

An Experiential Study On The Ability Of Institutes Entrance Design Elements And Physical Features In Inducing Perceived Image Among The Observers: With Reference To Entrance Edifice Of Technical Institutes In Tiruchirappalli And Thanjavur Region

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Abstract : This study attempts to reveal that the entrance design elements and physical features attributes of entrance of the institutes of technical education has the ability in inducing perceived image among the observers about the technical Institutes in Tiruchirappalli and Thanjavur region. Furthermore, to establish that perceived image of a setting is a function of legibility of design elements and characteristic physical features of the setting. In pursuit of this, the selected concepts for understanding features of physical environment- Image relationships identified by Kevin Lynch (1959): Form Identity, Visual scope, Dominance, legibility, and sensory stimulation are the key factors considered of this study that were investigated through observation and collected response from the students for a set of structured questionnaire in selected learning environments of college level institutions in and around Tiruchirappalli and Thanjavur district. The research questions examined through the selected factors here are: 1) does the form articulation and uniqueness of the entrance design elements facilitate in inducing superior image about the institute among the observers. 2) Does the visual distance and possibility of viewing entire span of the built structure of the entrance support in inducing superior image about the institute among the observers. 3) Does the greater size, scale and proportion of the physical features of the entrance aid in inducing superior image about the institute among the observers. 4) Does the clarity on spatial articulation and ease of perceiving the entrance design elements augment in inducing superior image about the institute among the observers. 5) Does the figure- ground relation, finish color and texture of the material of construction of the entrance structure endorse in inducing superior image about the institute among the observers. Data collected with questionnaires completed by 458 respondents from selected engineering colleges in Tiruchirappalli and Thanjavur region were analyzed and the results indicate that the Entrance design elements and physical features are significant in inducing perceived superior image among the observers besides the other uncontrolled variables. Thereby, proving the Research hypothesis that perceived image of a setting is a function of legibility of design elements and Characteristic physical features of the setting. Furthermore, the research findings indicate that more design variables could be studied in different context to bring out further significant insights in understanding the relationship between perceived image and image building capacities of the variables of built environment at large.

Key Words: design elements, dominance, form identity, image, legibility, physical features, Visual scope, sensory stimulation and inducing perceived image

1 INTRODUCTION

In recent times educational institutions, are known to have become increasingly concerned with the expressions of their physical environments. It is an undeniable fact that in today's highly competitive domain of business, the institutes imparting technical education is under tremendous pressure to market them as well as to gain an edge over competitors. In doing so, they spend enormous amounts of resources to project a perceived desirable "image".

The institute developers have perfectly understood that an observer's first impression of their institute is certainly experienced from the physical appearance of the very entry point to the college i.e., the appearance of entrance structure design and the physical features of the elements that provide access to the college. In view of this fact, there are several examples where institutions that impart higher technical educations have made conscious decisions to use the entrance structure of the Institutes with its design elements and physical features in their Institute's image building process. A consistent trend is seen among the institutes imparting technical education to create a physical setting to communicate their intentions, and serve as a representative image of the institute. The physical appearance or physical settings can be described as the immediate built environment from which the organizations operate and with which they are identified. (Berg & Kreiner, 1992). Institutions, today, not only want their physical settings to satisfy the functional requirements of business but also want work environments that are aesthetic and at the same time "express particular and strategic aspects of the organizations and their business" (Berg & Kreiner 1992). Symbolism, therefore, appears to be the keyword as Institutes increasingly use physical settings to create legibility and project representative "superior images" However, there is very little empirical research that explains

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this relationship between the built environment and its significance to a technical Institution. Nevertheless, the fundamental questions of – if and how physical settings affect the institute's image, remain unanswered. As put forth by (Berg & Kreiner,1992), there is wide scope to explore the relationship between the built environment and its image perceived by the observers who experience the environment. Therefore, the aim of this study is to establish and explain the role of the structure of the Institutes Entrance with its design elements and physical features in inducing perceived image among the observers of the setting. The study focuses on the design appearance of the entrance structure, its physical characteristics as an important part of the physical environment and explains how its experience affects the perception of the observers of Institution and how that experience further goes on to induce the Institution's superior image. The Studies presented in this paper demonstrate that Institute's physical features with different scales and contexts are strongly capable of inducing image of building. This study culminates by demonstrating that Perceived image of a setting is a function of legibility of the design and characteristic physical features of the setting. Furthermore the study findings qualify to provide design guidelines for entrance structure design of the institutes and encourage Institutions to identify Entrance structure design and its appearance of the elements as vital and equally significant aspect of the their physical environment.

