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**LIBRARY SIGNAGE AND STUDENTS' UTILISATION OF  
INFORMATION SERVICES IN THE UNIVERSITY  
OF CALIFORNIA LIBRARY**

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**ABSTRACT**

*This study was to examine library signage and students' utilisation of information services in the University of California library. The study was conducted at the University of California library. An analytical survey research design was adopted for the study. The population of the study was 4220 registered undergraduate students in the faculty of education at the University of California library. The sample of the study was 422 registered undergraduate students in the faculty of education at the University of California library, made up of 260 females and 162 males. The researcher developed instruments entitled "Library Signage Questionnaire" (LSQ) and "Students' Utilization of Information Services Questionnaire" (SUISQ) that were used in collecting data for the study. The instrument was given to three research experts for face validation. Two assessors were from the Department of Education Foundations, Guidance, and Counselling and one from the Library Science Unit of the Department of Educational Technology and Library Science, all at the University of California. A trial testing of the instrument was carried out using 30 registered students who did not take part in the actual study. Thereafter, the internal consistency of the instrument was determined using Cronbach's Alpha method. The reliability coefficient obtained was 0.86, and this was high enough to justify the use of the instrument. Regression analysis was used to answer the research questions, while the F-value of the Simple Linear Regression Analysis was used to test null hypotheses at a 0.05 alpha level. Conclusions were drawn from the study that regulatory signage and information guides foster independent and critical thinking. It solves wayfinding problems in an unfamiliar environment, and it helps library users use the appropriate data, tools, and facilities of the library, bringing about coordination in academic libraries and aiding students in wayfinding and effective retrieval of the needed information. Hence, library signage has great influence on students' utilization of information services in the University of California library. One of the recommendations made was that librarians should ensure that signs contain clear and precise information and that instructional signs should conform to the arrangement of materials on the shelf units to avoid confusion and frustration in accessing information and other library services.*

**KEYWORDS: Regulatory signage, Informational signage, Library signage, University of California**

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**INTRODUCTION**

The university library is an important element in supporting the learning process. It plays a key role as a place for access to information, knowledge building, and problem solving. The nature and quality of the environment in the university library also influence how and what students learn. A good university library is characterized by well-designed, sufficient, and flexible space and is equipped with an appropriate collection to support curriculum goals. Such a library has a design that is based on consideration of the unique and diverse needs of the learners it serves and employs a good management system to ensure optimum utilization by the university community. Stempler and Polger (2013) noted that the academic library should be a place where children can find things easily and learn to be independent library users. This requires that the university library be designed so that students are directed to the materials they need as well as navigate easily and independently, especially to find the information they need for learning and pleasure.

Libraries are growing organisms, and in this digital age, users are expected to find them more complex and confusing than ever before. Regular visitors to a library need help to inform and guide them through the continual changes that a library undergoes. Polger and Stemper (2014) posited that this assistance is often provided through signage, which must be regularly reviewed and updated. According to Ahn (2011), signage is the methodology of arranging indicators to guide people to their destinations. A successful signage system is intuitive and self-navigable, and it protects the overall visual integrity of the site. Library signage is an indispensable tool in enhancing the utilisation of information services in the library. Like other media employed to educate library users, they derive their importance and usefulness from the needs that users experience as they search for information.

## **STATEMENT OF PROBLEM**

As library collections expand, materials are moved and re-shelved to make room for new items, with little consideration to students' wayfinding needs. Recent observations have shown that most librarians and libraries are not aware of students' frustration in terms of haphazard arrangement of materials and confusing library signage. Some librarians interviewed admitted to the inadequacy of signage in libraries, while others were of the opinion that these signs are usually put in place but not adhered to by users. It is therefore based on this contradiction that the researcher attempted to examine library signage and students' use of information services in the University of California library.

## **RESEARCH OBJECTIVES**

1. To assess the extent to which regulatory signage predict students' utilisation of information services in University of California library.
2. To determine the extent to which informational guide predict students' utilisation of information services in University of California library.

## **RESEARCH QUESTIONS**

1. What is the extent to which regulatory signage predict students' utilisation of information services in University of California library?

