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## **Directional and Wayfinding Signage for Takoradi Technical University (Akatakyi Campus)**

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**ABSTRACT;** *The paper intended to look for more convenient technology to produce a signage that will create awareness of the new Akatakyi campus of the Takoradi Technical University and also provide functional and efficient direction to people. The research specifically sought to identify suitable landmarks and locations for mounting specific types of signage and directional signs for effective communication at the Akatakyi campus of the Takoradi Technical University. The vibrant growth of the university and the increasing number of the students over the past years has therefore rendered the Effia campus congested hence overstretching the facilities for the university. As a result, the management has acquired one hundred and fifty acres of land for the expansion of the university at the Akatakyi-Ahanta community a suburb of Takoradi to ease congestion on the main campus. The newly Akatakyi campus is intended to accommodate the Faculty of Engineering. It has been observed that most people are not familiar with the location and the program intended to be run at the Akatakyi campus of the university. It is therefore imperative to find ways of creating awareness of the new campus. The descriptive research method was used in the study to identify, describe and document all the data collected. The instruments used in gathering data were conversation, observation and interview. The outcome shows an excellent procedural model with illustrations. It is recommended that the management of Takoradi Technical University management should engaged the researcher and finance this project for the execution of the actual and the standardized sizes. This will help visitors all day to reduce stress hence, to located TTU facilities at ease within Akatakyi campus.*

**KEY WORDS:** Akatakyi campus, directional signage, wayfinding.

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## INTRODUCTION

Information people obtain before they visit a site can assist them to prepare for their journey; plan how they will get to the site; estimate how much time they need to get to their destination; and also offer other information about the site or position. However, pre-visit information is only useful if it is clearly obtainable and links with other information, such as signs that people will see on their way, and at the site. Before one can begin finding a way around a site, people have to be able to get to site and then locate an appropriate public entrance, so it is vital to ensure that signs are in place to enable people to find the site easily and to identify the various locations.

Similarly, when people find themselves in unfamiliar surroundings, they look for two important things. Firstly, they look for information on the geographical locations usually in the maps forms, buildings, directions and floor plans. Secondly, they look to signs that help direct them to their destination. The importance of signage in informing, guiding and directing people can therefore not be over emphasized. However, pre-visit information is only useful if it is clearly obtainable and links with other information, such as signs that people will see on their way to the site.

A signage is an efficient wayfinding system that allows the maximum amount of information, direct and guide people who are unfamiliar with the environment. Signage provides directional guidance, reassures public about intended location, sites location and warns of upcoming changes or hazards. Sign information represents a form of social control to limit people's movements and behaviours.

Wayfinding and directional signage have been a fundamental element in visual communication and many institutions and establishments have relied on them for growth and development of their set ups in order to direct and guide visitors to their facilities. Important information is displayed at the strategic locations. Effective wayfinding and directional signage are necessary for vast locations such as campuses, airports, shopping malls, hospitals etc. and are mounted at the right places, point to the most logical direction and are noticeable.

The term "wayfinding" describes the routes people go through to find their way around an environment. The wayfinding process is primarily problem-solving and it is affected by many factors which are covered in this section. People's opinion of the environment, the wayfinding information available, their ability to familiarize themselves spatially and the perceptive and decision-making processes they go through all affect how successfully they find their way. Findlay and Southwell, (2004) claimed that wayfinding involves a variety of driver's strategies and sources of information afforded by the landscape of which signs are a key component, often supplemented by paper maps and word of mouth. Signage information of wayfinding represents a form of social control to limit people movements and behaviour. Findlay and Southwell [10] claimed that wayfinding involves a variety of driver's strategies and

## **The Objectives of the Research**

The paper aimed to identify landmarks and locations for mounting specific types of signage and design directional signs for effective communication for Akatakyi campus of the Takoradi Technical University.

