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**Thesis Documentation on:**

**“Impact of System quality and Usability on Reader’s satisfaction for online news portal: A case study of Bangladeshi news portal”**

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## Approval

This thesis titled on “**Impact of System quality and Usability on Reader’s satisfaction for online news portal: A case study of Bangladeshi news portal**”, submitted by **Zareen Tasneem (ID: 191-35-2716)** to the Department of Software Engineering, Daffodil International University has been accepted as satisfactory for the partial fulfillment of the requirements for the degree of Bachelor of Science in Software Engineering and approval as to its style and contents.

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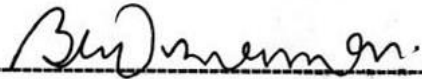
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It hereby declares that this project has been completed by me under the supervision of **Tapushe Rabaya Toma**, Assistant Professor, Department of Software Engineering (SWE), Daffodil International University. It is also declared that neither this work nor any part of this has been submitted elsewhere for award of any degree by me.

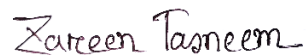
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Moreover, I am very grateful to my university friends, elder and younger brothers, who consistently commend me on my studies and daily work for learning stuff and letting me understand that I can create creative things in my career in this sector as well. I believe my thesis documentation is the unique that I have always aspired to create.

My thesis is truly centered on the readers satisfaction and impact on system quality and usability for online news portal; A case of Bangladeshi News Portal, and it is a survey-based thesis documentation. As I have a strong desire to study abroad, I am hoping for the best for my lengthy and challenging thesis documentation, as I intend to broaden it and release my paper work as my research paper on it in a broad area of including and articulating it later on with many more new and innovative approaches for my upcoming master's degree.

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## **Abstract:**

Any firm, anywhere in the world, must prioritize customer happiness if it wants to survive over the long run. The goal of this study is to examine how online news portal websites affect reader satisfaction with Bangladeshi newspapers and how reader contentment affects readers' intentions to continue reading.

Three significant factors system quality, usability, and information quality—were picked as online news portal predictors of customer satisfaction with the support of a literature review.

The goal of the study is to determine whether or not system quality, particularly in developing nations, has a significant impact on customer satisfaction and whether or not website quality acts as a mediator. We looked at how system quality factors affected readers' reading satisfaction on online news portals. Particularly, users' want to return to the news portal website. A total of 352 people participated in this study. PLS analysis was used to analyze the obtained data. According to the testing model, the results of the research based on the hypothesis show that the t-value is smaller than the t-table value, indicating that the variables used namely usability, information quality, and service interaction quality, were highly significant factors that directly affected readers satisfaction. Based on the R-Square value, the amount of influence obtained is 73.7%.

**Keywords:** System quality, information quality, service quality, usability, customer satisfactio

# Chapter 01

## Introduction

### 1.1 Background

This current era is witnessing an increase in the global trend of online. We live in an era of ICT (information, communication, and technology) today. Without technology, we couldn't think for a single second. From dawn until dusk, we require technological assistance. Computer technology is undergoing a revolutionary period right now. The majority of labor is dependent on web applications. Because of this, anyone, anytime, anywhere, may easily and affordably access a website over the internet and get what they are looking for.

One of the most important resources in the modern world is all available information. One of the key and important aspects of mass media is the usability of online news portals. Additionally, the effectiveness of the system and the caliber of the material directly influence how satisfied readers are.

One of the key and important aspects of mass media is the usability of online news portals. Additionally, the effectiveness of the system and the caliber of the material directly influence how satisfied readers are. Websites for online news portals and the caliber of their services, which are displayed as a structured collection of data. The contentment of readers is crucial since happy readers return to that online news source and suggest it to others.

These days, information technology development, particularly on the internet, is becoming more comprehensive because it provides instant access to a wide range of news. The evolution of the internet has had an impact on the evolution of online media. The development and upkeep of websites tailored to the needs of clients requires significant time and financial investment from



commercial organizations all around the world. Online newspapers are quickly replacing printed newspapers as people's preferred way to read the news.

User experience with news websites describes how people feel when navigating a news website, using a mobile app, or otherwise interacting with a company's digital products or services. Many factors contribute to designing exceptional user experiences, including user interface, usability, and user research. The researcher wants to solve the quality problems of the website based on user perceptions after reviewing the quality of the website using website analytic tools. Many previous studies on user satisfaction have been conducted, including: Online news portal evaluation The Impact of Quality Websites Method and Its effect on User Satisfaction

According to the website Analytics, there are 2 types of website user categories, namely new users and returning users (Pratiwi, S., &Irawan, M. I. 2021). The success of a website depends on the number of users who return to the websites . According to (Pratiwi, S., &Irawan, M. I. 2021), a returning user is a form of user satisfaction with the website. We discovered the significance of system quality, perceived ease of use, perceived security, information quality, and service quality for customer satisfaction in this study (Pratiwi, S., &Irawan, M. I. 2021). Security and privacy are regarded as critical components of customer satisfaction.

