward the Research Results in Thai's Graphic Design: Proposed Model

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ABSTRACT

The research fields of graphic design in Thailand have both the core and application research. The general objective of core research was to find the concepts or components of the improved effective graphic design. Likewise, the aim of application research was to test the results or productions of graphic design with actual environment. The common research processes have three steps. The first step was to analyze the components of graphics from real situation. The second step was to produce the prototype or the art works, and the final step was to evaluate the target groups. Moreover, the details for each fields research step were different. For instance, study of Thai's graphic design research, the important of research question was an extraction of Thai's identity and the uniqueness of conceptual graphic design with Technology Acceptance Model (TAM). However, the results of research were neither used in real situation nor environment of the real world. This paper, aimed to propose the methods of the acceptance of society toward the results of graphic design researches.

Index Terms—Graphic Design, Thai's Identity and Unique, Technology Acceptance Model (TAM).

INTRODUCTION

The definition of graphic design was the design of a language based on components of the art. Graphic design was able to tell the important concepts of designer to their audiences that emphasized on communication language and contents (Nunpakdi, 2010). This definition derived from many famous designers. The first was Paul Rand (1914-1996) who defined that the design as a methodology is a combination between forms and contents. Then, the design was considered as a part of the art. Milton Glaser, the American designer, stated that design has many meaning because it covered both the aesthetics and uncomplicated planning. In addition, Jessica Helfand, the Art Institution of America, illustrated the detailed definition of design that was compounding of many words and images that were the form of number, diagram, chart, photography, or illustration that considered to be the subjective or personal creation but it must maintain balanced with audience satisfactions (Tangchareon, 2002). Meanwhile, Tibor Kalman, Hungarian designer, and Bob Gill, the American graphic designer and illustrator commented that design was second language of human.

There were three important roles of graphic design (Nunpakdi, 2010):

1) To inform the meaning or detailed information such as line direction with precision and perceptive information to lesson confusion.

2) To identify the unique characteristics of a person or a object, used to communicate and identify object. For example, the colors were used in war movie poster suggested a depression and serious feeling.

3) To persuade the reality, credit and trust bank should present their stable, integrity and reliability through design.

The above role discussion, showed the meaning and signification of graphics and graphic design for subjective communication from the designer to the audience. This field of graphic design research may emphasize on the basic research and application research, however, the outcomes of research as graphic design products were not truly active in real situation and environment. Some reasons were the confidence of quality of research methods and the acceptance of the users. This paper presented the model of common process of graphic design research and the acceptance of society applied TAM.

II.   GRAPHIC DESIGN RESEARCH FIELDS: EXPLORING THE CASE OF THAILAND

This section presented the results of exploring of Thai's graphic design research. The scopes of presentation covered objectives, methodology and process of basic and application research. At the end of this section, we proposed the common process for the graphic design research that can apply to both of research area.

A.   Basic Research

Graphic design was a issue of communication processes which were used in wide range of works and both of old and new media, traditional and digital form, followed specific objectives. By explorations of researches related to graphic design, we found three general phases of process which consists of (1) pre-production: thinking and planning process, (2) graphic production, and (3) post-production: installation, evaluation, and testing the hypothesis. Almost of basic research were in pre-production phase. Then, the objectives of research in pre-production phase were creative thinking process, finding the design concepts by analysis process, and exposing the best way to communication the graphics to audiences (Nunpakdi, 2010; Bouki, 2014).

1)   The main objective

Some sample objectives of graphic design basic research: to evaluation of conceptual design achievement, graphic design factors analysis, to studying the factors and methods, which were related to best practice of design, to evaluate the audience, and etc.

2)   The example of research

This section presented example of research such as; Dr. Edward de Bono, the psychology of creative thinking field, presented three types of thinking that consists of vertical, lateral, and parallel thinking. Chathi Bouki (2014) used Edward de Bono to evaluation the graphics in campaign posters and logo of organization. Nitikorn Ninlasak (2010) studied the graphic elements that reasonable to presenting provincial tourism in iPhone such as application characteristics icons, displaying, color sets, and gadget sets. Some researchers were related to factors and guideline of appropriation for the targets e.g. Uthaiwan Prasong-ngeun (2013) found that the individual and academic communication must meticulous a design. Furthermore, Yatana Khadkeaw (2014) exposed the graphic design for visual impaired children included of color text on black background, double complimentary within warm colors, and enlarge graphics up to 50%.