2. What is the extent to which informational guide predict students' utilisation of information services in University of California library?

## **HYPOTHESES**

**HO<sub>1</sub>:** The extent to which regulatory signage predict students' utilisation of information services in University of California library is not significant.

**HO<sub>2</sub>:** The extent to which informational guide predict students' utilisation of information services in universities of California library is not significant.

## **CONCEPTUAL REVIEW**

### **CONCEPT OF LIBRARY SIGNAGE**

Library signage is one of the many touch points that a library user needs to navigate through the library confidently and independently. Lack of signage, however, can trigger library anxiety, which describes the feelings of fear, uncertainty, and worry when visiting the library. Dalton (2014) postulates that whether a university is being built or a street fair is springing up, wayfinding signage is one of the keys to a great visitor experience. The basic guiding principles behind the design and placement of those signs should be the same. Signs deliver information, and in wayfinding signage, only a handful of different types of signs are necessary to deliver information. Knowing what those types of signs are is an integral part of creating a useful system of wayfinding signage. Dwight (2008) makes the most sense when he lists these four: identification, directional, informational, and regulatory signage. Defining these four types of signs is simple, as is knowing how to use them. When designing the system, librarians should remember that the simpler the wayfinding signage system is made, the better it is for all involved, from the designers of the wayfinding signage system to the visitors using it to get around. Dwight maintains that the idea behind designing signs is to convey as much information as necessary in as little space as possible. That is why it helps to think of signs in these four different categories.

According to Ahn (2011), signage is the methodology of arranging indicators to guide people to their destinations. Signs are tools that aid in wayfinding. Architectural indicators such as light, color, materials, and pathways also play a large role in signage. A successful signage system is intuitive and self-navigable, and it protects the overall visual integrity of the site. Also, signage is specific to its place and visitors. Signs improve and are, most of the time, integral to a clearly designed wayfinding program. The function of a sign is to identify, inform, direct, restrict, or permit. Good signage recedes into the background while providing clear information when needed. In addition, sign codes, life safety issues, and disabled universal guidelines need to be included to meet the national and world-wide requirements. Mandel and Johnston (2016) posit that successfully designed signage helps visitors find their way, makes information accessible, and provides an enhanced experience. In addition, an inclusive assessment of the environment and issues that affect orientation for first-time visitors is imperative to a successful signage and wayfinding program. Successfully designed signage and posters in libraries can be key measures of library marketing to invite potential users.

## **CONCEPT OF UTILIZATION OF INFORMATION SERVICES**

Clark (2012) posits that academic libraries are libraries established and maintained by tertiary institutions. They are meant to provide the informational, educational, and recreational needs of the students. Libraries are considered agents of social, political, and cultural change in any society and provide a wider range of readers than any other type of library. Students are expected to make effective and efficient use of academic libraries to satisfy their informational and research needs. Users' satisfaction with the services rendered by academic libraries relates to their effective use of the services and resources provided by the library. The satisfaction derived by students greatly influences the utilization of the services rendered by the library. Therefore, to justify the existence of any academic library, the provision of effective services and resources necessary to attract potential users cannot be possible without library signage.

The primary role of an academic library is to provide information services to support the educational, recreational, cultural, economic, and technological needs of users. They are used as a medium for disseminating information and enhancing literature searches as well as as a tool for the development of intellectual compatibilities and the promotion of cultural and social integration. Stempler and Polger (2013) see the library as a store of knowledge, indispensable to the success of any functional education. They further stress that education without the services of a library is a half-baked education that can only produce narrow-minded individuals who will not be productive in their community. The most important aspect of the library is the extent to which students utilize the library's information services. As a result, what could aid in the utilization of library information services, such as signage systems, which must not be treated lightly.

Idowu (2011) opines that utilization and user satisfaction of academic library services have become an imperative concern in recent times. There is no doubt that satisfaction with library services influences the degree to which the services are used, and it has been found to be an important factor that affects the use or non-use of library services. The library is both a repository of knowledge and a dynamic social institution, an indispensable resource centre for reliable information and meant to preserve the recorded knowledge of man for use. Aina (2004) emphasizes that a library is concerned with the collection, processing, storage, and dissemination of recorded information for the purpose of reading, study, and consultation.