As a news medium, the internet is not relatively new. In 1974, the State University of Illinois published 'The News Report' as an online newspaper. (Wright, 2002; Peha&Khamitov, 2004). Following that, various newspapers began to publish online editions. However, 'The Southport Reporter,' which began publication in the United Kingdom in 2000, is regarded as the first true online newspaper (Wright, 2002; Peha&Khamitov, 2004). Following that, the globally influential British daily newspaper 'The Guardian,' the United States' 'The New York Times,' and a number

of Western newspapers converted to online by discontinuing print editions (Wright, 2002; Peha&Khamitov, 2004).

### **1.1.2 Theoretical foundation:**

The purpose of this study was to perform an empirical analysis, from a theoretical approach, of prior research findings that suggested that customer satisfaction effects of online news portal services, which were first assumed to be good, could be negative.

This study examines the parallels with previous research on The Importance of Information, System, and Service Quality of E-Commerce Websites on Customer Satisfaction and Loyalty in Bangladesh ( IHSAN, A., Li, S., & Alexis, N. S. H. I. M. I. Y. I. M. A. N. A. 2020) and research based on online news portals. Effects on Customer Satisfaction: Results of the Reader Survey The traditional approach, which focuses on how people choose how to spend their available resources (time, money, and effort), defines consumer behavior as actions people do to satisfy their wants and requirements

Online news portals follow the flow and appearance of a printed newspaper, with headlines competing for attention, advertisements occupying space, and pop-up windows concealing content. This distinguishes online news portal' web designs from those of other websites. Most online newspapers have a web design that does not adhere to this current style, however many websites with a modern web design make it simple for consumers to grasp and read the material. This is partially due to the increased emphasis on timely and engaging information in online newspapers.

Bangladesh is a tiny nation with a sizable selection of publications, including newspapers, television stations, periodicals, online newspapers, news portals, and blog websites. News portals in Bangladesh have grown to the size of an industry.

The journey of an online news portal in Bangladesh began in 2005 with [www.bdnews24.com](http://www.bdnews24.com). However, they formally began operations on October 22, 2006. ([www.bdtask.com](http://www.bdtask.com))

The nation's top news site company unlocked a new door. and encourage others to utilize the internet in a cutting-edge manner. Many internet newspapers started publishing after that. Almost every print media has already started their own web portal. Even the media on television travels the same path.

Therefore, it's difficult to locate a press these days that doesn't have an online news portal. In addition, individuals believe that news portals are more convenient to use than print or broadcast media. Over 80% of people currently read newspapers online. ([www. bdtask.com](http://www.bdtask.com)) Therefore, the time when presses stop producing newspapers and only conduct business online may not be too far off. However, a large number of online newspaper websites are launched each year, and the majority of them lack sound quality. Therefore, if we guarantee quality and are honest in our work, we may also create a news portal with a lot of visitors.

**Table 1. Most visited online news portal from Bangladesh**

<b>Bangladeshi news portal</b>	<b>URL</b>
ProthomAlo	<a href="https://www.prothomalo.com/">https://www.prothomalo.com/</a>
KalerKantho	<a href="https://www.kalerkantho.com/">https://www.kalerkantho.com/</a>
Samakal	<a href="https://samakal.com/">https://samakal.com/</a>
Ittefaq	<a href="https://www.ittefaq.com.bd/">https://www.ittefaq.com.bd/</a>
Jugantor	<a href="https://www.jugantor.com/">https://www.jugantor.com/</a>
Bangladesh Pratidin	<a href="https://www.bd-pratidin.com/">https://www.bd-pratidin.com/</a>
The Daily Inqilab	<a href="https://www.dailyinqilab.com/">https://www.dailyinqilab.com/</a>
BhorerKagoj	<a href="https://www.bhorerkagoj.com/">https://www.bhorerkagoj.com/</a>
Bangladesh Today	<a href="https://www.bhorerkagoj.com/">https://www.bhorerkagoj.com/</a>
The Daily Star	<a href="https://www.thedailystar.net/">https://www.thedailystar.net/</a>
AmaderShomoy	<a href="https://www.amadershomoy.com/">https://www.amadershomoy.com/</a>
JaiJaiDin	<a href="https://www.jajaidinbd.com/">https://www.jajaidinbd.com/</a>
Dinkal	<a href="https://dainikdinkal.net/">https://dainikdinkal.net/</a>
Dhaka Tribune	<a href="https://www.dhakatribune.com/">https://www.dhakatribune.com/</a>

Despite the abundance of online news portals and the variations in visitor numbers, little is known about the aspects that influence readers' pleasure. Understanding reader happiness will provide you deeper insights into the phenomenon of reader recommendation and intent to return.

Online newspaper stakeholders can then concentrate on those elements to boost website traffic, which would aid them in attracting online adverts from various firms.