3)   Research processes

The main aim of basic research in graphic design was to find a reasonable concepts, which were used for designing. The following showed detail of a common research processes that were summarized from (Bouki, 2014; Ninlasak, 2010; Prasong-ngeun, 2013; Khadkeaw, 2014).

a) **Step 1 Study and data gathering**

This step was data collection and analysis that combined activity both studying all of related literatures and field study. A field study was collecting data from participants such as knowledgeable person, local people, and the owner. This activity used the research instruments included interviewing, focus group discussion, observation, and questionnaire.

b) **Step 2 Graphic prototype designing**

This step created graphic prototype with the results of analysis data from the first step.

c) **Step3 Testing the hypothesis**

The research tested the prototype with samples to collecting the data after that testing the hypothesis.

B. **Application Research**

Graphic was communication elements for the symbol of contents to audiences. These elements played the roles of reading, perception, learning, and attraction in variety media such as book, magazine, advertising, product packaging, board, movie, poster, and exhibition. Moreover, the graphic design also covered environment media and signatures: sign and direction signage. The result of exploring the application researches, found that many research extracted the identity, uniqueness, and highlight of places, cultures and products. The next step of researchers was to transform things or place identity to graphics and artworks.

1) **The main objective**

The main objective of application research in graphic design summarized from exploring research, thesis, and article paper. We concluded that (1) to transforming of the objects distinctiveness and places, for examples culture, specific information, uniqueness and identity to be the concepts and elements of graphic design, and in addition, (2) audience evaluation of perception and level of satisfaction.

2) **The example of research results**

The graphic design communities such as provinces in Thailand extracted the local cultures, demography, identity, arts, wisdoms, and outstanding architectures as examples. Information about race, life style, occupation, arts and culture, and wisdom of Samut Songkham provine. These used some collected cultures to design a new and specific provincial logo, typography and color set (Srisureepaisarn, 2013). Likewise, use of Maha Sarakham province identities to design a map and information signage (Nusiwor, 2013) and outstanding architecture of Prachin Buri province (Sithong, 2014) were also cited as examples.

Graphic design such as colors and typographic was research to design the information board and graphic on specific landscape, which were installed at a real place. For example, agro-tourism information board (Chutikamo, 2011), specific design for Thailand historical park (Panthavangkul, 2012), and used indexical image to promote Lanna culture (Chiangmail province) (Tiewpanich, 2013).

Application of printing media such as poster to improve the level of satisfaction for Sukhothai historical park (Pantathong, Pirasan, and Sudsung, 2012) and a design of typography and illustration for global warming poster, which made the testing score improved and easy to understand (Singthong, Sindhuphak, and Klinhom, 2010).

Moreover, graphics on product packages need reasonable attention of promotional products. For example, the easy to buy products which have packages that reflected product's characteristics and visual quality (Ketreangroth, 2013), and image and pattern on product packages as an important factors to perception of product quality and classification (Pumkunthod, 2012).

3) **Research processes**

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We inferred from many researches to summarize the processes of application research to answering the main question of research such as how to use objects or place's identity as a graphic works. There were three steps of operation as shortly detail as follows;

a) Step 1 Field exploring

After setting the research problems, researchers were analysis data that collected from field experiment with interviewing, and observation forms. At the end analysis process was used to search and summarize the information of identity, and special characteristics of interested objects in the research problem.

b) Step 2 Modeling and installation

This step used the components of design that were the information of above step to create the graphic or tangible media as models. After that the graphics and models were installation in real situation or in an exhibition area.

c) Step3 Evaluation

The evaluations were made by expertise and/or sample depending on which the research objectives. Follow with a report write up steering the result as a final step.