## **Statement of the Research Problem**

Takoradi Technical University used to have two main campuses namely Effia campus and the Butumagyebu (BU) campus for which the general public is much aware and the programmes that are offered there. The BU campus accommodates the Faculty of Business whereas the Effia campus accommodates Faculty of Applied Arts and Technology, Applied Sciences, Engineering and Built and Natural Resource. The vibrant growth of the university and the increasing number of the students over the past years has therefore rendered the Effia campus congested hence overstressing the facilities for the university. As a result, the management has acquired one hundred and fifty acres of land for the expansion of the university at the Akatakyi-Ahanta community a suburb of Takoradi to ease congestion on the main campus.

The newly Akatakyi campus is intended to accommodate the Faculty of Engineering. It has been observed that most people are not familiar with the location and the program intended to be run at the Akatakyi campus of the university. It is therefore imperative to find ways of creating awareness of the new campus. It is hoped that directional signage is essential at strategic locations at the new campus to guide and encourage a flow of movement of people at the facility.

Moreover, a visit to the new campus reveals that, it is not easy for one to locate and navigate the new campus because there are no graphics signage to provide functional and efficient direction. It should be emphasized that signage is among the most important elements of visual communication. Most businesses and institutions rely on the assistance of the physical signage to create awareness and give the appropriate directives to customers and clients.

The visual communication provided by directional and on-premises signage has contributed immensely to the growth and success of the institutions. The newly Akatakyi campus needs an efficient way finding system to allow the maximum amount of information to be communicated to the general public especially prospective students and other people who are unfamiliar with the environment.

## **Scope of Research**

This research is limited to the prospective students and visitors who may be plying and using the facilities at the Akatakyi campus (Takoradi Technical University).

## LITERATURE REVIEW

Different types of wayfinding may rely on different wayfinding approaches. Farr, Kleinschmidt, Farr et al, (2012). Although, ultimately many of the design principles of wayfinding are universal. “Clear circulation, consistent and easily read signage should be easily seen and understood amidst conflicting or distracting sights or sounds. However, precision of direction from the viewer’s changing perspective is the guiding standard in designing circulation for ease of direction and wayfinding” Ulrich et al, (2006). Based on this general framework, the graphic information arrangements such as signs and maps balance the environmental design system hence providing provide direction, identification and location. Butler, et al, (1993).

They found that signs were more efficient than you-are-here maps or spoken instructions provided by staff in the building. This seemed to transpire for two reasons. Firstly, oral instructions depend on both the abilities and outlay of the one giving instructions, and the ability of the visitor to remember and effect the instructions. Secondly, a visitor using signs found their end point fastest because signs offer directions at main locations without needful for the user to memorize directions. This study highlights the importance of an effective wayfinding signage system in education settings to increase effective wayfinding and decrease staff and student frustration.

Wor, (2016) emphasised that signage is simply the design and use of signs, positioned at the strategic location to convey a message to a group of people. He concludes that it is vital for signage to boldly contain texts, symbols and luminance to be able to fulfill the following purposes of educating, informing, directing and cautioning at any given point.

Octink, (2019) believes that signage is generally defined as any kind of graphic display intended to convey information to an audience. Erhart, (2001) also posits that signage systems are the primary tool used to move the traveling public through airport facilities using a three concise and comprehensible system of directional, identification, regulatory and informational messages. Also, the same idea was supported by Nellis, (2018) that the term signage refers to the entire system of signs that provide information regarding a person’s current location relative to their desire destination, while also assisting with their navigation through an environment. Similarly, Arthur & Passini, (1992) are of the view that signage is another graphic information system the end-users utilize when finding their way. Signs complement circulation systems and function as cues to a particular destination this is the opinion.

As the name implies, directional signs are the most obvious type of signage which one might expect to find in a location where people need to be guided directly. They are characterised by the use of texts, arrows or symbols. These can be portable or fixed to a wall, floor or any flat surface for ease of visibility, and are typically characterised by bold text, as said by Passini, (1984).