## **1.2 Research Problem and Research Questions:**

### **1.2.1 Problem Statement:**

Our youth are using social networking sites because of their rapid growth and accessibility, which allows them to interact with others. Since we all use smartphones, we can connect to the rest of the world via visiting internet platforms, including news websites. We use these not only to keep up with the global situation but also to maintain it in our own country in the event of a crisis. Because in this day and age, this is the most effective means of staying in touch.

But one unacknowledged source of Social may be intense engagement with internet news portal sites. Additionally, it has a detrimental effect on their thinking because occasionally inaccurate information is provided on online news portal websites owing to system quality. As a result, readers have the false impression of any kind of news. it negatively affects the readers.

However, due to the news portal's poor infrastructure and website quality, visitors frequently have trouble understanding the news. They are unable to be pleased with news portals because of this. When a website offers important information and is simple to use, visitors report being considerably more satisfied with it. Users' opinions of the various organizations' and other websites' information quality, service quality, usability, and security features all played a role in how those organizations and websites were seen by their users. Remarks addressing both happy and frustrating events reflected these emotions.

Therefore, the goal of our research is to use information and technology to prevent these issues and guarantee the complete satisfaction of news portal users.

### **1.2.2 Research Questions:**

- Do the system quality, information quality, service quality have an impact on customer satisfaction of online news portal readers?
- Is there any influence of usability on customer satisfaction of online news portal readers?
- Is there any impact of information quality on customer satisfaction of online news portal readers?

### **1.3 Research Objective**

- To identify the impact of the system quality, information quality, service quality on customer satisfaction of online news portals.
- To identify the effect of service quality on customer satisfaction of online news portal readers.
- To identify the impression of satisfaction of online news readers' loyalty.

## **1.4 Significant of the study**

This study helps to understand how daily use of online news portal sites results in reader satisfaction. Also mention how the usability, information quality, website quality, and service quality all have a beneficial impact on consumer satisfaction.

There were several previous studies that presented the significant and positive relationship between system quality, information quality and customer satisfaction (Kumar, A., &Lata, S. 2021).Our study sheds insight on the variables influencing news portal websites. Therefore, online news portal users would be interested in reading the news and they will frequent the website to learn the accurate information if we are able to regulate the system and information quality to deliver accurate news and ensure service quality. A website's information quality, system quality, and service quality are all thought to be more significant factors that influence consumer happiness.

Firstly, we examine how reliable news is produced and kept up to date for posting on the news portal website using information and technology. And clarify: "Does this really happen whenever somebody participates in website maintenance, which causes overload? Technology and accurate information are positively impacted by system and service quality maintenance.

Secondly, we will focus on the methodologies and methods for assessing websites from various domains that have been developed, used, and maintained over the past few years by various researchers( E., Hamam, S., & Abu-Salem, H. 2011). These strategies and tactics, which are employed to evaluate a website's effectiveness and support website designers and developers in

making improvements, are based on a variety of variables ( E., Hamam, S., & Abu-Salem, H. 2011). These strategies and tactics are used to improve the design, content, aesthetics, accessibility, and usability of websites in a variety of ways (E., Hamam, S., & Abu-Salem, H. 2011)

Thirdly, We will discuss how outdated systems and poor website quality might cause new portal information to occasionally not function. All media businesses underwent significant upheaval as a result of the World Wide Web's expansion and quick development. One of the primary businesses impacted by the rapid development of the Internet is communication and mass media, which focuses on delivering current news to the public through print media, broadcast media, and Internet-based media. (E., Hamam, S., & Abu-Salem, H. 2011)

Fourthly, As a particular kind of information-presenting web gateway, news sites are unique from other sorts of websites. In contrast to transaction-based or retail-oriented websites that concentrate on online transactions and may differ greatly in terms and quality requirements, information-presenting web portals generally offer online information and information-related services. ( Aranyi, G., & Van Schaik, P. 2015)

Finally, the results of this study may point to the variables that contribute to readers' pleasure and the quality of online news publications. With this understanding, perhaps we can ensure that the current population understands that they can obtain timely, accurate information from all news portal websites, even breaking news