1.1. Relationship between Physical environment and Human-Perception:

The relationship between human perception and the physical environment is a multi-disciplinary field that includes contribution from social and behavioral sciences of psychology, sociology, geography, and anthropology as well as from the design disciplines of Architecture, landscape architecture, interior design, and urban and regional planning. Recently it has included contributions from neuroscience research(Ziesel 2006) and public health (Frumkin 2003) (Northridge & Sclar,2003). There are studies that consider person and physical environment as separate entities and emphasize the ways in which the physical environment influences Perception .Some researchers, however, start from an assumption of person- environment as unitary form and propose interlocking and ongoing process of coexistence between people's perception and physical environments called as transnationalism. (Minami & Tanaka 1995),(Wapner 1995), (Werner & Altman 2000) (Werner, Brown & Altman 2002). These studies have contributed to the development of broad categories of theory about Human perception and the physical environment: Stimulation theories, and control theories, originated in the theoretical approach that assumes separation of person and physical environment, but they have increasingly recognized the interrelatedness of person's perception and physical environment. Length of studies and volume of research were done in the area human perception and its relation to physical settings. Currently, the planners and designers along with sociologist and environmental psychologist put in their efforts to bring out the desirable outcomes from the appearance of a setting and its symbolic content with associative meaning it conveys to the observer who experience the settings. In particular the design of the physical settings and their attributes are examined on how it could project an image among the observers in different

context and buildings.

2. Significance and Need of this Study

It is important for design professionals working in this realm to understand how their work contributes to the concept of a setting's image. In this study the setting under investigation is Institute. As stated earlier the image needs to be coordinated through all facets of the Educational Institute's appearance. In terms of the built environment it would mean that the architectural form, overall layout design as well as the Entrance to the building needs to be designed to symbolically represent the Institutes personality and thus help form an image. Canter (1983, p 12) states that "the dominant influence of physical surroundings is via its significance. It is what the existing surroundings and the proposed Modifications mean to people." This research focuses on the appearance of the edifice of the entrance as a part of the physical setting and the objective is to understand its role in Institute's communication.

2.1 Definition and distinctions:

The context: Context is any information that can be used to characterize the situation of an entity. An entity is a person, place, or object that is considered relevant to the interaction between a user and a function, including the user and function themselves. In This study, the entity is the Observers and the elements are the Entrance edifice features in selected technical institutes of a particular city. (Brown 1996b) defined context to be the elements of the user's environment. They include the following facet of the environment:

Collective environment: available spatial order, physical settings of permanent feature variable, semi-permanent feature and ambience to carry out the function in the physical space. In this study, the collective environment refers to the spatial configuration, physical area of the Entrance edifice of the institutes where the study is carried out.

Social environment: location, collection of nearby people, and social situation social, emotional or informational state. Here, the social environment refers to the other people nearby settings and people who are experiencing the settings perceived image about the institution.

Physical environment: physical features of the Entrance edifice: Objective measures of the physical space, form qualities of the settings, lighting and noise level. Here, it refers to the actual physical settings overall form qualities like size, scale, color, texture , legibility and figure-ground relationship of the entrance edifice of the institution.

Image: The general impression that a person, organization, or product presents to the public (Oxford Dictionary, 2008).

Entrance Edifice: Refers to the physical design of the entrance structure which has the primary function of providing and regulating access to the buildings through them.

Spatial configuration and Physical setting attributes: The term Physical space is an outcome of a Built environment which refers to the man-made surroundings that provide the setting for human activity, ranging in scale from personal shelter to neighborhoods to the large-scale civic surroundings.

The spatial configuration refers to the generic form evolved out of any geometric shape or non-geometric, organic form that becomes the envelope of the space intended for use patterns that satisfy needs and provide opportunities for Habitation and life activities on a daily basis.

Physical attributes refers to the basic features of the built setting for a space including forms, proportion, area, openness, enclosure, levels of spaces, articulation of the spatial order, texture, scale, safety, protection, materials used and the finish of the setting.

Superior image: The impression which is of higher order in relation to the other settings experienced by the people.

(Groat 1974) says that an important part of people's interaction with buildings is the meanings they associate with them and therefore good design is one which is able to consciously manipulate these intended meanings. This theory can be applied to the appearance of the edifice of the entrance as well; and one can argue that an entrance structure begins to form a representative image of the Institution when it is consciously designed to convey meanings to its occupants and observers. Architects need to understand how their work can contribute to forming an Institute's image. At the same time Institutions need to understand how important the entrance design elements are to their immediate built environment. This tiny research will:

- Determine whether an entrance structure and its design elements have the capacity in inducing a representative image of the Institution, thereby projecting the Institute superior image.
- Provide an understanding of how physical feature attributes of the entrance structure affects the institute's image.
- Provide an understanding of how architects can create superior Image through design for Institutional clients.

