

Supporting the ambient guidance and counseling system by using three dimensions (3D) graphic elements

(An analytical study on some models of three-dimensional guidance and counseling elements)

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Abstract:

The guidance and counseling system is considered as one of the main ingredients used in the delivery of the required information for users of the closed or the opened environment. Due to the importance of this system; there was a necessity to develop this system by using modern technological techniques or using shapes and materials to display the elements of the system in a new funky path could attract the audience and achieve the required interaction to deliver the information in a proper timely manner.

The three-dimension (3D) ambient guidance and counseling system is a shape of a non-traditional guidance system that can contribute in the attraction of attention of the audience more readily than a traditional two-dimension (2D) system and thus achieve the desired goals with larger interaction. From such point; it was necessary to analyze and focus some light on this untraditional form and represent the differences between the three-dimensional (3D) system and the two-dimensional (2D) system. This could be achieved through describing of some models to gain access to the most important points influencing the audience and represent the extent of its interaction with the provided information.

Introduction:

The attention is considered as the first step in a series of steps that leads ultimately to the process of reading and understanding the message. Hence, the first goal in any communication process is to attract the attention of the audience

The process of attracting the attention of audience and trying to make him retains the information is one of the major difficulties facing the communication process with the audience, where the individual is exposed to many information and messages with the phenomenon of multiple and different tools of communication.

The effective guidance in a complex and dynamic environment requires a high level of tariff items that can describe the needed information by the audience. New media forms are being used to capture audience's attraction which cannot be reached using the traditional media. Despite the growing uses of the guidance and counseling system in the environment around us; there are very few 3D models of the guidance and counseling elements that can offer the information to the audience. These elements could be signs, maps or pictograms.

The current research tries to deal with the description of the untraditional and 3D ambient guidance and counseling system to access the most important points which makes this system more attractive in producing the provided information.

The research problem :

By observing the different forms of the ambient guidance and counseling systems; the systematic was adopted mainland on the two-dimensional graphic and written elements, which give the system the traditional conventional form. Also, it was noticed that the three-dimensional elements were not used to provide a non-standard information system which can draw the attention of the audience in a way that supports the receiving of the provided information through it more clearly. From such point, the research problem could be summarized by answering the following questions:

- 1- To what extent does the out-of-the-ordinary in designing the guidance system contributes in the interactions of the audience with the provided information?
- 2- How could the 3D graphic elements be used to design an attractive guidance system?
- 3- How the 3D ambient guidance and counseling system could be harmonized with the environment in which it operates?

The aim of the research:

The method in which the information are presented to the audience is considered as the key factor to achieve the effectiveness of the ambient guidance and counseling system. The surprise and creativity are the major causes to achieve identification and communication with the audience.

From this sense, the current research aims to provide theoretical bases for the study of 3D ambient guidance and counseling system, in an attempt to elucidate how the 3D ambient guidance system represents a growing sector in the creative guidance.

The importance of the research:

The importance of the research lies in the need to shed some light on the interaction exchanged between the 3D ambient guidance and counseling system, its untraditional form and the audience.

Moreover, the research will try to clarify the usage of the appropriate data to support the 3D ambient guidance and counseling system in attracting the audience's attentions to the receive information properly.

Research Methodology:

The methodology will adopt analytical inductive approaches via the specialized information to concept the 3D ambient guidance and counseling system with its different elements and illustrate its role in supporting the guidance process by the untraditional form in opened or closed environments.

1.Principles in designing guidance and counseling system:

There are three important design principles in designing guidance and counseling system:

a. Correct color: The selection of the correct color plays a major role in the design of the guidance system. The color must be appropriate to the nature and activity of the place.

b. Contrast for readability: Guiding signs include some graphic elements such as texts, pictograms and arrows in the foreground. In addition, the contrast between the foreground and the background items is an important point for the audience's understanding.

It has to be mentioned that the low contrast can be treated by using dark outline around the foreground elements, or adding a border around the different in order to present the information clearly.(7)

c. Innovation: Innovation in the design of the guidance and counseling system is a strong element which can attract and deliver the required information in an easy and efficient manner. This innovation is represented in new processes and graphic distributions of the elements in guidance and counseling system together with the use of untraditional methods, such as 3D, and animated elements.

