Essential skills of training ideas generation in graphic design for non-graphic designers in Thailand

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ABSTRACT: This article is intended to: 1) investigate the generation of ideas in graphic design; 2) highlight the skills and the process of ideas generation for graphic design; and 3) to learn about skills-based training for ideas creation for graphic design. The study is divided into three phases including Phase 1: the study of the process of graphic design ideas generation; Phase 2: the study of skills and process of graphic design ideas generation; and Phase 3: the study of skills-based models for training in graphic design idea generation. The results obtained can be used to support the development of training courses for graphic design ideas creation for interested individuals who are non-graphic designers in Thailand and abroad.

INTRODUCTION

Graphic design has existed long enough for its role in society to be easily understood [1], and it shares many similarities with other design disciplines, such as architecture, fashion and industrial design [2]. As a result, one can readily observe graphic design. People associate with graphics and they cannot feel a sense of alienation between them and graphic design [3]. Graphic design work relies on existing information to construct messages and convey meaning to the intended audience [2]. It is a problem-solving process [4], and the design process as a whole begins first with the idea [5].

Once the problem has been defined, it is time to devise solutions and develop concepts in greater depth. This often means communicating ideas to oneself [6]. The idea of simplicity as a condition for good design continued for many years [7]; in graphic design, *ideas* is a process. A graphic design course student must look at idea generation as a process; it is a process of thinking. For each idea, links with earlier ideas are determined by means of gathering and evaluating evidence of connections [8].

Some ideas may work and some ideas may not work, and one idea may lead to another idea and, then, to more ideas [9]. The designer develops ideas within the context of the objectives and the user's needs [10]. If one aims to be a good graphic designer, one must be creative, be open to new ideas and be receptive to knowing one's intended audience more [11].

This article demonstrates the sequence of the developmental processes of graphic design ideas generation that are later developed as skill models used in the training for graphic design ideas generation. The models can be further developed to become graphic design ideas generation training courses for individuals who are non-graphic designers in Thailand and abroad.

METHODOLOGY

Phases 1-3

This research uses purposive sampling, and the sample groups include the individuals whose work is related to graphic design in the private sector, personnel in computer school of graphic design training courses and university professors. The sampling of each phase is illustrated in the following:

Phase 1**:** eleven graphic design professionals were interviewed to acquire data on the process of graphic design ideas generation.

Phase 2**:** seven graphic design professionals were interviewed on skills and the process of ideas creation for graphic design.

Phase 3: seven graphic design professionals were assessed to gain data on the skills-based training for ideas creation for graphic design.

Research phases: consists of three steps:

- Finding the process of graphic design ideas generation;
- Evaluating the opinions of graphic design experts on graphic design ideas generation;
- Evaluating the opinions of graphic design experts on the pattern of skills used for training for graphic design ideas generation.

STUDY PROCESS

Phase 1: In this phase, the generation of graphic design ideas is obtained. The theoretical studies on graphic design and related work were gathered and studied to establish an open-ended questionnaire. It asks 11 graphic designer experts about graphic design ideas. The respondents took an average of 15-30 minutes to complete the questionnaire. The raw data were acquired after consulting with experts and consultants about the process of graphic design ideas generation, and are shown in Figure 1.
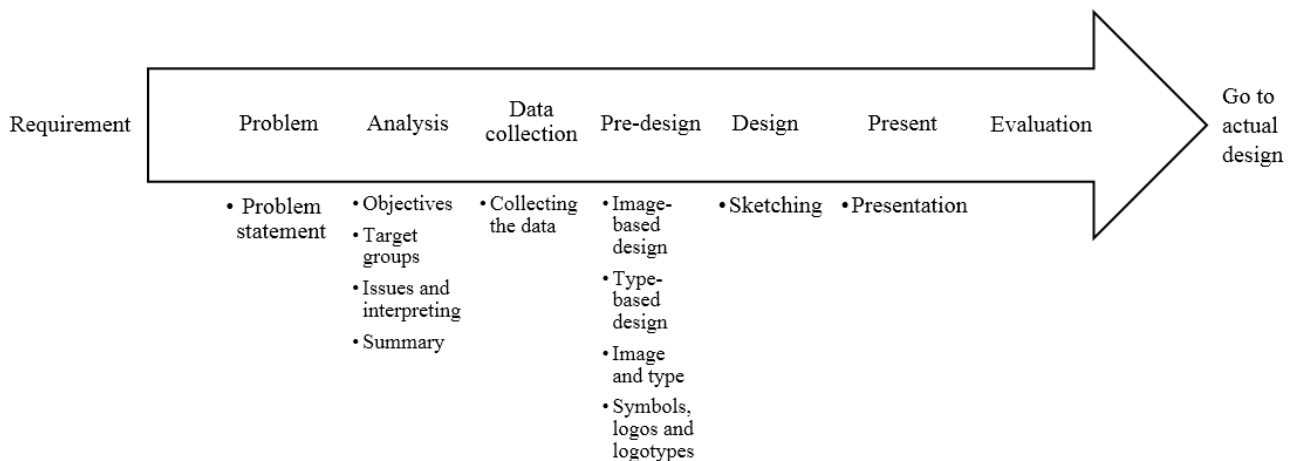