3.1. Objectives

The following objectives are formulated for this study:

- To find out the relationship between an Institute's entrance physical settings and its ability in inducing image among the observers of the setting.
- To understand how observers perceive and read the Entrance structure elements, what this experience of the entrance design signs and symbols means to them and how their experience of the entrance edifice eventually induces Institutes image.
- To demonstrate empirically the level of influencing capacity for the identified factors in promoting superior image of the institute among the observers.
- To prove that the entrance edifice features of the institutes has significant contribution in inducing superior image among the observers.
- To identify key features that a Designer can use to take a client through the image building process.
- To point out the limitations of entrance design in contributing towards Institutes Image building process.
- To empirically prove that the perceived image of a setting is a function of legibility of design elements and Characteristic physical features of the setting.

3.1.1. Scope of the Study

The prime motive of this research is to investigate the influence of the entrance edifice and the design attributes of it in influencing perceived superior image among the observers about the institution they perceive. Thereby, proving the proposition that the perceived image of a setting is a function of legibility of design elements and Characteristic physical features of the setting. In particular, this study explores the ability of the physical setting in projecting an image for the institution in a contemporary setting and how does that physical setting in context i.e. Form Identity, Visual scope, legibility and design attributes including the Dominance and the sensory stimulation of the entrance edifice of the institute could be supportive in promoting superior image of the institution among the observer of the institution. The various studies related to image projected by the settings has been approached from many directions, but the correlation between form identity, configuration, design attributes etc., of the specific setting i.e., the entrance edifice of the technical institutes among observers at college level in Indian context has not been investigated systematically. Moreover, the potential for further scope of the research on inducing superior image is found to be high because the issues related to the Physical setting feature variables were not dealt with many situations. It is found that the previous studies related to image building pertaining to built environment has not been documented by applying specific theoretical concepts towards the investigation. Hence, this study has been carried out to deal with the Factors related to inducing perceived image among the observers about the institution in the contemporary setting, through selected concepts identified by Kevin Lynch (1960). The concepts are stated as below.

Form Identity: Degree to which a Form in the designed environment manifests distinctiveness to the observer.

Visual scope: Extent to which an environment facilitates the possibility of viewing entire span of the built structure.

Dominance: Extent to which an environmental feature manifests supremacy through its size, scale or proportion.

Legibility: Ease with which people can conceptualize key elements and spatial relationships within an environment.

Sensory stimulation: Quality and intensity of stimulation caused by its size, scale and proportion as experienced by the various sensory modalities.

Figure-Ground perception: The perception of good figure in relation to the articulation of background settings by the observer.

The above selected key concepts were empirically investigated whether it could be the causing factors in inducing in inducing perceived image among the observers with reference to Entrance edifice of technical Institutes in Tiruchirappalli and Thanjavur region. Since this study is applied for the selected learning settings of a district of Tamilnadu, the findings and the results are more specific in nature and the same theory can be applied to other institutes also to get significant results with appropriate research design. The scope of this study is to investigate the entrance

structure and its features of the technical institutes in and around Trichy and Thanjavur region whether it could induce perceived image of the institute among the observers. The observers are from the same region who are familiar with the selected settings. However, this study mainly focuses the following aspects:

- To determine whether Educational Institutes consciously make decisions to use the physical settings, and the Entrance edifice in particular, to project an image among the observers.
- To understand the potential of the Physical elements of the entrance in stimulating consciously or subconsciously tries to represent an image through entrance edifice design.

The information derived from this study will help both designers and their clients who are involved in the design of educational institutes and encourage them to increasingly make entrance edifice an integral and equally important part of the physical settings.

3.2. Literature Review

The objective of the literature review is to provide a better understanding of the Theoretical concepts of image and institute’s image as applied to the world of technical educational institutes and how these concepts apply to the design of entrance edifice. The review is divided into two sections and starts with a brief relationship between Human perception and built environment. In the next section the concept of image as proposed by (Kevin Lynch 1959) and the selected concepts for understanding features of physical environment- Image relationships identified by (Kevin Lynch 1959): Form Identity, Visual scope, Dominance, legibility, and sensory stimulation are explained and culminates in summarizing the observation drawn from the review of literature. Several studies have demonstrated that the concept of image has played a very vital role in history of architecture. “Image change” a result of the change in the physical environment, helped in re-inventing organizations. Not only were the resultant environments a more desired form of physical and functional setting, but the once perceived forceful and authoritarian organizations now seemed more approachable and receptive to its various stakeholders. This phenomenon therefore suggests that there is a relationship between Establishments and their physical settings and the concept of image. To understand this relationship, it is essential to provide clarity on fundamental terms of this study that are listed below and the literature review in the aims to throw light on those terms.