Gibson, (2009) share a similar opinion when they concluded that, direction signs include a combination of identification signs, and might also include a schematic overview of a location. This implies that when a visitor arrives at an unfamiliar environment for the first time, it can be confusing and often irresistible due to its size. However, a visitor will in general, want to know where to park, this must be clearly visible. Having parked, directional information must be available to locate various facilities. Directions must be effective not only for the first-time visitor but also on a day-to-day basis. A fully inclusive directional sign is vital to the success of any educational establishment, this will generally include names, arrows, symbols, signs as well as 'you are here' maps.

Inferring from what the cited references are saying directional sign is considered as the most important type of sign in an environment. The movement of people and vehicles on location is basically fast in comparison to other built-in facilities, which makes the signs a vital assistance for everyone. For this reason, the provision of a successful directional signage and wayfinding on Akatakya campus of TTU is one vital initiative to help solve these issues. The provision of efficient directional sign will ensure clear guidance from destinations and suitable signing for emergency situations in and around the university campus on day-to-day basis.

## **METHODOLOGY**

Descriptive research is the research design in which data is collected in a qualitative manner and analyzed using quantitative procedures Nassaji, (2015). Descriptive research refers to the scientific methodology in which observation of the sampled population is carried out in its natural surroundings. The researcher therefore employed the descriptive research method in the review of related literature. Findings from books were recorded, described, analysed and interpreted to provide evidence on what has been done already on the project. Similarly, the same method was applied in the identification and analysis of tools, equipment and materials for the project. The various methods and techniques involved in executing the art works were also recorded, described and interpreted. In summary, the descriptive research method was used in the study to identify, describe and document all the data collected.

The Takoradi Technical University main library, the Faculty of Applied Arts Library and Western Regional Library, Sekondi were visited for existing related literature to provide a background for the study. The researcher sourced information for books, periodicals, journals, and related thesis where applicable. The internet was also depended on to surf various websites and move easily among connected sites for information from online journals and books during the library research.

### **Target population**

The target population is a specific audience or demographic group of concern to the designer for which a product is designed. Fraenkel and Wallen, (2000) postulate a population as any group of individuals that have one or more characteristics in common. This may be generally a large collection of individuals which may be the main focus of a scientific query. In the design and creative world any execution of any product is directed at a target population that is of concern to the designer.

In other words, they are the people that a researcher realistically selects his or her sample from. These groups of population had distinct and varied characteristics as well as different population sizes which played an integral role given the dynamics of the problem and the research questions and objectives for this study. However, the accessible population were twenty-nine (29) respondents which are separated into three sets, namely, the staff of TTU (8), people residing around Akatakyi (16), and professional graphic designers (5). Sampling is the process of selecting a few (a sample) from a bigger group (the sampling population) to become the basis for estimating or predicting the prevalence of an unknown piece of information, situation or outcome regarding the bigger group Kumar, (2011). The twenty-nine (29) consumers were used as the sample for this study. The intended project is directed at providing effective direction to the general public especially individuals who may find it difficult to locate the Akatakyi campus of TTU.

### **Data Collection Instruments**

The instruments used in gathering information were observation, interviews and conversations. The researcher resolved to use the above-mentioned techniques as deemed as appropriate. Instrumentation according to Fraenkel and Wallen, (2000) is basically the process adopted by a researcher in collecting data for a study. It involves both the selection and design of the instruments and the prevailing conditions in the administration of the instruments. They further echoed that the choice on the type of data collection instruments depends on factors such as cost, available resources and time. Common choice among data collection instruments by the researcher are, interviews, observations and conversations.

### **Interview**

According to Schostak, (2006) (as cited in Alshenqeeti.p40) an interview is an extendable conversation between partners that aims at having an indepth information about a certain topic or subject, through which a phenomenon could be interpreted in terms of the meanings interviewees bring to it. To buttress this, Denning, (2012) explains interview as one-on-one conversation with one person acting in the role of the interviewer and other in the role of the interviewee. Interviews normally involve a transfer of information from interviewee to interviewer, which is usually the primary purpose of the interview. The interview was more relevant to this research in the sense that respondents were more willing to talk than to write. Direct interviews were therefore



conducted at the Development and Planning office of TTU to solicit respondents' sufficient views, perceptions and valuable information on the Akatakyl campus.