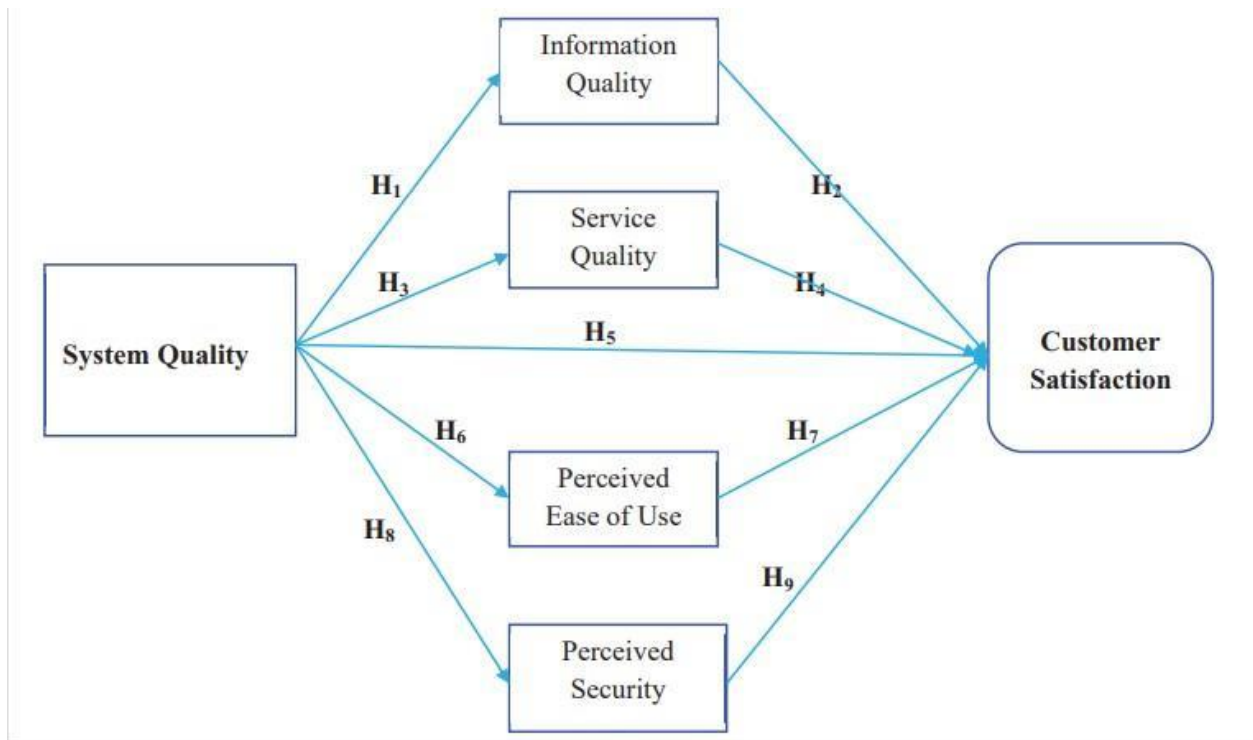


## **Chapter 02**

### **Literature Review**

#### **2.1 Anil Kumar and SumanLata's Research Model:**

The relationship between system quality, information quality, service quality, and customer happiness was examined by Anil Kumar and SumanLata using an integration of satisfaction quality perspective on a trust-based model. To achieve the main goal, the information system gives clients the ability to do various options autonomously. Information quality is seen from two distinct perspectives: (a) system quality, and (b) information quality. Information quality includes information correctness and dependability, whereas system quality pertains to software development capabilities (DeLone& McLean, 1992). Key quality issues in information exchange are revealed by information quality and system quality, and it has been discovered that these issues have a direct impact on user happiness (Zheng et al., 2013). Websites are used to measure visitor satisfaction; when a website offers important information and is simple to use, visitors are more likely to be satisfied (Sundeen et al., 2016). Based on customers' perceptions of the various organizations' and e-commerce websites' information quality, service quality, and other factors. Figure 2.1 depicts the overall research model.



**Figure 2.1 Anil Kumar and SumanLata's Research Model**

In my thorough research, I introduced a number of variables using this paradigm. I used the following model to represent system quality, information quality, service quality, and customer satisfaction. I chose this model and these variables since they are all linked to readers' satisfaction with online news portals. Here is a quick overview of each variable that was motivated by this model.

**System quality:** System quality is the degree to which a system is user-friendly and satisfies connection, reliability, flexibility, data quality, and integration criteria to carry out particular activities ( Delone & McLean, 2003 ). As a result, online news portal website' features and performance traits are the main emphasis of the system quality measure in this study. Therefore, system quality in this sense relates to how much the system's thorough design, reaction time, reliability, availability, functionality, and flexibility affect readers' opinions of readers' happiness with online news portals.

**Information quality:** A desirable attribute of a system output is information quality, which assesses the caliber of the information the system produces and its applicability to the user. To lessen the uncertainty that comes with developing new services, it is necessary to make clear judgments on what services to produce, for whom, and through which distribution channels. It guarantees the finest outcomes when firms compete with one another. Completeness, accessibility, accuracy, precision, objectivity, consistency, relevancy, timeliness, and intelligibility are just a few of the requirements that information must achieve in order to be deemed of the highest quality.