3.3 Image

In the most simplified terms, an image can be defined as

- A visual representation
- A picture in the mind (Oxford Dictionary, 2008).
- A simile or metaphor (Oxford Dictionary, 2008).
- A visible impression obtained by a camera, displayed on a video screen, or produced by reflection or refraction (Oxford Dictionary, 2008).
- The general impression that a person, organization, or product presents to the public (Oxford Dictionary, 2008).

These definitions though simplistic introduce us to the complexity of image as a Construct. A great deal of research

has been done over the years to understand the concept of image. While some researchers describe it as an object or a tangible stimulus, others like (Dichter 1985) describe image as the total impression an entity makes on the minds of people and emphasizes its role in perception and how it influences the way people behave or react to things. (Woods 1975) categorizes this research into four different categories based on External and internal dimensions, and explains how these two views are Interdependent. He explains that the basic fundamental differences between these two dimensions lie in the philosophical assumptions.

“Externalists seem to assume that the environment is the source and basis of image and that behavior in the environment is a response to the stimuli contained in the environment. The internist view on the other hand seems to assume a more active role of individuals in developing images. Though environmental experience is needed to develop an image that image need not accurately represent the environment.” (Woods 1975).

The Form identity, articulation and physical setting attributes within the contemporary settings manifests moods, communicates messages and remains relevant on the following aspects: Organization of spaces, change in the levels of height and quality of light is gradually to understand the functionality of the settings and it provide us information on automatically detective function of the settings. It immediately provides clues and informed choices for individuals’ preferences and personal pursuits. Though the range of perceived image of a setting are likely to be induced at different levels like individual level, and group level, For this study purpose perceived image at Building level is examined. Specifically the form identity spatial configuration and physical setting attributes of entrance edifice is studied whether it could be an inducing factor in building superior image among the observers about the technical institutes in Trichy and Thanjavur region. In pursuit of this investigation, our literature study clearly shows that there is a substantiate gap in this area of research involving the form identity, spatial configuration and physical setting attribute for assessing the level of perceived image induced by the entrance edifice among the observers . In light of this, the study is carried out by applying the factors identified by Kevin Lynch (1960). In that five concepts were selected to study the research question. Therefore, this study has formulated hypothesis based on the five concepts and as an outcome the following hypothesis were formulated and examined.

Level of perception	Perceived Physical Setting	
	External	Internal
Specific	Image as Object Or Stimulus Pictures or Photographs Graphic signs Picture Superiority Icon or Symbol Landmark	Image as Mental Representation Mental Pictures Mental Rotation Mnemonic Devices Experience and cue Dependent
Comprehensive	Image as Environment Environmental Context Context Induced Mood Environmental Attributes Curb Appeal Spatial Personality	Image as Holistic World View Mental Schema Experience Dependent Associative Memory Mental Networks/ neural activity pattern

Fig 1. Classifications of Image Research (Woods, 1975)

He had five criteria for legibility. First, the region might have 'vivid differentiated elements'²³ but these are organized legibly so, for example, the main metropolitan elements can be understood by the majority of adults. Secondly, the image can be investigated and understood at detailed levels, as well as at the more general level. Thirdly, the image should be able to be seen differently by different people, dependent on their interests and experience. Fourthly, it has to be adaptable, so that change to circulation systems (from rail to flight; from people movement to electronic communication) would not destroy the image. Fifthly, the image has to be able to be associated with functional and social organizations. Linked to this are accessibility low cost movement/communication; adequacy enough quality roads, schools, shops, factories; diversity a varied range of activities and facilities; adaptability; and comfort – low stress in terms of climate, pollution, noise and communication. (Lynch 200) looked particularly at what he called the "public images". Barcelona gains its identity through variety within an overall framework, which allows elements to be different, but still relate to the overall identity of the place. The same goes for cities such as New York and London. However, in certain cases, the unification of particular urban elements can contribute to the development of identity - one thinks of red London buses, black taxis and yellow cabs in New York - but these elements are very particular in their characteristics, and differentiate themselves from the more universal qualities of much 'contemporary' design. The built environment tries to create an exterior, physically adopted to its functions and visually impressive. Further, it provides a congenial surrounding with physical setting attributes that provokes appropriate behavior in the social environment. However, every built environment attempts to create an order which is socially identifiable and interactive with the members at large so as to get the endorsement of the society that transact with the setting. In order to perform the activity in line with the socio-cultural norms of their community, People adapt, transform or change their environment in which they live. Nevertheless, the physical setting forms the building which is an assemblage of many sets of physical features, characteristics and attributes. Physical environments often serve as repositories of individual experiences and social relationships and are therefore, more than a cause of behavior and more than a behavior mechanism. (Irwin Altman, 1993) The fact that buildings are defined by many sets of physical setting attributes and the relationship between themselves has made the process of investigating Human behavior within this context as rich, complex and undeniable in bringing out several theories and models. (Robert Gifford, 2000) Though, the designers and planners have long been concerned about the effect of the built environment on human behavior. In the beginning of nineteenth century, there was a massive thrust on the effect of the spatial configuration on the social interaction and the meaning it communicates to the community by the physical planning and started searching for factors that could induce representative image and connotative meaning not only among the residents of the neighborhood, but also in other secondary environments like the learning environments too, which is considered as the foundation for the human development.