In Generally, guidance system plays a big role in our life. It has started to cover many parts in our direct environment and almost nobody is far from being exposed to signage system elements every day.(2)p.5

Achieving an effective guidance and counseling system requires an organized strategy that identifies the followings:

- ✚ What are the tasks and activities that always interact with the audience?
- ✚ When and where should this guidance provide information?
- ✚ How these information can be provided so as to be visually impressive?
- ✚ how to deal with cases where the information sequence has not been achieved?(6)p.3

2.The history of the term "Ambient":

The first appearance to the word "ambient" began in the British media in 1999 by the Concord British Declaration agency which is an agency specialized in outdoor advertising campaigns. This term considered as a standard term, especially in the field of an advertising industry. It is the name given to a new form of products and services that can be described as traditional or

alternative media. The choices of the effectiveness and best form to represent these non-conventional forms are the key of successful message to be included.(3)p.400

This concept was evaluated from just a term coping with the audience need of something different and attractive. These pushed advertising agencies to place advertisements in unusual places. However, 'The unusual places' lose this audience, and this points to two things: first, the unusual places are part of the definition of ambient advertising. Second, linked to the first point, ambient advertising could be seen as a variant term determined by the advertising rules in the time period of that moment. But, generally, what might be unusual for one person can be classic for others.(9)p.735



Fig(1)"a,b,c" shows some examples of ambient advertising

3.What is 3D ambient guidance system?

First ,the term "ambient media" is commonly presented nowadays to describe attention-grabbing media which appear in open or close places.(10)p.1

And to know what is ***3D ambient system***, it is important to get some answers of the question: **what is an ambient guidance and counseling system?**

The direct and most precise answer could be that an ambient guidance and counseling system is a system that allows people to interact with important information as an integral part of the physical environment. This provides the user-friendliness in terms of receiving the information which seems as added values of physical entities in the surrounding environment, which confirms the mental image of the audience with this information.(6) p.3

The 3D guidance and counseling system is the providing of signage elements in unusual and unconventional methods. It is used to provide important information of the physical environment using three dimensions graphic elements to interact with the audience by confronting the audience with something untraditional in the surrounding environment.(8)p.32

Compared to other guiding system; the 3D ambient guidance and counseling system consists guidance strategies for deciding which information should be accessible , when, where and how these information should be presented in the environment through 3D graphic elements such as pictograms, words and arrows. These elements are an integral part of the information environmental system that directs audience and provides them with the required information in order to effectively help people to achieve goals defined by flows.(10)p.2

It is a strategic offering guideline and instructions for the recipient to undertake the necessary activities to be exact.(6)p.3

Hence, the main purpose of 3D system is to attract attention and to build a collaborative awareness. It could be effective to receive the information and to generate an immediate behavioral response from audience. These behavioral responses to an ambient 3D form of guidance and counseling system could be accordingly strong in either closed environment or opened environment.(10) p.2

Although the nontraditional form of the system is a major cue in attracting the attention of the audience; achieving the integration among elements of the system and the environment, in which it is employed, is a prerequisite for supporting its function in providing information. So that the system achieves its function to the fullest extent, it must be an integral part of the environment it contains. For that, it is necessary to clarify the importance of achieving harmony between the system and the environment in order to support its function of guidance and counseling.

First :the consensus and harmony with the environment:

Aesthetic value is part of everyday's experience and tasting aesthetic value is an innate response exists in everyone in varying degrees and forms. Details of place and the consistency of its elements are the basis for the formation of aesthetic vision which are related to cultural and social backgrounds of the community and are subjected to the standards of art. Every society deals and accept what it sees as an appropriate fashioned way for it to reach the information which were looking for.

Accordingly, there is no doubt that the presence of harmony with the environment, to achieve an aesthetic value in the environment, is affected greatly by the degree of diversity, renewal and excellence.