Figure 1: The process of graphic design ideas generation.

In Phase 1, the process of graphic design ideas generation was found to consist of seven stages:

1) Defining the problem;
2) Problem analysis:

    2.1   objectives,
    2.2   target groups,
    2.3   issues and interpreting: capturing the issues and interpreting the issues (keyword of the issues),
    2.4   summary.

3) Data collection: collecting all relevant data from the summary of issues;
4) Development (pre-design): the data is then synthesised for sketching to bring into the style of graphic design;
5) Performance (design): the actual sketching that covers all the important issues;
6) Present: explaining realistic picture of the actual sketching;
7) Evaluation: an assessment of the state of reality.

In Phase 2, the skills and steps in the process of graphic design were explored. It is the study of process, which is in the form of charts of graphic design ideas generation. These charts were included in consultations with experts and it was found that, according to Phase 1, skills used in graphic design ideas generation training include three graphic skills:

1) Data analysis skills;
2) Data interpretation skills;
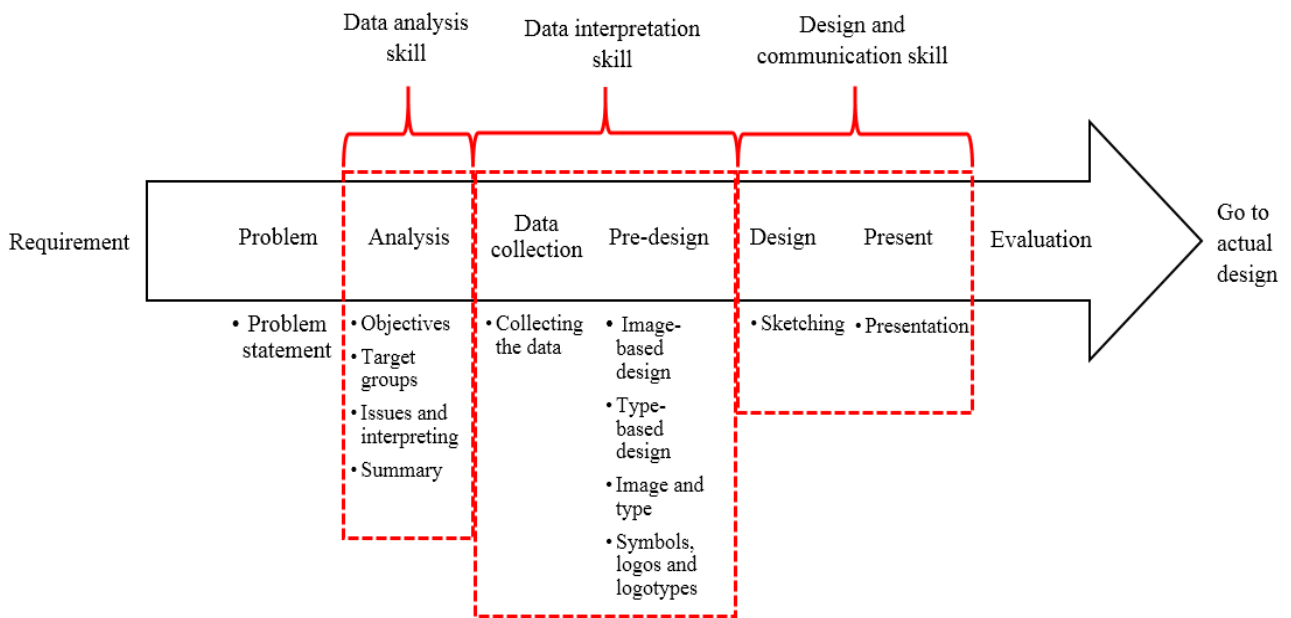3) Design and communication skills, as shown in Figure 2.