## **REGULATORY SIGNAGE AND STUDENTS' UTILIZATION OF INFORMATION SERVICES**

Studies have been carried out by several authors on the use or non-use of libraries and their resources by undergraduate students at higher institutions (Omosekejimi, Ojeme, and Eghworo, 2015). Many such studies are documented in library science literature, while some are not published (Onwubiko, 2005). With the increasing number of students gaining admission into higher institutions, libraries are likely to face a number of problems, one of which is the increasing number of non-compliance attitudes occurring in the library. This implies that most libraries in developing countries are behind in the modern trend of library operation, utilization, security, and continuous restructuring of library space. One issue that needs to be addressed is student compliance with library rules and regulations in academic libraries. This includes collection security. Hence, library regulatory signage is indispensable in academic libraries and

is required to provide regulatory signs to guide against student misconduct and ensure collection security.

Johnston and Mandel (2014) opine that regulatory signs explain rules and can be external regulations like emergency and fire signage or internal regulations about library-specific policies. Regulatory signs might include "Library Rules," "No Talking with Cell Phones in the Library," or "Emergency Exit" signs. Regulation signage restricts certain behaviours for the maintenance of security and order and bookshelf signage. Such signs include classification signs, front labels, and signs or phrases at the end of the shelf. While the informational signs are there to put people in the know, it's the regulatory signs that tell them what they can and cannot do. This implies that regulatory signs in academic libraries are those signs required to restrict unwanted behaviour and are a measure to ensure compliance with library rules and regulations. Library regulatory signage helps to checkmate students' misconduct and violations of collection security in academic libraries.

Ugah (2007) considers student misconduct and collection security violations as formidable obstacles to information access and use. Such acts are serious problems that can result in user dissatisfaction. Ugah identifies major security issues in libraries as including: theft and mutilation; vandalism; damage and disaster; over-borrowing or delinquent borrowers; and purposefully displacing the arrangement of materials. According to Bello (2003), book theft is a major security issue in libraries, particularly in academic libraries, with special collections being the most targeted materials. Therefore, academic libraries require regulatory signs to help against book theft, such as signs that state that book theft is prohibited. Like most scholars on library abuse, Lorenzen (2006) and Holt (2007) described the most common forms of non-compliance attitudes of library users relating to theft of physical materials, theft or alteration of data, and theft of money.

## **INFORMATIONAL SIGNAGE AND STUDENTS' UTILIZATION OF INFORMATION SERVICES**

Academic libraries are left with no option or choice but to provide access to relevant information resources by applying this to enable quick access, integrate, and repackage information for the end user that will capacitate and enrich higher educational institutions' means of conducting research. Basically, library resources are materials that users consult in making decisions and also for problem-solving. Libraries have always played a significant role in enabling people to engage with all kinds of information and available knowledge resources (Curran et al., 2006). However, availability of information does not imply accessibility and utilization; thus, university libraries must provide informational signage to aid in the utilization of available library information.

Perhaps, informational signage in academic libraries enhances accessibility and utilization of library resources because it provides necessary information for library users to use appropriate data. Ugah (2007) opines that the more accessible information resources are, the more likely they will be used, and readers tend to use resources that require the minimum effort to access. Informational signage saves students' time and reduces the level of stress and challenge associated with locating the material of interest. According to Ochogwu (2007), this is due to the

failure of our library professionals to provide complete access to those information resources due to a lack of informational signs related to indexing, abstracting, and bibliographic.

## **METHODS**

Analytical survey research design was adopted for the study. The study was conducted in University of California library. The population of the study was 4220 registered undergraduate students in the faculty of education at the University of California library. The sample of the study was 422 registered undergraduate students in the faculty of education at the University of California library, made up of 260 females and 162 males (even though 400 questionnaires were properly filled in and returned for use). The researcher developed instruments entitled "Library Signage Questionnaire" (LSQ) and "Students' Utilization of Information Services Questionnaire" (SUISQ) that were used in collecting data for the study. The instrument was given to three research experts for face validation. Two assessors were from the Department of Education Foundations, Guidance, and Counselling and one from the Library Science Unit of the Department of Educational Technology and Library Science, all at the University of California. A trial testing of the instrument was carried out using 30 registered students who did not take part in the actual study. Thereafter, the internal consistency of the instrument was determined using Cronbach's Alpha method. The reliability coefficient obtained was 0.86, and this was high enough to justify the use of the instrument. Regression analysis was used to answer the research questions, while the F-value of the Simple Linear Regression Analysis was used to test null hypotheses at a 0.05 alpha level.