3.4. Review of Past Studies









The literature in this area is at an early stage of development, although it is growing rapidly. Results of this research to date,





which has been largely cross-sectional, provide a growing body of evidence that shows an association between the built environment and image building process behavior at different levels. The role of physical setting in the support (or nonsupport) of building image among the users has been known in the literature for some time, for example in urban study Kevin Lynch (1960) demonstrated that the image of the city is formed by the physical elements like paths, edges, nodes, district, and landmarks at the urban level. Fig: 1- Schematic representation of relationship between built environment and Human perceived image. Besides acting as a communicating medium, spatial layout or an architectural arrangement can also signal the appropriate social roles and responsibilities, for example, jury members seated at the head of a rectangular table assume leadership roles and participate more than members seated on the sides (Strodtbeck And Hook 1961). The physical setting and spatial arrangement of the residential space also plays an important role in regulating social interaction within and between the settings for example, proximity of work spaces has been linked to the occurrence and frequency of both formal communication (Conrath 1973), and informal, face-to-face communication (Homans 1954; Conrath 1973). By creating greater visual accessibility, open types of workspaces facilitate communication (Lorenzen and Jaeger 1968). One important aspect of the human perceptual research is that it shows that our behavior is governed by environmental perception and the visual traits of the settings, the pattern created by elements stands first in inducing the image rather than the actual elements that builds the pattern (Gestalt principle). Experiments in Human perceptual organization are valuable in that they can provide a greater understanding in environmental perception and transaction. All that happens in the world of human beings will definitely happen in a spatial setting and the design of the setting has a deep and assisting influence on the people in that setting. The spatial configuration, articulation and physical setting attributes within the contemporary settings manifests moods, communicates messages and remains relevant on the following aspects: Organization of spaces, change in the levels of height and quality of light is gradually to understand the functionality of the settings and it provide us information on automatically detective function of the settings. It immediately provides clues and informed choices for individuals' preferences and personal pursuits.

4. Physical setting of the entrance edifice of the technical institutes and their description

Since this study investigates whether the appearance of the entrance edifice's physical features of the institutes selected from Tiruchirappalli and Thanjavur region could induce perceived image among the observers of the institute, it is expected to describe the details of entrance structure with its physical features. To substantiate, the entrance structures selected is of the form made out of post and beam that is constructed with contemporary materials like brick, steel, cement and roof supported by RCC beams and columns. The exterior is finished with cement plastering and colored with emulsion. The columns are featured with small decorations, and in certain cases with steel and aluminum panel claddings. The entrance gates have two distinct entry and exit way in a single span division either in the form of post and beam or in certain cases huge arch form to become an inviting sign for the users. Generally the entrance access way is huge to

facilitate the movement of both people, and vehicles that is required to move in and out of the institutes. The spatial configuration and design attributes of the entrance structure of the institute stands out holding the names and signs of the institute. Nevertheless, the associative value and connotative meaning of the institute's image is expressed in the design features of the entrance structure. Point to ponder here is that this research focuses on the impact of these features of the design in inducing the perceived image of the institutes among the observers are investigated. In order to demonstrate that perceived image of the institute is a function of the legibility, spatial configuration and design attributes of the entrance edifice the selected concepts for understanding physical environment- perceived image Human relationships identified by Kevin Lynch (1960): Form identity, visual scope, dominance, legibility, sensory stimulation were investigated through observation and collected response from the respondents like students, faculty, general public, for a set of structured questionnaire in selected technical institutions in and around Tiruchirappalli and Thanjavur district. The entrance has two distinct access. Table: 1. a & b image of the entrance edifice and the description of the physical settings of Tiruchirappalli and Thanjavur Region.