Figure 2: Skill groups for graphic design ideas generation.

By synthesising, the advisors and graphic design experts explained the process of graphic design ideas generation, shown in Figure 3.
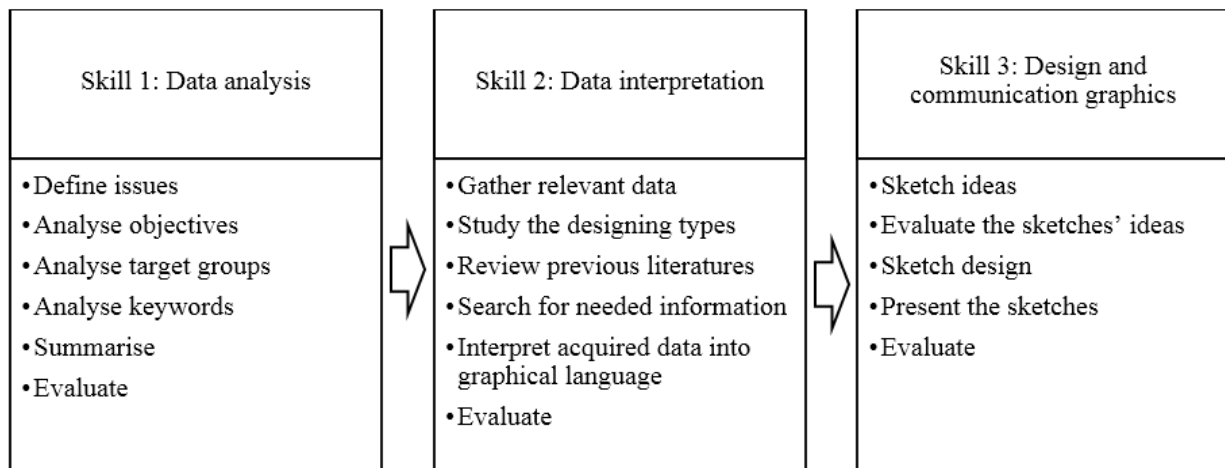

Figure 3: Skills and procedures of graphic design ideas generation.

The closed-ended questionnaire with the Likert scale structure was created to be provided to seven graphic design experts to find appropriate assessment of steps in each skill.

In Phase 2, the skills and process of graphic design ideas generation are acquired from the Likert scale questionnaire. Seven specialist experts in graphic design help assess the appropriateness of skills and process. According to the assessment results, all stages of each skill in the creation of the graphic design ideas process is required to be at the maximum level, as shown in Tables 1-3:

Table 1: Data analysis skills.

Assessed items: data analysis skills	Necessary degree at each step	
	$\bar{X}$	SD
1.1　Study of problems in assigned jobs to apply in the designing of graphics.	4.29	0.76
1.2　Analyse the job purposes to apply in the designing of graphics.	4.71	0.48
1.3　Analyse the target groups or audience to apply in the designing of graphics.	4.43	0.78
1.4　Analyse the keywords related to the jobs to apply in the designing of graphics.	4.57	0.78
1.5　Conclude the analyses to apply in the designing of graphics.	4.57	0.78
1.6　Evaluate the process of data analysis skills.	4.43	0.78
Total	4.50	0.72

Table 2: Data interpretation skills.

Assessed items: data interpretation skills	Necessary degree at each step	
	$\overline{X}$	SD
2.1 Study the relevant data to be used in graphic designing.	4.29	0.76
2.2 Study the types of designing to be used as approaches in own graphic designing.	4.71	0.76
2.3 Review the laureates of graphic design as an approach to own graphic designing.	4.43	0.78
2.4 Retrieve required data to be used as an approach to own graphic designing.	4.71	0.48
2.5 Interpretation the data into the language of graphic, e.g. images, letters, stripes and other relevant forms.	5.00	0.00
2.6 Assess the data interpretation skill process.	4.29	0.95
Total	4.57	0.62

Table 3: Design and communication skills.

Assessed items: design and communication skills	Necessary degree at each step	
	$\overline{X}$	SD
3.1 Graphic designing always requires idea sketching prior to design sketching.	5.00	0.00
3.2 Presentation of design sketching requires plausible explanation of the work that is sketched.	4.57	0.53
3.3 Evaluation for graphic design skill process and communication of graphics.	4.43	0.78
Total	4.6	0.43

As shown in Tables 1 to 3, the assessment by experts on data analysis shows that for Skill 1: data analysis skills is attributed to design graphics applications and it produced a maximum value of $\overline{X}$ = 4.71 and SD = 0.76.