### Observation

Observation is one of the very important methods for obtaining comprehensive data in natural settings and situations. It is a data gathering device by which certain types of information can best be obtained through direct examination by the researcher. Price et al, explains that the term refers to the study of non-experimental situations in which behavior is observed and recorded. It could also be termed, "what's going on or what's she doing." The research is classified as non-experimental because the variables are neither controlled nor manipulated. The results are both qualitative and quantitative in nature.

## RESULTS AND FINDINGS

**Table 1: Motivations on the needs to design directional signs for effective communication at Akatakyl campus.**

Statement	YES		NO		TOTAL	
	Freq	%	Freq	%	Freq	%
Do you think wayfinding is a problem at Akatakyl Campus	27	93	2	7	29	100
Do signage and wayfinding system at Akatakyl campus meet accessibility requirement	0	0	29	100	29	100
Do you subscribe to internally lit signage?	24	83	5	17	29	100
Do you believe signage that have graphic symbol are more useful than signage with text only?	26	90	3	10	29	100
Will you propose wayfinding sign at Akatakyl campus?	23	79	6	21	29	100

**Source: Field Survey, 2022**

From Table 1, it can be observed that most of the respondents (93%) indicated that wayfinding is a problem at Akatakyl campus of Takoradi Technical University. Again, all the people surveyed (100%) stated that signage and wayfinding system at Akatakyl campus does not meet accessibility requirement. Moreover, majority of the respondents (83%) subscribe to internally lit signage. Last but not the least, 90% of the respondents believe that signage that have graphic symbol are more

useful than signage with text only. Lastly, 79% of the respondents propose wayfinding signs at Akatakyi campus.

The findings emanated from the survey indicated the need to address the objectives of this study.

***“To identify suitable landmarks and locations for mounting specific types of signage for effective communication at the Akatakyi campus of the Takoradi Technical University”***

The focus of this objective is to ensure efficient wayfinding system that allows the maximum amount of information to direct and guide people to identify the various locations within the Akatakyi campus. It was therefore essential to identify suitable locations that will provide directional guidance, reassures public about intended location and the specific type of signage that suit the location.

Gibson, (2009) indicated that there are a variety of sign types used on university properties to lend direction to campus visitors. They are located in order to be used by visitors to affirm their directional choices. The buildings at the new campus are similar in architecture design and the general layout of the environment demands a comprehensive define spatial content, form identification to assist and facilitates easy access. Werner, et al., (2006) emphasis that arrangements of wayfinding in building is one of the sources of information for finding one's way in the built environment. The layout of wayfinding that is legible around building or groups of buildings facilitates the ability of users to find their way around.

Sorrows & Hirtle, (1999) affirms that, identifying location helps people to navigate easier and to better understand the building. Similarly, the researcher noted that wayfinding becomes successful not only by the quality of the object itself, but also with how well a user locates and associates and with a specific identity.

To provide additional guidance and enhance free movement and easy access locations of the Akatakyi campus, the following landmarks or locations were identified which are suitable for the corresponding types of signage.

- i. On the Takoradi-Agona highway at the campus junction
- ii. Main Entrance
- iii. Campus buildings (Main Administration Block, Staff Common Room, Club House, Bookshop, Car Parks. NO Parking, Recreational Centre, ICT Block, Sport Complex. Library, Workshops, Clinic, Lecture Hall, Cafeteria, Staff Residence and Mosque).

These landmarks were strategically selected for placement of directional and wayfinding signage to serve users and help them keep their bearings. It would help the user feel safe and secure.



Secondly, landmarks can serve as navigational assistances by providing optimal points along a route of travel, validation of the precise route of travel and verification of arrival at the end point. The fewer decisions demanded of the user, the more efficient the route. Therefore, wayfinding signage is the most useful at these decision points.