S.No	Image of the Entrance Edifice	Description
1.		The entrance is framed by huge columns at the ends and has two distinct access for entry and exit with separate gates to control the movement. The color scheme is brown and cream.
2.		The entrance is framed by a huge curved plane wall with rectangular frame of opening having the access of entry and exit in the same frame.
3.		The entrance is framed by post and beam structure with aluminum panel cladding of red and grey color the top of the horizontal beam displays the sign of institute's name.
4.		The entrance structure is framed by post and beam with two distinct access way for entry and exit. The central space has a wall panel to display the institute's name, the sides of the entrance has two security cabins.
5.		This entrance is framed by two columns at the end and the central span has the display of the institute's name. Plane wall on either sides.
6.		The entrance is framed by post and beam structure with RCC cladding with aluminium panels of yellow, red and grey color with two distinct entry and exit access way in a single span
7.		The entrance is framed by post and beam structure with two arches in a single frame for entry and exit of the access way the decoration elements symbolizes a fort entry.
8.		The entrance is framed by post and beam structure with two arches in a single frame for entry and exit of the access way the decoration elements symbolizes a fort entry.

S.No	Image of the Entrance Edifice	Description
1.		The entrance has two distinct Access way for movement of people and vehicle with huge central watch tower, the span of the entry is framed by RCC post and beam structure. Color scheme ivory and white emulsion With steel gates.
2.		The entrance has single span of access way framed by RCC post and beam structure with name of the institute on top of the horizontal frame
3.		The entrance access has single Span of access with RCC post and beam structure with decorative motifs and symbols depicting the religious association of the Institute, color finish is done over the cement plaster with brown and beige colors
4.		The entrance structure is framed by a huge span of segmental arch which facilitating two way access to the institute. The arch is out of RCC with cabins out of steel frames and glass panels. The central space has the sign board of the institute.

5. Study Hypothesis:

H1: The form articulation and uniqueness of the entrance design elements facilitate in inducing superior image about the institute among the observers.

H2: the visual distance and possibility of viewing entire span of the built structure of the entrance support in inducing superior image about the institute among the observers.

H3: the greater size, scale and proportion of the physical features of the entrance aid in inducing superior image about the institute among the observers.

H4: the clarity on spatial articulation and ease of perceiving the entrance design elements augment in inducing superior image about the institute among the observers.

H5: the figure- ground relation, finish color and texture of the material of construction of the entrance structure endorse in inducing superior image about the institute among the observers.

To prove the equation $Is = f * n \{BE+ Legi+ DF\}$

Where Is = Image of the setting, f = Function of, n = no. of Factors, BE = Built environment, Legi = Legibility of the setting, DF = Design features of the setting

5.1. Research Methodology

To achieve the above objectives the research methodology consists of the following stages:

1. The entrance edifice of various institutes were selected based on the experts designers opinion grounded on the features and articulation of the entrance structure and the pictures of the same were shown to the respondents to confirm whether they are familiar with that settings and such twelve settings were selected for this study.
2. Data collection by self-report method by administering questionnaires on Participatory learning behavior.
3. Selected concepts for understanding features of physical environment- Image relationships identified by Kevin Lynch (1960): Form Identity, Visual scope, Dominance, legibility, and sensory stimulation were investigated through observation and made up into 5 parcels by collecting response from the observers on perceived image about the institute.
4. Analyze the data to test the research hypotheses.

5.2 METHOD OF STUDY

5.3 Sample

A random sample (F.G.Kaiser, 2000) of 503 were observed, interviewed and examined by self-report method for the study. Of the 503 questionnaires that were set out 469 were returned giving a return rate of 90%. Some questionnaire contained considerable missing data and were excluded. Thus 458 subjects who provided complete data were considered for the study. Among them 267 are Male and 191 were Female with a mean age 33years. The sample was 100% literate and graduate level of observers with occupants of the setting and observers familiar with the settings from twelve Institutions of self-finance category in and around trichy and thanjavur region The names and identity of the Institutions surveyed for the study and the pictures of their entrance edifice are disclosed here with the intention of study purpose only as assured to the corresponding institutions.

5.4 Procedure

Before handing out the questionnaire to the subjects they received a short description about the objective of the study. In certain cases subjects were helped to clarify some of the items of the questionnaire the respondents required about 10 minutes to complete.

5.5 Instrument

First, item pools of 30 questions (F.G.Kaiser, 2000) were created. Most of this was based on by Kevin Lynch (1960): Form Identity, Visual scope, Dominance, legibility, and sensory stimulation. Ten items were eliminated as it does not fit into the above construct. Finally a set of 20 questions were construed for the survey. The second step involved asking 8 subjects (four males, four females; age ranging from 19 to 22 years) to read and answer the questionnaire by speaking aloud while answering. When the subjects stopped or

hesitated in answering, the experimenter inquired why, and later changed the wording of some items. Thereafter, statements are framed in a yes or no pattern questions and their response is recorded. Under the components. 1) Does the form articulation and uniqueness of the entrance design elements facilitate in inducing superior image about the institute among the observers. 2) Does the visual distance and possibility of viewing entire span of the built structure of the entrance support in inducing superior image about the institute among the observers. 3) Does the greater size, scale and proportion of the physical features of the entrance aid in inducing superior image about the institute among the observers. 4) Does the clarity on spatial articulation and ease of perceiving the entrance design elements augment in inducing superior image about the institute among the observers. 5) Does the figure-ground relation, finish color and texture of the material of construction of the entrance structure endorse in inducing superior image about the institute among the observers.