C. The Proposed Common Process for the Research

Above part stated basic information of research in graphic design, to be noted that there were three main steps included of (1) set up the research problem and studying related literatures, (2) do the graphics or models, and (3) test and evaluate to answering the problem. Fig. 1 showed the proposed common process of research in graphic design that modeled from topic of research process in section A and B.
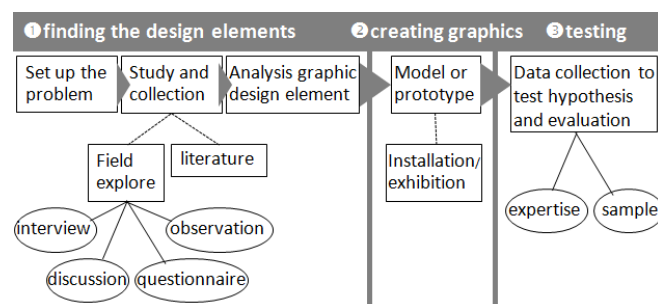

Fig. 1. The proposed common processes for research in graphic design.
Illustrated by Suwich Tirakoat, year 2015.

The first phase called finding the design element because the outcomes of this step consist of information on graphic design elements, which extracted from real objects or issues of research problem. There were three steps to doing at this phase; set up the problem was normally starting point of research, which researcher defined the research question or hypothesis or both. Study and collect step was very important that researchers took a much time to study related literatures and field exploration to collect the data from real situation by using tools such as the questionnaire, discussion, interviewing, and mixed methods. Use of all collected data was analysis graphic design element. The form of outcomes included planning, draft of prototypes, sketch, and design guideline and principles.

The second phase was creating graphics according to analysis results. For basic research, the prototype of graphic works, which consisted from hypothesis was formed. Contrary, application research created the models or real objects of graphic design such as packages, signage, or digital media, as well as

publishing the research installation, public exhibition, or online via internet. The final phase was testing that collected the data to test the hypothesis, or graphic evaluation depending on research objectives.

III.   THE TAM AND APPLICATIONS

Technology acceptance model or TAM was a psychology and human behavior theory, which proposed by Davis in 1989. The model derived from theory of reasoned action (Fishbein and Ajzen, 1975) that used to predict an act of accepts or reject on the use of information technology system such as computer system, information system, e-learning, and wide range of IT applications. This model has two components that consist of input factors (external variable, perceived usefulness, and perceived ease of use) and acceptance outputs (attitude toward using, behavior intention to use, and actual system use) as showed in Fig. 2.
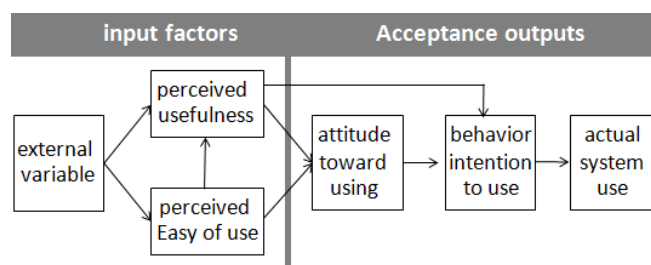

Fig. 2. TAM basic model (Davis, 1989).

The detailed of each component of TAM, which shown in Fig. 2 are as follow (Wongsumeth, 2013; Leunam, 2011; Chawisuk and Wongchatupat, 2012):

External variables mean the external influence, which made the different perception of individual, e.g. believe, experience, understanding, social behavior, etc. These variables impacted perceived usefulness (PU) and perceived easy of use (PEOU). PU defined the perception indicator that individual will get usefulness from system, e.g. how do the systems improve their operation? Thereby, if user perceived usefulness then the attitude toward using and/or behavior intention to use the system automatically followed. PEOU mean the perception indicator of easy to use the system, user believed that using the system on free will. Next states were PU and/or attitude toward using, which mean the interest and point of view in using the system. Where, behavior intention to use means individual's interest to use the system with explicit expression. And lastly, actual system use means acceptance and use of the system or technology.

In addition to application TAM for information technology (IT) systems for example, the studying of factors influencing to acceptance of ERP software to accounting user (Meansrichai, 2012), it was applied to wide range of fields such as learning, services, marketing, and etc. For instance, factors influence to acceptance of web-based learning system (Wongsumeth, 2013), adaptive TAM with powerful, high reliable, valid and robust predictive model can used by academic manager and academician as in Sultanate Oman for better decision making (Sharma and Chandel, 2013). TAM in the service industries were also improved the organization performance by modified TAM (Osathanukroh, 2010), moreover, the study for service quality factors of outsourcing services SMEs (Thongthawai, 2013) was another example of using TAM.