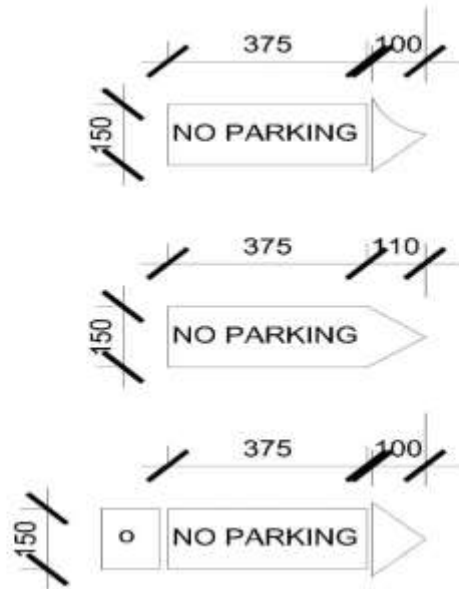
**Directional signs for effective communication *that may be required within the Akatakya campus of the Takoradi Technical University*”.**

With reference to objective one (1) various locations within the Akatakya campus were identified to be strategic to have specific signage in place to ensure efficient wayfinding system that allows the maximum amount of information to direct and guide people. The focus here is therefore to design subsidiary signage for the suggested location for management consideration and adoption. It was observed that some of these locations are important landmarks that needs urgent identification. For example, the administration which is the first point of call to any visitor needs proper recognition. The following thought therefore outlined the other subsidiary signage placement; Standard building identification signage are preferably free-standing and not attached to buildings. Mostly are two-sided and position vertical to the street and the building. However, identification signs depict the official name of the building only. Thus, names of occupying units or internal spaces are to be placed on internal directories and will not appear on identification signs.

***Step 1- Planning and Preliminary Sketches***

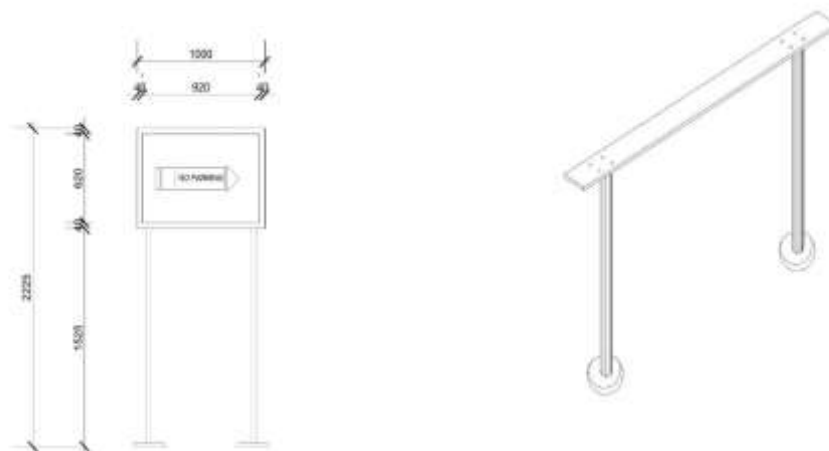
A well-designed wayfinding system starts with understanding the location, and defining where the information needs to be to maximize communication. In search for concepts, preliminary sketches of layout designs were adopted. These are also referred to as thumbnail sketches. From the initial

consultation. Conceptual designs were presented as preliminary sketches. The dimensions, colours and sizes were used was in line with the specifications.



### Thumbnail Sketch for Wayfinding Design

*Source: Field work, 2022*



### Preliminary Designs

*Source: Field work, 2022*

### ***Step 2- Preliminary Computer Designs for the Wayfinding***

This stage involves the initial sketches of the proposed wayfinding signage designs with the aid of computer, using coral draw (vector). The purpose of the conceptual design at the early stage was to create a design that would really implement the requirements. Several factors were taken into consideration during the design process, including file format, design size, installation, visibility, and legibility. The preliminary design stage also outlines and identifies dimensions, inconsistencies, misunderstandings and ambiguities which provided options to choose from.