6. Analyzing data

The set of 20 questions are rated in a bipolar scale with the scores of 'No'= 0 and "yes"= 1. Therefore a maximum total range of score will be 20 which recorded for all the components put together as mentioned earlier. Thus the score of 20 shows a strong influence for inducing superior image about the institute among the observers. Here, for the purpose of studying the role and influence of the physical features ability in a distinctive way the Factors are segregated into 5 parcels and Each parcel share a score of 4 points and obtaining full 4 points in the respective parcel shows significant influence and reveal definite ability of the settings in inducing superior image about the institute among the observers. A score of 3 discloses the moderate influence of the factors towards ability of the settings in inducing superior image about the institute among the observers. And less than 2 shows lower influence of the factors towards ability of the settings in inducing superior image about the institute among the observers. And a score of 0 reveals that the factors are highly insignificant towards ability of the settings in inducing superior image about the institute among the observers. Details of the questionnaire format for this study is provided in Appendix-A. Interpreting results and range of scores;

- 20 – 15 - Strong in inducing perceived superior image.
- 14 – 10 - Moderate in inducing perceived superior image.
- 9 – 4 - Low in inducing perceived superior image.
- 3 – 0 - Insignificant in inducing perceived superior image.

The total score in respective parcel is summed up and divided by the no. of items to get the range of score values. The empirical results are tabulated as below; Table- 2: provides the Tabulated results for each Factors that influence participatory learning stated in the research hypothesis.

Factors Inducing Superior Image							
Range of Scores		Form Identity	Visual Scope	Dominance	Legibility	Sensory Stimulation	Sample
20-15	Strong	58%	57%	53%	73%	71%	458
14-10	Moderate	23%	25%	27%	19%	18%	458
09-05	Weak	11%	10%	13%	5%	6%	458
04-0	Insignificant	8%	8%	7%	3%	5%	458
Physical Setting for Investigation		Entrance Edifice and Design Attributes of the Technical Institutes					

7. Results:

The study results clearly indicate in an empirically that Hypothesis H4 is strongly supported for inducing superior image thus proving that legibility of the physical setting has the ability to induce perceived image about the institute among the observers. Furthermore, it suggests that Hypothesis H5 is equally supported by this study and has greater importance in induce perceived superior image about the institute among the observers.

H1: The Form identity again has moderate significance in inducing perceived superior image about the institute among the observers.

H2: Visual scope has moderate significance in inducing perceived superior image about the institute among the observers.

H3: Dominance of the entrance edifice has relatively less significance in inducing perceived image about the institute among the observers.

Thus the study equation is proved as is = $f * n \{BE+ Legi+ DF\}$

8. Findings

The results of this study strongly and evidently support the two research Hypothesis made for the investigation. Further with 73% of the sample supporting that legibility of the entrance edifice as a key feature in demonstrating the ability of the structure in inducing perceived superior image about the institute among the observers and 71% of the sample supporting that sensory stimulation of the entrance edifice as a key feature in demonstrating the ability of the structure in inducing perceived superior image about the institute among the observers, clearly suggest that there is a definite causal connection between the built environment and the perceived image about the institute among the observers. Thus Legibility and physical features of the entrance edifice proves to be the driver in inducing perceived image about the institute among the observers in this context.

8.1. Conclusions

Although this study is done for a region of technical Educational institutional settings context, the results indicate that the Built environment can facilitate or constrain perceived image about the institutes. Likewise, the built environment of the entrance settings can be structured in ways that it could become a landmark for the region and could improve the surrounding environment providing chances for little development of support facilities for the institutes and even the land values could improve based on this kind of development

.nevertheless, this could offer the neighboring inhabitants a desirable change in the quality of life . this study provided a clear understanding on how observers perceive and read the Entrance structure elements, what this experience of the entrance design signs and symbols means to them and how their experience of the entrance edifice eventually induces Institutes image. Built environments that induce more desirable image and stand as representative of the image that the institutes trying to project and fill up the gap of what the institutes are capable of in offering and what the observers think of as they experience the settings. It is now essential to make use fo these physical settings to achieve the goal of the institute and to communicate to the society their intentions and connotative meaning they offer to different stakeholders. The authors believe that research on the relationship between built environment and image of the setting is at a pivotal stage. These types of investigations are highly adaptive in nature and paves way to carry out similar studies in other context depending on the type of the stakeholders, occupants and the built setting. The number of investigators and studies are growing rapidly. Nowadays, interdisciplinary approaches are being encouraged and technologies such as the digital documentation, geographic information systems, and closed circuit television, system are now available to map more objective and detailed measures of both built environment and projected image of the settings at different levels in different context too. This empirical evidence designates built environment as a tangible causal agent in inducing perceived image about the setting chosen for investigation.

