Public Signage System To Combat Problems of Illiteracy And Multilingualism

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Abstract

The present paper is aimed to examine the public signage system in small cities and towns where a large population consists of uneducated or less educated people who are not able to benefit from the public signage system. A case study is presented of a typical Indian town to demonstrate the problem. Based on an intensive interaction with affected persons at such places, a design solution has been developed and presented which essentially aims at incorporating user-friendly graphics along with the text in a sign representation, in addition to selection of appropriate size, color, background and its placement. It is noted that the proposed recommendations are also suitable for persons with disability (with the exception of visually impaired persons). Further, the system is also eminently suitable to persons of other languages, making it highly effective in a multilingual society.

Keywords: signage system, illiteracy, multilingual society, public places

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1. Introduction

The development of a nation is recognized from the quality of life of its people and their literacy level. Studies have shown a strong correlation between several developmental indicators and level of literacy of the population [1].

Ever since independence, education for all has been one of the major concerns of the Indian Government. Even though the education scenario in India in the past few decades has been characterized by massive quantitative expansion at all levels, it is still faced with a staggering backlog of high illiteracy rate of over 34.62 as per Census of 2001.The problem of illiteracy is both colossal and complex, given the size of the country, its huge population, wide regional and gender disparities, several regional languages, economic and other factors such as poverty, communalism, casteism, etc.[2].

India is a country of many languages. India has over 400 languages out of the 6700 identified languages of the world. The language of one region may become difficult to decipher by the people of other regions, including its immediate neighboring region. This coupled problem of multilingualism and illiteracy has to be tackled when dealing with signage system for public places. The approach to include graphic symbols in the signage is a commonly accepted solution. The graphic symbols are designed to be simple and effective for visual communication. A designer has to use his skills in taking decision on the language matter (text), a befitting graphic symbol, the background and foreground color scheme, proportioning, size and placement of the signage to make it serve its purpose effectively for all – literate, illiterate, persons with physical disability and population of the local region and other regions who might have temporarily migrated. Special efforts are required for persons with visual disability. Special considerations are also required when designing the signage system for use in rural regions. An adequately designed system will enable all people to move about safely and to use the facilities within the setting conveniently. According to Bednar, a comprehensible architecture design with an efficient signage or visual communication system ensures high accessibility standards of the built-environment [3].

In this paper, the design and implementation of a barrier-free visual communication system has been presented which can be used to help people read signage, decipher text and symbols, and remember its content.

2. Illiteracy

Ever since Independence, a major concern of the Government of India and of the States has been to give increasing attention to education as a factor vital to national progress and security. An important problem in the field of education in India is the extent of illiteracy. Illiteracy is a relative term. Whether a person is

illiterate or not does not only depend on their personal reading or writing skills. The degree of the individual language competence, which is expected by the society the person lives in, also has to be considered.

The traditional definition of **literacy** is considered to be the ability to read and write, or the ability to use language to read, write, listen, and speak. In modern contexts, the word refers to reading and writing at a level adequate for communication, or at a level that lets one understand and communicate ideas in a literate society, so as to take part in that society.

The Census of India is a rich source of information on demographic and other socio-economic variables. Conducted every decade since 1871, the Census provides perhaps the longest time-series on social and economic change in India [4]. As per the 2001 India census, **India's national literacy** is only 65.38 percent. More than three fourths of the country's male population (75.85%) and above half of the female population (54.16%) is literate. There is, however, a wide disparity in the literacy rates of different states - Kerala has achieved 90.92% literacy while Bihar has only 47.53 per cent in 2001.

3. Visual communication systems and illiteracy

Visual communication / sign systems have many advantages over words. They communicate information to people quickly. They can be controlled to reflect or influence emotional qualities and affect viewer emotionally in ways that verbal communication cannot. Furthermore being conspicuous by definition, they constitute one of the most dominant elements in the urban and rural landscape.

The largest segment of the world's illiterates is in India and since the command of a (natural) language is necessary for easy comprehension of visual communication systems, these potential users are being left out of the information society. Being able to read is a skill, which is difficult to define. The dictionary meaning is: "to look at so as to understand the meaning of (something written, printed, etc.)" and "to recognize and understand the meaning of (gestures, symbols, signals or other communication)". Persons who are illiterate are certainly part of the group, which has been referred to as the information poor.

Many illiterate people, therefore, have difficulty in interpreting their location and orienting themselves within the environment. Information or communication barriers make it difficult for people to receive or send information.

Current needs for good signing are widespread and critical in government facilities, hospitals, rail and bus stations – or wherever masses of people need directional information. Good signage is of particular importance to the rural and illiterate people.