The harmony that achieves persuasion and acceptance with the environment could be categorized into several types:

- ✚ Visual (formality): Through the graphical components.
- ✚ Sensory: by emphasizing on positive psychological effects achieved by the integrated identity.
- ✚ Verbal: Choosing the sentences, words and presentations and arranging them. Through the integration of these types we can achieve the completed harmony.(1)p.5

And the integration among all these types achieves the highest degree of compatibility and harmony with the environment.

Second: the harmony between the 3D guidance and counseling system and the environment:

If it is important to achieve harmony with the environment, it is necessary to take into account this harmony between the three-dimensional extension guidance and counseling system with its various elements and the environment in which it is employed.

As it is normal, the human interactions with the events require the provision of information which are at the same time the product of these interactions. Culture and traditions contribute in the formation of the environment which is the theater of the human interactions with the objects and the scene of events, and these interactions extract information and use technology and available materials in the formation of elements of the system. It seems highly unlikely to take the design of one system of an environment and hiring in another environment without taking into account the spatial characteristics and the nature of each environment .(5)p.11

The audience does not just respond to things but to their arrangement altogether, their relations with each other, and in some cases the people deals with the influence and the conclusion which are located as a result of this coordination.(5)p.12

Achieving a balance between the goals of the 3D guidance and counseling system and the nature of the environment is the priority of any successful guiding system .Visual studies stress on the importance of consistency and diversity between the environment and the guidance system employed in it, the harmony gives the system its identity and diversity to get the attention of the audience by its untraditional elements and to help to access the information in an interesting and easy way. The difficulty lies in achieving this harmony is that the environmental effects are complex and intertwined.(5) P.4

And from the above, achieving harmony between the 3D guidance and counseling system and the environment In order to have a positive impact on the audience whether in open or closed environments can be achieved by taking into account some criteria:

- 🌈 Compatibility through the accuracy of the design elements of the system and its relevance to the nature of the place is a great asset to confirm the place identity and increase its aesthetic value.



Fig(2)



Fig(3)

Fig(2) a signage of a parrot breeding center and fig(3) a signage about snake in the zoo with a 3D graphic elements suitable to the nature of the place, such as the stems of the plant and leaves of the trees and a body of a snake in order to appear as a part of the zoo environment

- ✚ The size and shape of the elements of the system design should commensurate with the area of the environment including these elements.



Fig(4)

Fig(4) shows 3D model of the giraffe in a natural size to define the location of the giraffe as a form of guiding and counseling the visitors, and we can notice the suitability of the size of elements with the open environment of the zoo

- ✚ The elements of system design should not affect the architectural features of the environment, but must be integrated with them and assured them .
- ✚ Caring of cleaning all components of the system and periodically examining them to maintain their integrity and make the environment free of defects to make it permanent in harmony with the environment.(4) p.3274
- ✚ The color is one of the most important aspects of optical communication to achieve the harmony. It is used to influence the eye, ideas or feelings. Also, it supports the visual and environmental harmony, either open or closed environments. Poor choice of color causes poor communication with the audience, and the increases the difficulty of the information to be accessed. In such sense, we should choose the

colors to be used in the system carefully to support the harmony with the environment.(4)p.327



Fig(5) shows two of signage in the zoo used a green color in order to be part of the natural environment

✦ Materials is a very important point, it must be compatible and suitable for the design of the system 3D elements with the nature of the environment.(4)p.3276
 As each material may be suitable in an environment more than another one, the selection of material appropriate to the nature of the place is the most important thing in achieving the highest degrees of harmony between the guidance system and the environment.



Fig(6) shows two models of signage in the zoo ,the left one with 3D elements and the right one with 2D elements. The wood material was used in the form of logs in both to achieve the highest harmony with the nature of the zoo

And the following are some types of the most important materials which are used in a different signage :

- 1- The material of acrylic, which is made from highly elastic polished plastic substance, is available in different colors.
- 2- The aluminum featured by its lightweight, but strong, is a good choice for making banners used in open environments.
- 3- Banners made of carved wood with classic shapes are featured by their comparatively high durability and easier portability for repairing and maintenance than other materials.