9. Future direction of research

This research reveals the importance of image building process for the institutes and its possibility through the articulation of physical settings like entrance edifice itself in demonstrating the ability of the characteristic features to communicate the intention of the institutes to the observers. In view of this fact, if the field is to move forward, however different kinds of collaboration and research are needed. More interdisciplinary approach to research would help bring together the needed expertise of the public perception, social psychologist, urban planners, architects, Interior designers among others, the research found that the interdisciplinary character of its own membership shall greatly facilitate its understanding of the issues. A lot of longitudinal studies should be carried out in order to measure full range of perceived image of the settings among the observers at different context like, semi-urban, urban and cosmopolitan. Likewise the image the institute intend to project and the image actually experienced by the observers, stakeholders can be studied and check out if there is any gap between these two images communicated by the settings and conduct an Image audit so as to bring out the factors responsible for promoting and impeding the intended image by the institutes at a larger scale. Such intensified studies could definitely offer new insights and design strategies to bring up intended and desirable images by the Institutes as well the stakeholders of the settings. Nevertheless, these kinds of studies and their databases are essential if important causal connections are to be investigated in this domain. Thereby it is made clear that built environment and its settings are the major catalyst in communicating the design intentions to the society at all walks of our life.

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APPENDIX –A

QUESTIONNAIRE FORMAT

1. **Form identity:** The form articulation and uniqueness of the entrance design elements facilitate in inducing superior image about the institute among the observers

- a) Do you think that the appearance of the form of the entrance structure has the ability to induce superior image about the institute among the observers? **YES / NO**
- b) Is the overall visual form of the entrance edifice an important factor in building an image about the Institute? **YES / NO**
- c) Does the physical attributes of the form of the entrance structure facilitates in projecting superior image of the institute? **YES / NO**
- d) Did you feel that form identity and articulation of entrance design elements has become a significant component in inducing superior image? **YES / NO**

2. **Visual Scope:** The visual distance and possibility of viewing entire span of the built structure of the entrance support in inducing superior image about the institute among the observers.

- a) Do you think that the adequate visual distance to view the entire structure of the entrance support in inducing superior image about the institute? Yes / NO
- b) Is the adequate distance to perceive the entrance structure an important component in creating superior image about the institute? **YES / NO**
- c) Do you feel that the visual scope to view the entrance has the potential in affecting the process of building image about the institute among the observers? **YES / NO**
- d) Do you think that if the entrance structure is not perceived fully then it will not induce superior image about the institute ? **YES / NO**

3. **Dominance:** the greater size and proportion of the physical features of the entrance aid in inducing superior image about the institute among the observers.

- a) Do you think that the greater mass of the entrance structure is responsible in creating superior image about the institute among the observers? **YES / NO**
- b) Do you think that the entrance structure with monumental scale has the potential in inducing superior image about the institute among the observers? **YES / NO**
- c) Do you feel that proportion of the entrance structure and the size of the physical features of the entrance

edifice have the potential in inducing superior image about the institute among the observers? **YES / NO**

- d) Did you feel that Dominance is a key feature in inducing superior image about the institute among the observers? **YES / NO**

4. **Legibility:** Does the clarity on spatial articulation and ease of perceiving the entrance design elements augment in inducing superior image about the institute among the observers.

- a) Do you think that the legibility of the entrance edifice is a key factor in inducing superior image about the institute among the observers? **YES / NO**
- b) Do you feel that clarity of the design elements in entrance edifice has the potential to induce superior image about the institute among the observers? **YES / NO**
- c) Does the ease with which you perceive the entrance design elements support to induce superior image about the institute among the observer? **YES / NO**
- d) Do you agree that clarity in entrance design elements are responsible in forming superior image about the institute among the observer? **YES / NO**

5. **Sensory Stimulation:** The figure- ground relation, finish color and texture of the material of construction of the entrance structure endorse in inducing superior image about the institute among the observers

- a) Do you think that proper background for the entrance structure is important in inducing image of the institute among the observers? **YES / NO**
- b) Do you feel that the color scheme of the entrance edifice is vital in inducing image of the institute among the observers? **YES / NO**
- c) Do you agree that the material finish of the entrance edifice is a key feature in inducing image of the institute among the observers analytical learning? **YES / NO**
- d) Do you think that the texture of material finish of the entrance edifice is a key feature in inducing image of the institute among the observers? **YES / NO**