For Skill 2: data interpretation skills, the process of data interpretation into the graphical language, for instance, images, letters, lines/stripes and other relevant forms produced a maximum value from all experts, of $\overline{X}$ = 5.0 and SD = 0.

For Skill 3: design and communication skills, it is found that graphic designing always requires idea sketching prior to design sketching. Accordingly, all experts expressed the same opinions, which are $\overline{X}$ = 5.0 and SD = 0. Nevertheless, all three skills discussed are in the following:

1) Skill 1: data analysis skills;
2) Skill 2: data interpretation skills;
3) Skill 3: design and communication skill; all skills obtain the maximum value.

In Phase 3, skill patterns used in graphic design training are acquired from the advisors and experts with the results shown in Figure 4.
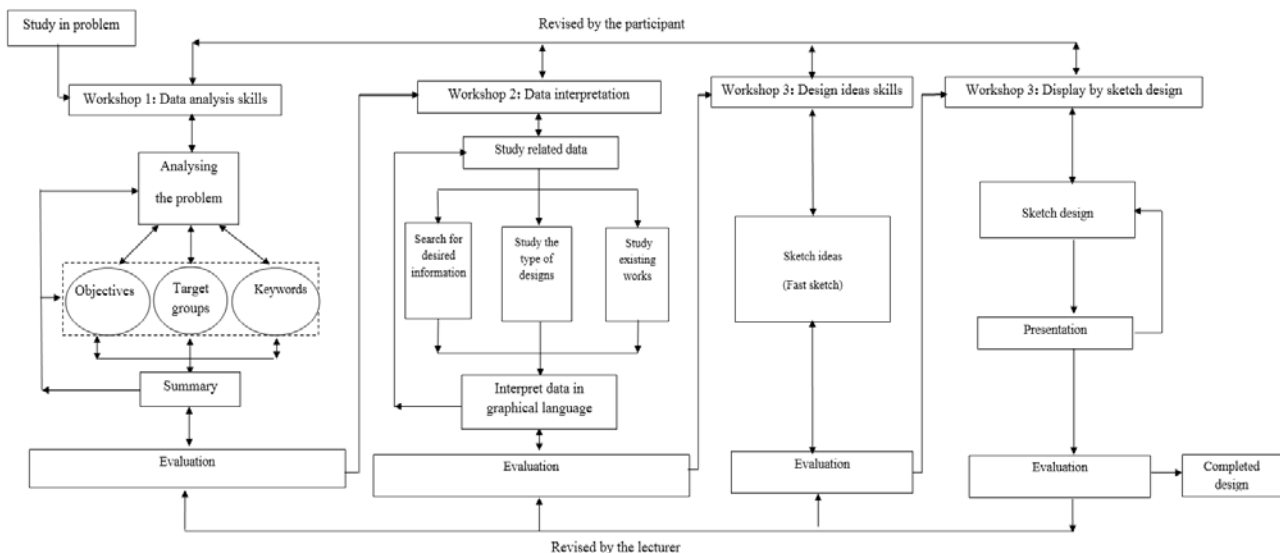

Figure 4: Skill process used in graphic design training.

It was found that all three skills that were studied in Phase 2 are divided to accommodate the creation of graphic design training in four skills including Skill 1: data analysis skills; Skill 2: data interpretation skills; Skill 3: design ideas skills; and Skill 4: display by sketch design skills. Subsequently, those skills are brought up in the questionnaire certifying the skill patterns used in training, as shown in Figure 4.

In Phase 3, the skills of process used in graphic design training were evaluated. It was found that the generating of graphic design ideas includes four topics: 1) data analysis; 2) data interpretation; 3) designing ideas; and 4) display by sketch design.

Seven experts expressed their opinions on the quality of questionnaire on the creation of graphic design ideas training.

Expert opinions on skills-based training for graphic design ideas are shown in the following tables (Tables 4-7):

Table 4: Skill 1: data analysis.