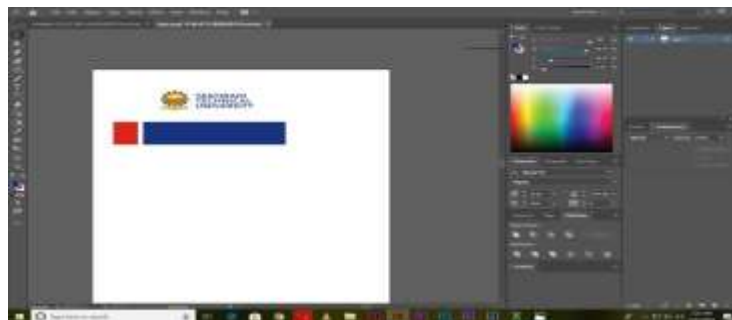


**Rough Visual Sketch**

*Source: student's work*

### ***Step 3- Application of Colours***

This stage of the design process shows an initial idea of how the final work will look like. The university colours and legible fonts (Arial Black) was then included to enhance visibility and to make it attractive. The university logo was infused in all the designs to depict uniqueness and uniformity.



**Application of Colours**

*Source: students work*

#### ***Step 4-Finish Rough Stage***

As shown in plate 4.5, the university logo is displayed at the top of the design to show identification and uniqueness. Again, the standard internationally recognised clip art was incorporated at the left side of the arrow to aid those who cannot read or understand English to be able to recognise, locate and navigate the facilities without any stress. The step also depicts the detailed appearance of the design for the wayfinding signage. The production layout shows specification of colours used and type of fonts selected for the signage. The same process was applied to the rest of the signage.

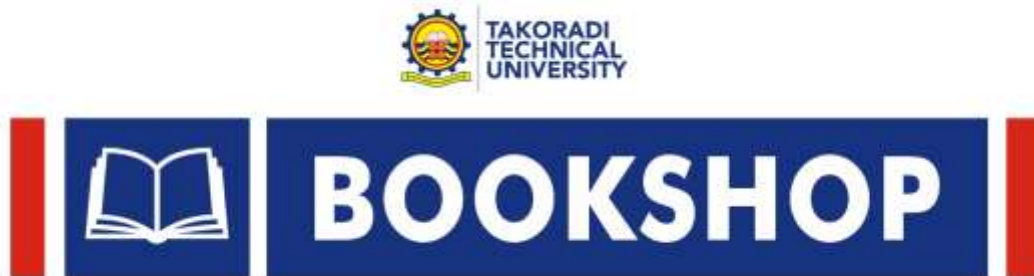


#### **Final Wayfinding Design**

*Source: Field work, 2022*

#### ***Step 5- An Array of Wayfinding Signage***

This stage displays various finished wayfinding designs proposed for placement at the different locations within Akatakyi campus facilities. These wayfinding designs is meant to notify, direct and guide people who are unfamiliar with the campus facilities. In quest to direct people, important information needs to be displayed at strategic points throughout the campus facilities. Therefore, the designs exhibit consistency throughout the signage system; colour codes, pictograms, typography, language, among other aspects.











### **Proposed Finished Wayfinding Designs**

*Source: Field work, 2022*

## **CONCLUSION**

The outcome of the study concludes that all the objectives put forward were achieved. Using the appropriate data collection instruments and procedure the study was able to identify suitable landmarks and locations for mounting specific types of signage for effective communication at the Akatakyi campus of the Takoradi Technical University. Finally, other designs of signage for specific locations within the Akatakyi campus were made using the appropriate software application and going through a rigorous designing process.

## Recommendations

1. It is recommended that, the management of Takoradi Technical University would adopt the use of these signage designs to maintain standard and uniformity on TTU landmarks.
2. Other tertiary and pre-tertiary institutions in Ghana without proper directional signage at this time of high cost of electricity and unstable power supply could consider the use of creating environmental legibility signage through reflector flyers.

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