### **Service quality:**

Customer expectations and service performance are depicted in connection to the concept of service quality. It can also be seen in how well an organization satisfies the demands of its clients. To ensure client loyalty and repeated usage intent, service quality is necessary. These days, it is essential to check that a business is offering or providing high-quality goods or services that cater to customers because doing so might anticipate the institution's future and its development in the market (Alexis and Chen). According to( Park & Kim's 2003) article,

"Service quality" is defined as the customer's opinion of the caliber of the product/service information offered by a website (Kabango et al.). Service quality refers to the general impression that a user has of the caliber of services they have received when using a website. Service quality denotes overall consumer assessments and judgements regarding the quality of online service.

**Customer satisfaction:** According to ( DeLone and McLean ,1992), satisfaction (SAT) relates to a person's level of satisfaction with utilizing the IS. In our setting, reader happiness with the online newspaper is prioritized over facilitator or other types of users. According to some research, satisfaction can be defined as appropriateness, effectiveness, efficiency, enjoyment, overall satisfaction, and satisfaction with information and systems (Almutairi& Subramanian, 2005). (Gable et al., 2008). Customer satisfaction, according to (Hunt 1977), is an evaluation of feeling that is reliable across time. Later, (Rust and Oliver ,1994) claimed that a consumer is satisfied when utilizing a service or product because it makes them feel good. It is seen as indicative of overall satisfaction when a customer's contentment is dependent on subsequent transactions or system functions (Shankar, Smith, &Rangaswamy, 2003).

## **2.2 S. Pratiwi and M. Isa Irawan's research model:**

They are expected to have a significant impact on usability, according to S. Pratiwi and M. Isa Irawan's research on the features of online news portal websites. As a result, the characteristics, convenience, benefits, and flexibility of online news portal services were the parameters they considered. They empirically investigate the factors that influence a customer's usability of online news portal website services in this study. A research model, as shown in [Figure 2.2], was created for this purpose.



**Fig 2.2 :Pratiwi and M. Isa Irawan’s research model**

Usability, according to this model, has a direct impact on customer satisfaction. So I adapted this relationship and used it to define the purpose of my research. I adapted Pratiwi and M. Isa Irawan's research model for Usability and Relationship. However, the usability of online news portal website service characteristics shown here were developed using my own sets of variables.

**Usability:** Usability refers to how effectively, efficiently, and successfully a particular user can utilize a product or design in a certain situation. Through guarantee optimal usability, designers typically test a design at various stages of production, from wireframes to the final deliverable.

The term "usability" refers to how much a technical system is perceived to be easy to use and intuitive by users.

### **2.3 Relationship between System quality and information quality**

According to research by Hajli (2013), companies can improve their websites and boost their customers' perception of their usefulness by focusing on information and system quality. They are crucial ideas of websites that want to expand while maintaining their competitive advantage, according to researchers Alexis and Chen. An entity whose various aspects represent the interests of various categories is referred to as having high-quality information systems (Kuo, 2009). In addition to ensuring accessibility, the information system also guarantees the satisfaction of a wide range of stakeholders while delivering high-quality services (Kim & Ong, 2005). According to a prior study (McKinney et al., 2002), the system quality aids in facilitating and rewarding the bricks-and-mortar buying experience and fosters customer loyalty (Zhou et al., 2010)

**Hypothesis 1:** System quality has a positive impact on information quality.

### **2.4 Relationship between Usability and Customer satisfaction:**

In the subject of research, customer satisfaction, usability is an important concept. Easy navigation is crucial when it comes to online platforms through websites in order to draw in both seasoned and new online users. In information system research, usability is commonly linked to customer satisfaction levels, and vice versa. Making navigation, information, and content easy for users on online websites helps increase their mainstream adoption (Rice, 1997). The customer was positively affected by the information system's usability (Yang et al., 2004). According to the previous study, perceived usability has a favorable impact on consumer

satisfaction across all online platforms (George & Kumar, 2013). Therefore the following hypotheses is developed:

**Hypothesis 2:** Usability has a positive impact on customer satisfaction .

## **2.5 Relationship between Service quality and Customer satisfaction:**

Service Each person provides a different person with a quality or quality of service, and the recipient evaluates it based on how well it matches their impression and expectation of the service provider's quality. When it comes to reliability, responsiveness, assurance capacity, and personalisation, service quality typically represents the abilities and generosity of service providers. Previous studies have connected high service quality to increased user happiness. Users' happiness with online news portal websites are influenced by their perception of providers as being able to conduct financial transactions, dependable, and interested in their users' needs rather than just their own. Users start to trust that a supplier can live up to their expectations, for instance, when they receive timely responses and excellent service. Service excellence may serve as a major difference for online news portal website providers and increase user satisfaction. Thus the following Hypothesis is introduced.