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IV.   THE PROPOSED ACCEPTANCE OF THE RESULTS OF GRAPHIC DESIGN RESEARCH

This section described the characteristics of the results of research in graphic design, which summed up from both of basic and application research. There were a variety of result formats as follow:

• Verifying and validating the design theory and presented the accordance and contrast of the results

• Proposing the graphic design principles and guidelines to use for specific objectives

• Presentation of a new component for graphic design on cultures, places, environments, and intangibility subjects

• Designing the graphics to specific purposes such as quality, and knowledge of community context

• Proposing the new methods of product and package design

The reason of many formats of the research results impacted to the user (people), community, and, moreover, changing the environment. In this regard, people who were affected may disclaim it. Fig. 3 show modified TAM to proposing the acceptance of results of research in graphic design. This model added five elements into basic of TAM.
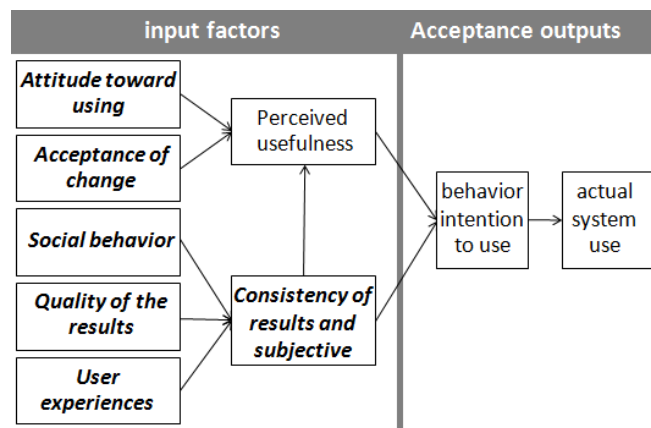

Fig. 3. Modified TAM to acceptance of graphic design researches.
Illustrated by Suwich Tirakoat, year 2015.

Each new input factors are attitude toward using, the meaning as shown in past section, we moved it from part of acceptance output to be input factor because we need to evaluate the common idea toward using the new graphic design. Acceptance of change means to assess the level of agreement if the research results will change some points of environment such as changing of color, shape of direction signage, logo, symbol, and etc. To be noted, many results were rejected because people who were user of unacceptable changes in tradition and previous styles. Social behavior included of demography, life style, specific cultures and believes. These was directly impact to opinion toward consistency of the results of research and subjective. Quality of the results consisted of the result of evaluation by expertise or academician, participant's opinions, and specific improvement. User experiences included of background knowledge, the understanding in subjective, aesthetics, emotions, moods, and feeling. Consistency of results and subjective, this element was changed from PEOU by reason of the results were the principles, guidelines, and/or methods. All of formats of the results can assessed the consistency with required subjective or context.

V.   THE CONCLUSIONS AND FUTURE WORKS

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A. Research methodology in graphic design

Normally, the research methodology in graphic design was not much difference from general research methodology, the proposed common process of research like Fig. 1 just be the guideline for the researcher that answered the specific research question and hypothesis. The results of graphic design research have many formats such as model, prototype, principle and guideline to design, the researcher should adopt processes with consistency to the subjective that should both the flow of process, research instrument, and participants in each process.

B. Modified TAM

TAM was powerful and reasonable theory for prediction on acceptance or reject of the user that applied in wide range of subjects. By the reason of the variety of the results formats, we proposed the modified TAM as Fig. 3 in past section, we separated into two parts, which consisted of input factors and acceptance outputs. There were six elements in input factors part included of attitude toward using, acceptance of change, social behavior, quality of the results, consistency of results and subjective, and PU. In acceptance outputs remained two elements that included behavior intention to use and actual system.

C. Future works

The elements in models showed in Fig. 3 were conceptual frameworks, which need to elaborate its definition such as the list of questions and information in each element. Additional factors can be considered as a plug-in to our model and using the statistics to test the correlation of all factors. Finally, applying the modified TAM model in the research methodology for evaluation in using the research results in real situations.

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