4- Metal (enamel) is considered as one of the strongest materials and is resistant to weather changes; this makes it the perfect choice for banners placed in an environment exposed to many changes in the weather.

5- PVC (polyvinyl chloride), also known as foam, is used widely in many projects; it acquires high quality, precise and high literal expansion of profession, so it can be used in different closed environment.

6- Wooden signage offers a classic shape and is characterized by excellent durability. It may be used with a number of different materials.

So of all that, achieving harmony between the system and the environment must be taken into account at all stages of planning and designing, starting from determination of the set goals and ending in formulating laws to ensure regulatory gaining.(5)p.13

Analytical Study :

In this study, some models of the three-dimensional guidance and counseling system elements at different locations will be analyzed to reach the most important points that distinguish them from 2D traditional systems.

First model

Point of analysis	Analysis
The 3D elements used in guiding	A pictogram
Description of guidance element	Pictogram of a human
Message to be displayed	Directive to exit place
Type of place	A public closed place
The availability of aesthetic value	3D elements add an aesthetic value which is attractive to the attention
The clarity of graphic elements used in the system	Graphical elements providing information are clear enough
The used materials	plastic and acrylic
Drawing attention through the use of 3D elements	3D elements help to draw attention
Compliance with a specific area of design	Design came out of the selected area as a result of the use of 3D
Overall shape of the design	Unconventional

Second model



Point of analysis	Analysis
The 3D elements used in guiding	The pictogram, the arrow and the word
Description of guidance element	Pictograms of a man and woman, writing and arrow to set direction
Message to be displayed	Directive to the private bathrooms for men and women
Type of place	A public closed place
The availability of aesthetic value	3D elements added an aesthetic value which is attractive to the attention
The clarity of graphic elements used in the system	Graphical elements providing information were clear enough
The used materials	Wood
Draw attention through the use of 3D	3D elements helped to draw attention
Compliance with a specific area of design	Design came out of the selected area as a result of the use of 3D
Overall shape of the design	Unconventional

Third model



Point of analysis	Analysis
The 3D elements used in guiding	Pictograms in a signage
Description of guidance element	3D pictograms used to identify the most important animals in the zoo
Message to be displayed	Introducing the most important animals in the zoo
Type of place	Open place (the zoo)
The availability of aesthetic value	3D elements added aesthetic value to attract attention
The clarity of graphic elements used in the system	Graphic elements providing information were clear enough
The used materials	Wood and acrylic materials
Draw attention through the use of 3D	3D added a new dimension, which helped to draw attention
Compliance with a specific area of design	Design came out of the selected area as a result of the use of 3D
Overall shape of the design	Unconventional

Fourth model**Montreal Science Centre:**

The Montreal Science Centre is a science museum in Montreal, Canada. Established in 2000, it is the second largest science center in Canada, this center is helping visitors of different ages to learn diverse sciences and technologies through varieties of interactive means. (11)

Point of analysis	Analysis
The 3D element used in guiding	Pictograms
Description of guidance element	3D pictograms in a large size used to identify some sciences in the center
Message to be displayed	Introducing the most important science in the center
Type of place	Science center
The availability of aesthetic value	3 D added a new dimension, which helped to draw attention
The clarity of graphic elements used in the system	Huge graphic 3D elements providing information were clear enough
The used materials	Acrylic material
Draw attention through the use of anthropomorphism	The design resulted from the area specified for the signboard due to the use of the design
Compliance with a specific area of design	There is no specific area of the design
Overall shape of the design	Unconventional

Fifth model

Point of analysis	Analysis
The 3D element used in guiding	Pictograms in a signage
Description of guidance element	3D pictograms about some animals in the zoo
Message to be displayed	Introducing the most important animals in the zoo
Type of place	Open place (the zoo)
The availability of aesthetic value	3 D added a new dimension, which increased the aesthetic value
The clarity of graphic elements used in the system	Graphic 3D elements providing information were clear enough
The used materials	Aluminum and wood materials
Draw attention through the use of anthropomorphism	Using of 3D helped to draw attention
Compliance with a specific area of design	Design came out of the selected area of a signage as a result of the use of 3D
Overall shape of the design	Unconventional