**Hypothesis 3:** Service Quality has a positive impact on customer satisfaction.

## **2.6 Relationship between Information quality and Customer satisfaction:**

Information quality is the notion of a person's capacity to satisfy a user's needs. Information that is accurate, useful, thorough, and relevant is of a high caliber. The importance of information quality in fostering trust in online interactions was stressed by Nicolaou and McKnight due to the

fact that users depend on service providers for current, relevant, timely, and insightful information. When service providers offer higher-quality information, user contentment rises. Information quality and customer satisfaction in online services have been proven to be significantly and favorably correlated in prior studies. Information quality can also aid in reducing uncertainty since it can decrease unanticipated consequences when shared, accurate, current, and relevant information is available. Customers' pleasure with the quality of the information increases as it fits their demands, which lowers discontent. The following supposition was made as a result:

**Hypothesis 4:** Information Quality has a positive impact on customer satisfaction

## 2.7 Hypothesis and Proposed model:

### 2.7.1 List of all hypothesis

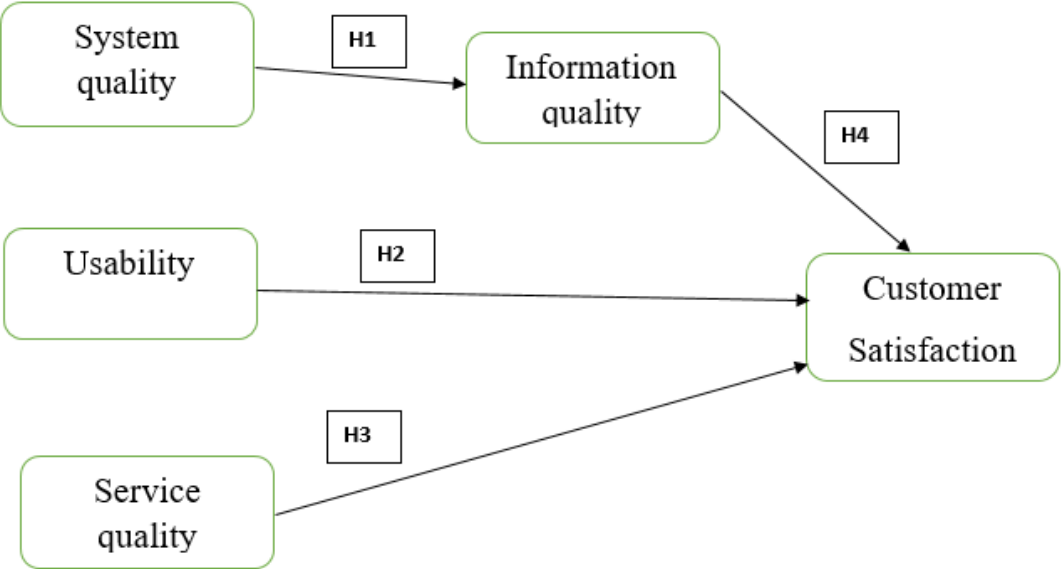
**Table 2.1 List of all hypothesis**

SL. No	Hypothesis
H1	System quality has a positive impact on information quality.
H2	Usability has a positive impact on customer satisfaction ..



<b>H3</b>	Service Quality has a positive impact on customer satisfaction.
<b>H4</b>	Information Quality has a positive impact on customer satisfaction.

**2.7.2 Proposed Structured Model**



**Fig 2.3 Proposed model for Research**

## **Chapter 03**

### **Research Methodology**

#### **3.1 Quantitative research**

The term "quantitative research" is defined differently by various academics. Here are a few examples:

The numerical representation and manipulation of observations with the purpose of describing and interpreting the phenomena those observations reflect is known as quantitative research. This includes physics, biology, psychology, sociology, and geology, among many other scientific and social disciplines.

Furthermore, quantitative research is described by Cohen (1980) as social research that makes use of empirical techniques and claims. (Schwartz, R. A., & Whitcomb, D. K. 1980). According to him, an empirical statement is one that describes what "is" the situation in the "actual world," as opposed to what "ought" to be the situation. Empirical claims are frequently expressed in numerical terms, and applying empirical evaluations is another aspect of quantitative research. The phrase "empirical evaluation" refers to a process used to assess how well or poorly a given program or policy actually adheres to a given standard or norm.

Likewise, Creswell (1994) provided a succinct description of quantitative research as a field of study that "explains events by gathering numerical data that are evaluated using mathematically based methodologies (in particular statistics)." (Creswell, J. W. 1999).

This method allows us to analyze nearly any phenomenon, which gives quantitative research a lot of flexibility. But not all phenomena lend themselves well to quantitative analysis. Quantitative approaches contain drawbacks in addition to some obvious advantages. This implies that qualitative research techniques are preferable for studying particular phenomena.

In other words, the main goal of quantitative research is to measure social reality. In order to develop study quantitatively, quantitative research and or questions look for amounts in things. Rigid guidelines in the process of data gathering and analysis are crucial because quantitative researchers perceive the world as an objective reality.

## **Different Types of Quantitative Research**

There are several types of quantitative research. For instance, it can be classified as

- Survey research
- Correlational research
- Experimental research
- Causal-comparative research. Each type has its own typical characteristics

## **3.2 The Process of Research**

This research generally followed a research procedure, as do all studies with a scientific foundation. The problem, hypothesis, research design, measurement, data collecting, data analysis, and generalization are the seven main stages. Each level influences theory and is influenced by it ( Matveev, A. V. 2002).

