Essential of Pictograms for Effective Hospital Signage

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Abstract

Language serves as a tool of social interaction and communication among people.Communication between building and building user needs signage as a device. Fromthis research, texts associated with pictograms help the building to communicate to its users more effectively. Pictogram reduces about half of the perception time used to perceive sign with text only across all literacy levels, especially for people who could neither read nor understand Thai or English. The pictogram designed in this study mainly deals with elderly, and group with vision problems have found that it should possess a large portion of white background as both sample groups have identified that it is the clearest and easiest mode for visibility. At pictogram wrap up tested, medical profession detected mismatched iconic information. This finding proved the following: first, pictogram might not be interpreted correctly by all groups of users since patients cannot detect mismatched iconic information; second, cognitive effect of iconic information must relate to its function and familiarity to users. Thus, designer should be familiar with all iconic information prior to design in order to rid mistakes and to design good quality and effective image-related graphic symbol for competent communication which makes pictogram essential for signage. Keywords: Pictogram, iconic information, perception time, sign

Introduction

To communicate well with building users, the elements such as directional sign, floor sign, and directory help the users to determine locations and to go around the building accessibly. All kinds of signs are also very important in case of fire. In public buildings like hospitals which have large quantities of users, signs are more important in solving communication problems. In Thailand, signage in hospitals is mostly based on a lettering which is not a universal language. Patients who could not read both Thai and English cannot perceive information on signs. Graphics, symbols, and pictograms can ease reading as well as optimal contrast of colors since they are universal. However, there are other factors for signage design: font and letter size. In addition, patients with vision problems such as nearsightedness, farsightedness and especially color blindness are also considered in this research. The color blind people are identified by genes or eye sickness which is mostly red-color blindness. Color blind people cannot distinguish the colors especially red, green, yellow, and blue. However, these kinds of people can differentiate blue more than other colors1. Charuta (2004) concluded that the elderly can clearly read dark blue information on white

background.

Likewise, Norman (1990) concluded that a pictogram is better than a label, and recognizing an image is easier than reading text. Many researches also reported that pictograms have the potential to be interpreted more accurately and more quickly than texts. They are more noticeable, and more easily understood at a distance compared to textual information. However, inappropriate design pictograms with complex contents can cause problem for people with low literacy while basic pictograms can cause problem for literate people.

Objective

The research aims to study the perception of elements involved in sign design for the hospital, focusing on the essential of pictogram in sign.

Methods

The following methods are used:

1. Literature review.

2. Interview the key informant of Ban Phaeo Hospital. Several obtained information is general data, statistics of inpatients and outpatients, statistics of personnel, and existing signage.

3. Determine condition and perception time of existing sign in Ban Phaeo Hospital.

• Interview 121 outpatients and 13 hospital personnel to identify the condition of existing signs and uses as development guideline.

• Test the perception time of existing sign by 100 sample population with the same demographic as patients.

4. Find appropriate design elements for new sign by 100 sample population with the same demographic as patients.

• Test each element: color, font, pictogram separately.

• Test new sign which combines all elements.

• Compare perception time of existing sign and new sign.

• Analysis.

5. Redesign pictogram according to sample group’s comments and suggestions.

6. Informal discussion with hospital personnel.

7. Redesign and seek final conclusion from hospital personnel.

8. Final touch on all pictograms.

Condition and perception time of existing sign in Ban Phaeo Hospital The research case study was selected from autonomous health facilities. Therefore, Ban Phaeo Hospital (Public Organization), the first autonomous health facility in Thailand, was chosen as it is on the growing stage. To date, it has head quarter in Samutsakorn, 4 more branches to serve Samutsakorn province, 2 branches in Bangkok, and 1 branch in Nonthaburi. The development of head quarter and all branches will be prototyped to other autonomous health facilities in the future. Ban Phaeo Hospital is a medium sized hospital with 180 beds, 14 health departments and 8 service sections. The existing signs in the case study of Ban Phaeo Hospital, and most hospitals in Thailand were mixed patterns: text only, pictogram with text, and number. They caused hospital patients to be confused during their diagnostic process. In particular, the elderly having vision problems and low literacy could not read the signs to determine the exact direction or accurate diagnostic procedure. Eye OPD in Ban Phaeo Hospital tried to improve their signage, but until now they cannot solve the problem. The early step of research dealt with interviewing patients and hospital personnel to identify the condition of existing signs and uses as development guideline. There were 121 patients from Medical OPD, E.N.T. OPD, and SurgicalOrthopedics OPD being interviewed. A little over half of the patients, 53.85%, indicated that they were confused by the existing sign. In case the hospital signage would be changed, 57.02% of the patients preferred the text only as the existing sign and a quarter of sample population recommended adding pictogram along side with text. Another interview was conducted with hospital personnel only involved in public relations, porter jobs, and medical equipment delivery. A little over half of the personnel, 53.85%, preferred the text only as the existing sign in Figure 1.



Figure 1. Existing sign in Ban Phaeo Hospital

Over half of the interviewed patients preferred the sign with text only because they are old patients who are accustomed to the medical checkup routine. But the test results for white DB Fongnamas Bold font on gray background showed that only 75.75% could see the letters clearly, 15.67% for the letters being too small, and 2.61% for letters being too close. The existing color tone was 83.47% clear and too light color was 16.53%. After the interview, test of perception time on existing sign was made. The result from the test showed that as the age of a patient increases, the perception time also increases; see Figure 2.