## **DATA ANALYSIS AND RESULTS**

**Research Question One:** What is the extent to which regulatory signage predict students utilization of information services in the University of California library?

**Table 1: Simple linear regression analysis for the extent to which regulatory signage predicts student's utilization of information services in the University of California library**

<b>Variable</b>	<b>R</b>	<b>R Square</b>	<b>Extent of prediction</b>	<b>Remark</b>
Regulatory Signage	.305	.093	9.3%	Low Extent
Students Utilization of Information services				

The result in table 1above indicates the R for the strength of the relationship and R<sup>2</sup> for the determination of the extent to which regulatory signage predict or determine students' utilization and information service in the University of California library. The R- Value of .305 indicates a low extent of relationship between the two variables. The calculated R<sup>2</sup> of .093 which is the coefficient of determinant indicates that only 9.3% of students' utilization of information service is predicted by regulatory signage. This indicate that regulatory signage to a low extent predicts students' utilization and information service in the University of California library.

**Research Question Two:** What is the extent to which information guide predict students utilization of information services in the University of California library?

**Table 2: Simple linear regression analysis for the extent to which information guide predicts student’s utilization of information services in the University of California library**

Variable	R	R Square	Extent of prediction	Remark
Information Guide	.337	.114	11.4%	Low Extent
Students Utilization of Information services				

The entries in table 2 above indicates the R for the strength of the relationship and R<sup>2</sup> for the determination of the extent to which information guide predict or determine students’ utilization and information service in the University of California library. The R- Value of .337 indicates a low extent of relationship between the two variables. The calculated R<sup>2</sup> of .0114 which is the coefficient of determinant indicates that only 11.4% of students’ utilization of information service is predicted by information guide. This implies that information guide to a low extent predicts students’ utilization and information service in the University of California library.

**TEST OF NULL HYPOTHESES**

**Hypothesis One:** The extent to which regulatory signage predict students utilization of information service in the University of California library?

**Table 3: Simple linear regression analysis for the prediction between regulatory signage and students utilization of information service in University of California library.**

Variables	Source Variation	Sum of Squares	Df	Mean Square	F-Cal	F-Crit	Decision @ p< .05
Regulatory Signage	Regression	78.527	1	78.527			
	Residual	76.307	396	21.657	40.565	3.89	*
Students Utilization Information Service	Total	54.834	397				

**\*Significant at p< .05**

The entries in table 3 above shows that the calculated F-value of 40.565 is greater than the critical-F value of 3.89 at .05 level of significant with 1 and 397 degrees of freedom. The result is significant; therefore, the null hypothesis which states that the extent to which regulatory signage predicts student’s utilization of information service in the University of California library is not significant is rejected. The result means that regulatory signage significantly predict students’ utilization of information services in University of California library.

**Hypothesis Two:** The extent to which information guide predict students utilization of information service in the University of California library?

**Table 4: Simple linear regression analysis for the prediction between information guide and students utilization of information service in University of California library**

Variables	Source Variation	Sum of Squares	Df	Mean Square	F-Cal	F-Crit	Decision @ p < .05
Information Guide	Regression	75.689	1	75.689			
	Residual	79.146	396	21.159	50.837	3.89	*
Students Utilization Information Service	Total	54.834	397				

**\*Significant at p < .05**

The outcome in table 4 above shows that the calculated F-value of 50.837 is greater than the critical-F value of 3.89 at .05 level of significant with 1 and 397 degrees of freedom. The result is significant; therefore, the null hypothesis which states that the extent to which information guide predicts student's utilization of information service in the University of California library is not significant is rejected. The result reveals that information guide significantly predict students' utilization of information services in University of California library.