Finding gaps in the literature allowed for the development of the problem or research questions, which was the first step in the research process. The review of pertinent literature was described

in depth in Chapter The fact that quantitative research starts with theory serves as an illustration of the tradition's heavily deductive approach to the link between theory and research (IHSAN, A., Li, S., & Alexis, 2020).

The identification of pertinent theories following a review of the literature served as a foundation for the creation of the research's theoretical framework and hypotheses. The theoretical foundation and theoretically supported hypotheses of this study are described in Chapter 2 . Commonly, the major procedures of quantitative research are presented to imply that a hypothesis is derived from the theory and tested. However, many quantitative studies do not call for the formulation of a hypothesis; rather, theory serves as a broadly defined set of issues from which social scientists gather data. The specification of hypotheses to be tested occurs frequently in both experimental research, which is typically based on a cross-sectional design, and survey research.

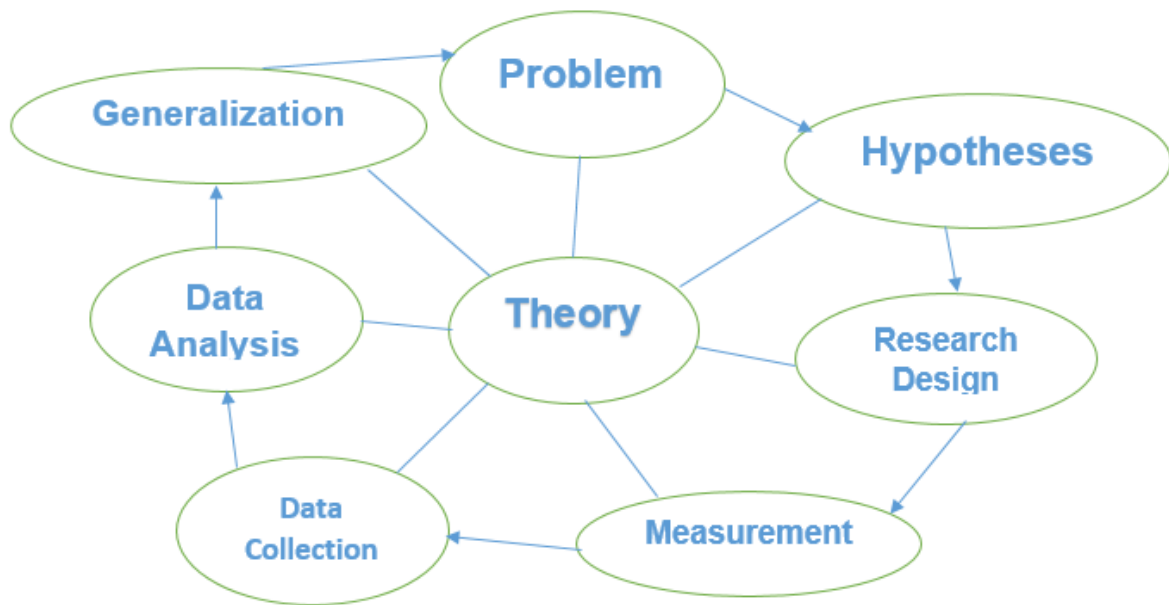
The next step was to choose the most appropriate research design for this study. First, as described in the preceding section of this chapter, the researcher needed to identify the appropriate research paradigm. After deciding on a research paradigm, the appropriate research design was used. This has implications for a number of issues, including the validity and reliability of findings, as well as researchers' ability to acknowledge causality in their findings.

The development of the survey questionnaire was given great consideration during the measuring phase. A pilot study was conducted as the last step of this phase to assess the survey questionnaire's face validity and reliability. The aforementioned phase's findings were used to modify the survey questionnaires as needed. The survey questionnaire was reviewed and polished before being utilized to gather information from the sample. Typically, this includes

translating theoretically complex consider While the concept of social anxiety, for instance, cannot be directly observed, it can be operationally characterized in terms of self-rating scores, behavioral avoidance of crowded places, or physical anxiety symptoms in everyday interaction

Two subsequent phases were followed by data analysis. To begin with, preliminary data analysis was used to clean up the data and acquire a broad perspective of the respondents. Structural equation modeling was used in the second phase. In Chapter 4, the data analysis is explained. In order to find significant correlations between variables and determine if one variable significantly affects another, the researcher employs a range of statistical tools.

The analysis of the results and a discussion of their implications were part of the process's last phase. All of these topics are covered in Chapter 5. The researcher must consult pertinent theories and literature in order to provide a comprehensive explanation and discussion of the findings. The analysis' outcomes must be described by the researcher using the research's findings as a guide. The results will become apparent at this point: is the hypothesis supported? What consequences do the conclusions have on the theoretical ideas that the study was built upon?