No.	Data analysis skills	Necessary degree at each step	
		$\bar{X}$	SD
1	The design problems must be appropriate and, thus, can be used for training.	4.43	0.78
2	Problems analysis is required to obtain keywords, which can help training participants analyse the keywords more easily.	4.57	0.53
3	Training participants should have a summary of keywords that is required to be used in the development of graphic design ideas.	4.71	0.48
4	There should be an assessment during the workshop, which is the data analysis to establish a concrete measure from the trainers.	4.71	0.48
Total		4.60	0.56

Table 5: Skill 2: data interpretation.

No.	Data interpretation skills	Necessary degree at each step	
		$\bar{X}$	SD
1	Information researching on the Internet can help training participants find the relevant information to be applied to the development of graphic design ideas of their own.	4.57	0.78
2	The study of graphic design type can help the training participants achieve great ideas for developing their own graphic design.	4.71	0.48
3	The training participants should have studied graphic designing portfolio that help find good ideas to bring into the graphic designing in the form of their own.	4.57	0.53
4	The training participants should specify the elements of which their graphic design contains, e.g. images, letters and other relevant forms.	4.57	0.78
5	The training participants should include an overall summary of the design as a design guideline or approach to which their design belongs.	4.86	0.37
6	There should be an assessment during the workshop: data interpretation to establish a concrete measure from the trainers.	4.86	0.37
Total		4.69	0.55

Table 6: Skill 3: idea design.

No.	Designing ideas skills	Necessary degree at each step	
		$\bar{X}$	SD
1	Sketching ideas can help participants find the overall pattern of graphic designing.	4.71	0.48
2	Starting with sketching ideas should contain several types of data collection through the graphic designing to bring into the development of their own ideas.	5.00	0.00
3	There should be an assessment during the workshop: idea design to establish a concrete measure from the trainers.	4.86	0.37
Total		4.85	0.28

Table 7: Skill 3: display by sketch design.

No.	Display by sketch design skills	Necessary degree at each step	
		$\overline{X}$	SD
1	The training participants should provide a selection of some of their good sketching ideas. Therefore, the sketching designs should be used in preparation for presentations.	4.86	0.37
2	Sketching designs should contain more than one alternative model in presentations.	4.86	0.37
3	Sketching designs should be assessed according to the estimations to establish substantial measures.	4.86	0.37
4	There should be presentations by participants. As a result, the audience will get to know the reasons, concepts and sources of the work.	5.00	0.00
5	There should be an assessment during the workshop of the presentation skills to establish a concrete measure from the trainers.	4.71	0.48
Total		4.85	0.31

CONCLUSIONS

The skill patterns used in training for graphic design ideas, as shown in Table 4, show that data analysis skills averaged $\overline{X}$ at a maximum value equal to 4.60 and SD equal to 0.56. Herein, the analised issues show that the training should include an overall summary of the design that shows the forms or types of the design to result in concrete measures from the speakers. This idea produced the maximum value.

In Table 5, graphic ideas interpretation obtains a maximum value where the average $\overline{X}$ is equal to 4.69, with SD = 0.55. The issue with the highest value is that the training participants should include an overall summary of the design whether the design guidelines are provided in any form. Moreover, the assessment or evaluation during the workshops was that data leading to concrete measures from the speakers produced the maximum value.

In Table 6, designing idea skills produced the average $\overline{X}$ at a maximum value equal to 4.85, with SD = 0.28. There are issues to begin by sketching ideas. The issue that there should be many types of data collection through the graphic designing to bring into the development of their own ideas obtained the maximum value.

In Table 7, design presentation skills obtain the average $\overline{X}$ at a maximum value equal to 4.85 and SD equal to 0.31. The idea is that the participants must have presentations to let the audience get to know about the concept and reasons for the work produced the maximum value.

The four skills discussed were:

- Skill 1: data analysis skills;
- Skill 2: data interpretation skills;
- Skill 3: designing ideas skills;
- Skill 4: display by sketch design skills, which is called 4D model of ideas generation in graphic design.

According to the results of this research, all three phases of the study result in a model for skills-based training to generate ideas for graphic designing (4D model). The results of this research can be used to support and develop training courses for graphic design ideas generation for interested individuals who are non-graphic designer in Thailand and abroad.

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BIOGRAPHIES

Thawatchai Kansrirat is a PhD candidate in Learning Innovation in Technology in the Faculty of Industrial Education and Technology at King Mongkut's University of Technology Thonburi (KMUTT), Bangkok, Thailand. His educational background is education technology and production technology. Thawatchai's research interest is in the area of training models, instructional design, e-learning and MOOC development.

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