4. Design considerations

To read not only means to know all the letters of a word and to connect them to a word, it also means to understand the meaning of the word (the text). Furthermore to understand means to be able to activate knowledge. The same knowledge can be activated by different media (e.g. visually with pictures or text, acoustically with sound or spoken language).

The main purpose of signs should be to provide clear designation of places, warnings and routing information. In order to make signs useful to everyone, they should be designed so as to be easily seen from eye level, and well-lighted for night time identification. The design of signs is a complex matter demanding interdisciplinary study. It is always desirable that the communication of information is not misleading or confusing; it should on the other hand, be revealed as fast as possible.

Experience has shown that the key to help illiterate people to read, and indeed to learn to read, is to work with pictorial communication. Hence there is a need to emphasize on using pictures in all signs to convey meaning.

For a sign system to be clearly understood, messages must be consistent, as short as possible, stated positively and mean the same thing to all viewers. The size of letters should be in proportion to the reading distance, in both horizontal and vertical directions, from the farthest point of viewing. Signs can combine graphic symbols with lettering so that everyone including illiterates can understand the message. The signage should be more pictorial so that languages will not become a barrier for persons having no knowledge of the language used in signage. The greatest readability is usually achieved through the use of light-colored characters or symbols on a dark background. The characters and background of signs should be eggshell, matte, or other non-glare finish.

Certain colors can be powerful reinforcing agents in signing. The commonly used colors are white, black, red, blue and green. Particularly when it is used in conjunction with colorful walls, light of the proper intensity and color can create excitement, aesthetic enjoyment, dramatic, emphasis, and emotional warmth as well as clarity of orientation and safety from crime and accidents.

5. Designing symbols

The term symbols are used here to mean both symbols and pictograms. Although these two elements function similarly, they are quite different in origin. Symbols are abstract or geometric forms, which are associated with an idea. Pictograms, by contrast, are based on recognizable objects closely associated with the idea they communicate.

Visual communication system is based on a set of symbols which can be used to break down language barriers. Every symbol is abstract meaningful; they can be placed together to form sentences [1, 2]. Note, however, this pictorial language is plagued by the fact that it is rather cryptic. This is, in fact, true to all pictorial languages.

The first step in the purpose of designing visual communication systems would be to identify the various aspects of a given public facility by graphic symbols that will serve collectively as an interface for the user.

5.1. Iconic

The message area in this has some similarity or resemblance with its object, and the meaning can be 'read' easily even by illiterate people. Iconic solutions seem to be logically most suited for representation of message areas as symbols, because of their immediacy of information recognition and retrieval. Fortunately, a majority of the message areas seem to offer solutions in this category.

5.2. Indexical

The message area does not offer enough direct clues and hence has some complex kinds of resemblance to its object. Also such representations can best be summed up as being the output of the user's conception of his familiarity with a given facility. Cultural knowledge is required to read these symbols.

5.3. Arbitrary

The message area or certain aspects of it are depicted by an arbitrary sign. These symbols have a tendency to be contextually dependent, and to that extent are restrictive in their application. The messages are very difficult to understand by rural and illiterate population.

The final symbol that is intended to be used, as a part of the signage should necessarily possess certain visual attributes that are essentially formal in their characteristics and are considered indispensable towards designing the graphic symbol.

6 . Design solutions for signage for illiterate persons

Since the person's eye goes immediately to the visuals, a designer should think about how to use visuals, color, fonts, eyes movement of the reader, etc. The types of emotional appeals and the overall impact of the signage should also be considered.

Main entrances to all buildings should stand out or be clearly signed with the appropriate symbols. Reception areas should be well lit with unobstructed circulation space, good provision of seating and with clearly defined routes to reception counters, lifts, stairs, toilets and other facilities. A plan of the building should be displayed in the reception areas, which clearly shows exit routes. Emergency alarm systems should be both audible and visual. Dangerous areas should be accentuated by use of contrasting texture, color or physical guards. Directional signs must be located at every point of decision so that there is no doubt in the visitor's mind whether to turn right, left, or go straight ahead.

Readers who are not able to read a text can be aided with pictures explaining a text or they can be helped by hearing someone read the text to them. Both have their rightful place in interactive systems. But pictures have, in comparison to speech output, the following advantages:

- Pictures can be included within the text like in primers for reading novices.

- Pictures included in the text can stay there permanently, thus give an overview about the information delivered by the text and hence aid in deciphering the information.

- Compared to language, more recipients can be addressed with pictures than with spoken language.

Educators believe that explaining the contents of a signage, only by pictures gives illiterate people the argument not to learn a language. Thus only give graphical reading aids are given and presented in addition to the text. All systems developed to replace the complete text (and thus helping illiterate users to understand the meaning without the text) force the user to learn a visual language. Another aspect is that retaining the text helps the user in learning how to read.