## **DISCUSSION OF FINDINGS**

The result of findings in table 1 showed that all the identified items on regulatory signage predict students' utilization of information services in the Universities of California library. What account for the result is the fact that regulatory signs explain rules and can be external regulations like emergency and fire signage or internal regulations about library-specific policies. Regulatory signs include library rules and regulations and precautionary and safety signs. Regulation signage restricts certain behaviours for the maintenance of security and order and protection of bookshelf signage. Such signs include; classifications signs, front label, sign or phrase in the end of shelf. The finding is in line with Schmidt and Etches (2014) who maintained that signs can be seen as tools to achieve this, and hence their design falls well within the scope of library work. This implies that regulatory signs in academic libraries are those signs required to restrict unwanted behaviours and a measure to ensure compliance to library rules and regulations. Library regulatory signage helps to checkmate student's misconduct and violation of collection security in academic libraries.

Similarly, the result of the data presented in table 3 showed the extent to which regulatory signage predict students' utilization of information services in the universities of California library is significant. The reason is that students are bound to obey library rules. Nobody is exempted from rules; hence regulatory signs inform students what they can and cannot do. Library regulatory signage helps to checkmate student's misconduct and violation of collection security in academic libraries, thereby ensuring availability, accessibility and effective utilization of information resources. This is in line with Lorenzen (2006) who postulated that regulatory



signage is necessary in academic libraries to discourage mutilation of library materials. Mutilation is the defacement or damage of library materials. Ogbodo (2004) agreed that reactions to situations such as theft or mutilation of materials, or disruptive behavior, should not be left to an individual staff member's judgment. Regulatory signage plays significant role in checking unlawful acts in academic libraries.

The result of findings in table 2 showed that all the identified items on information guide predict students' utilization of information services in the Universities of California library. The reason for the result is obvious, informational signage gives information. It provides knowledge of how what one requires could be seen. Informational signage in academic libraries serves as a guide to direct students to where they should locate any information resources needed. This finding is in line with Admin (2016) who maintains that informational signage gives information. It provides knowledge of how what one requires could be seen. Informational signage in academic libraries serves as a guide to direct students to where they should locate any material needed. Barclay and Scott (2012) agreed that informational signage tells building users where they are and what they can (or cannot) do. Ahn (2011) supported that the signage plays a role as indicating information. Information signage provides all basic information to library users, it is a tool to discern various books, service points and facilities. However, Ahn observed that delivering messages in signs should be simple and straight forward.

Similarly, the result of the data presented in Table 4 showed the extent to which information guide predict students' utilization of information services in the universities of California library is significant. This is because information guide provides all basic information to students in the library. It is a tool to discern various books, service points and facilities. Perhaps, informational signage in academic libraries enhances accessibility and effective utilization of library resources, because it provides necessary information for both female and male students to use appropriate data. This is in line with Dwight (2008) who postulated that informational signs help to answer certain questions such as what are the hours of operation, is public Wi-Fi available? All this and more can be supplied to visitors through informational signs. While informational signs can be found at locations marked by identification signs, they can also provide information about other things along the route. information signage contains necessary information for library users to use appropriate data, tools and facilities of library. The signage includes administrators' intentions, general information, restrictions, opening hours, titles of facilities and exhibitions, handling descriptions and operational manuals.

## **CONCLUSION**

The following conclusions were drawn based on the findings of this study:

Regulatory signage and information guides foster independent and critical thinking. It solves wayfinding problems in an unfamiliar environment, and it helps library users use the appropriate data, tools, and facilities of the library, bringing about coordination in academic libraries and aiding students in wayfinding and effective retrieval of the needed information. Hence, library signage has great influence on students' utilization of information services in the University of California library.

## **RECOMMENDATIONS**

Based on the findings and conclusion of this study, the following recommendations were made that:

1. Librarians should ensure that signs contain clear and precise information and that instructional signs should conform to the arrangement of materials on the shelf units to avoid confusion and frustration in accessing information and other library services.
2. University librarians should use regulatory signage to create more awareness of library rules and regulations and penalties attached to breaching the rules and regulations. This will help to reduce mutilation, theft and other forms of crime and misbehaviour in academic libraries.

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