Sixth model

Point of analysis	Analysis
The 3D element used in guiding	Signage
Description of guidance element	3D signage in the shape of pencils
Message to be displayed	Guiding to the direct of different places
Type of place	Public open and closed places
The availability of aesthetic value	3 D added a new dimension, which increased the aesthetic value
The clarity of graphic elements used in the system	Graphic 3D elements providing information were clear enough
The used materials	Acrylic material
Draw attention through the use of anthropomorphism	Using of 3D helped to draw attention
Compliance with a specific area of design	There is no specific area of the design
Overall shape of the design	Unconventional

Through models that were analyzed; we could summarize features that can be added by using the 3D elements in the guidance and counseling system in the following points :

1- 3D elements add an aesthetic value to the design which helps to provide it with a remarkable attention to read it more than once and to interact with it.

2- Using of 3D elements contribute accessing information more rapidly because the gravity element commitments to the basic design rules in the recruitment of the system elements.

3- The use of 3D elements impose harmonization with the employed environment through the formation of a coherent picture between the place and the used 3D graphic elements in the design.

4- 3D elements could use more than one material in the same design and in some cases this will contribute to enhance the function of the elements of the system to deliver the required information in a timely manner and with a minimal effort.

5- Elements of the system can be shown as unconventionally form far from the stereotype which contribute in motivating the audience to see and read it without getting bored.

From the above, we can identify some differences between the traditional form of the guidance and counseling system elements and the 3D elements in the following table:

Table(1) shows some differences between the 2D and 3D guidance and counseling elements		
Comparison points	Traditional elements	3D guiding elements
Modernity and innovation	typical and ordinary	have a great deal of innovation
Availability of aesthetic value	show limited by appropriate coordination between different design elements	The 3D adds aesthetic dimension to the design
The ability to draw attention	The audience resort to read the information for his need only without having something that attracts his attention to read it	The attention is achieved through the 3D even if the audience is not looking for information
Degree of information access	The typical form does not stimulate the audience to interact with the information provided	The information reaches faster as a result of the interaction of the audience with and attracted to it
Used materials	often one material is used	More than one material is often used

Conclusion:

In the current research, the researcher is trying to define guidance and counseling system based on ambient graphical 3D elements, as a new form which goes out of the traditional identity of the guidance system to unconventional identity which can be more attractive and has more ability to draw the attention of the audience. This is an attempt to assist in the arrival of the provided information more quickly and in a more renovation manner. The researcher is trying to clarify and illustrate that achieving harmony between the system elements and the environment could provide the system with an aesthetic values and psychological comfort which could impose an effect on the audience to access information faster.

Results:

- 1- Innovation in the provision of information through the elements of the guidance and counseling system is an important thing to achieve the audience interaction with the provided information.
- 2- 3D graphic-elements in the guidance and counseling system are unconventional elements which may play an important role in drawing the attention of the audience.
- 3- Right employment of the graphic-elements in the guidance and counseling system with a good harmony with the environment contributes in achieving the role of the system in presenting the information .
- 4- The uses of several materials in the design and the displayed elements of the guidance and counseling system may contribute in achieving a good innovation degree through the untraditional form of the graphic elements.

Recommendation:

- 1- The need to learn more about the latest materials used in the design of 3D ambient guidance and counseling system to achieve the most benefit from them.
- 2- The need to focus on achieving harmony between the system's identity-based on 3D graphical elements and the nature of the environment which includes the system.
- 3- The permanent search for an all-new design of guidance and counseling system to attract the attention of the audience to the provided information.
- 4- Gather the attention to the aesthetic aspect by achieving harmony between the environment and the guidance system.
- 5- The need to develop regulations and laws to protect any system of guidance and counseling in order to take enough advantage since it is a right of people.
- 6- Increase the awareness of the researches that are interested in developing and renewal the guidance and counseling system to get it out of the typical system.

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