7. Case studies

A case study based survey was conducted of existing visual communication systems within public buildings of small towns of India, which need to be made user-friendly and identifiable by disabled persons. The neighboring towns of Rishikesh, Raiwala and Haridwar were selected for the survey. The shortcomings of the existing signage system are highlighted through several photo plates. For each case, a new signage is proposed. The solutions offered are sustainable, replicable and practical in the long run to make built environments 'accessible to all'.

Indian rural public places and Indian rural road sides are having signs which are usually foreign, wrongly written, disproportionate and irrelevant to the information needs and interests of the people expected to read them. Thus,

information media that use a language and format that is irrelevant to them cannot adequately serve rural dwellers.

The bus and railway stations have no proper signage for disabled and it is difficult to locate the entry and exit, as shown in Plates 1 and 7. The corresponding solutions are proposed in Figures 1 and 6. The ticket counters (Plate 2) and the enquiry counters (Plate 10) lack illustration. New signage proposed is shown in Figures 2 and 9. Another example is of public toilets given in Plates 3 and 4. There is hardly any signage. The proposed signage for toilets for men and women is given in Figure 3. The inadequate signage for drinking water facility (Plates 5 and 6), telephone services (Plate 8) and waiting area (Plate 9) are shown and the new signage developed are shown along side in Figures 4, 5, 7 and 9 respectively. The basic idea in all proposed signs is to include a prominent space for graphics, relevant to local environment. The text is written in local script as well as English. The colour application improves legibility.

Plate 1

Parking for disabled, Rishikesh

Fig 1

Proposed signage for parking for disabled

Plate 2

Haridwar bus station
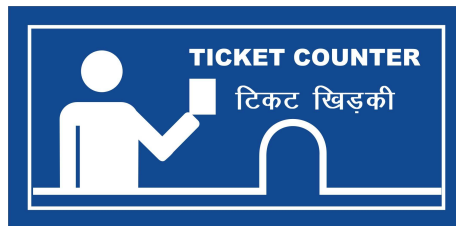
Booking window

Fig 2

Signage proposed for ticket window

Notice boards displaying important information are useless as they are hanged too high to be clearly visible and are in a poor condition. The existing signage for various facilities are devoid of proper symbols and message texts.

Plate 3

Toilet, Haridwar bus station

Plate 4

Toilet, Raiwala

(a)

(b)

Fig 3

Proposed signage for toilets

Plate 5

Drinking water facilities at

Haridwar bus station

Fig 4

Proposed signage for drinking water

`Plate 6

Drinking water, Raiwala
water

Fig 5

Proposed signage for drinking

Plate 7

Pathway for disabled, Haridwar

Fig 6

Proposed pathway

Plate 8

Telephone facilities, Haridwar

Fig7

Proposed signage for telephone

Plate 9

Waiting room, Raiwala

Fig 8

Proposed signage for waiting room

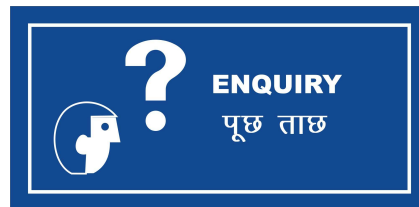*Plate 10*

Enquiry office, Rishikesh

Fig 9

Proposed signage for enquiry office

Use of secondary language with identifiable symbols helps illiterate and rural population to find the way at their own.

8. Conclusions

Information is power and appropriate information provision empowers people or even nations to promote informed decision-making. Ever since Independence, a major concern of the Government of India and of the States has been to give increasing attention to education as a factor vital to national progress and security.

The majority of the human resources of India reside in rural areas. Similarly, the majority of the rural dwellers are illiterate. Since socio-economic and scientific developments depend on the masses, there is an urgent need to provide comfortable, users-friendly environment and needful information for them.

In this paper a way of developing a signage system tailored to the needs of illiterate and rural people has been presented which is usable, both for information

retrieval and learning. This has been systematically investigated considering the needs of illiterate people based on the existing signage systems.

The signage system, in general, in rural and semi-urban India is not adequate. The deficiencies have been identified and solutions/modifications are suggested. Signage using symbols and pictograms can assist many people, particularly those with learning disabilities. It is proposed that illustrations in the form of symbols and graphics should be used along with text to make them more people-friendly. The approach focused both on using techniques of connecting images and text and interface design. This will give the rural masses an essential component of the information. Programs of government will be better understood and appreciated by them and services of the various agencies of government will be better utilized by them to improve their everyday lives.

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