**Figure 3.1: The main stage of research process**

### 3.3 The Method of survey

Respondents will probably find it sensitive to be questioned about their propensity for moral disengagement, personality qualities, leadership style, organizational ethical atmosphere, and exposing their unusual workplace behavior. Applying survey methods was determined to be the best course of action as a consequence.

A survey method is a procedure, tool, or method used to ask questions to a specific group of people in order to gather information for study. It frequently helps to facilitate communication between study participants and the person or team doing the research.

A thorough and in-depth assessment of the literature served as the foundation for the development of the research technique. In order to produce indicators that could be assessed and interpreted in line with this sort of research, primary data were obtained through a survey and analyzed in accordance with the descriptive and statistical technique. To gather the necessary data, a survey was circulated in several financial institutions, banks, universities, and corporate offices. Online surveys were also conducted. To ensure uniformity in the selection process and the reliability of the results, global studies that were closely related to this investigation were referred to as secondary sources of data.

The benefits of surveys include: very simple administration, can be created more quickly (compared to other data-collection methods), Nevertheless, the cost varies on the type of survey. Remote administration is possible by web, mobile, mail, email, kiosk, or telephone. Remote operations can lessen or eliminate geographic dependence. able to gather information from a lot of responses, Several inquiries can be made regarding a topic, providing great flexibility for data analysis, Advanced statistical approaches, such as the capacity to examine many variables, can be used with survey software to evaluate survey data in order to determine validity, reliability, and statistical significance. Data from a variety of sources can be gathered (e.g., attitudes, opinions, beliefs, values, behavior, factual), Standardized surveys are comparatively error-free in many ways.

The drawbacks of surveys include the possibility that respondents won't feel motivated to offer truthful, accurate responses and the possibility that respondents won't feel at ease offering responses that might be seen negatively. Due to forgetfulness or boredom, respondents may not be completely aware of the reasons behind any given response. Compared to other question categories, surveys containing closed-ended questions could have a lower validity rate. Data

mistakes resulting from non-answers to questions may exist. Bias may be introduced into survey results if different respondents choose to reply to a question vs those who choose not to. Because different respondents may perceive different answer choices, this could result in data that is confusing. For instance, the response choice "kind of agree"

### **3.4 Questionnaire Development for Surveys**

The tool for this study was created using a combination of already-validated metrics based on a thorough literature assessment. The chosen verified metrics were then slightly modified to fit the research sample. This approach is frequently used when creating survey instruments because it has two major benefits, including the fact that the existing instruments have already been evaluated for validity and reliability and that using the existing instruments makes it possible to compare the new findings with previous results from other studies ( Kitchenham, B., &Pfleeger, S. L. 2002). The survey used measurements that had already been created and confirmed in the literature.

Our methodological approach entails the use of a questionnaire to evaluate the effectiveness of online news portal readers services on customer satisfaction in Bangladesh. It also involves the analysis of the aspects of online news portal services that influence customer satisfaction, which in turn leads to continued use intention. Our analysis of the literature identifies five factors that affect how readers use online news portal services: system quality, service quality, information quality, usability, and satisfaction. When creating survey questions, these five indicators are considered. Before formulating the probable reader inquiries, we determined the applicability of five indicators and the potential advantages and disadvantages of an online news site with regard



to customer satisfaction. Measurements from the literature that had already been established and validated were employed in the survey.

The questionnaire was carefully crafted, especially in the way the questions were worded and arranged. The questionnaires should be succinct, direct, and simple to understand. (Frazer, L., & Lawley, M. 2000) As a result, the language is on par with what would be understood in a high school. Additionally, to reduce eye strain, the questions were logically spaced and neatly structured. Most of the questions did not employ more than 20 words in total.(Omona, J. (2003). Less than 12 pages made up the entire questionnaire, which is the ideal number of pages for a survey (Neely, J. G. 2011). By including the relatively less critical questions (demographic details) in the later section of the study instrument, the likelihood that respondents would become fatigued and react cautiously to the earlier questions while carelessly to the later ones was reduced ( Iwuanyanwu, C. C. 2021).

Two parts made up the questionnaire: the first part dealt with demographic information such as age, gender, education level, and experience reading online news portals; the second part concentrated on assessment items for IQ, SQ, information quality, and system quality. Anil Kumar and SumanLata's research, published in 2021, served as the inspiration for the questionnaires for information service quality, system quality, information quality, and customer satisfaction. Items relating to usability were modified based on study done in 2021 by S. Pratiwi and M. Isa Irawan.

**Table 3.1:**

**Table 3.1: Questionnaires Adaption**

<b>Antecedents</b>	<b>Adapted from</b>
<b>Information Quality</b>	<b>Anil Kumar and SumanLata's</b>
<b>Service Quality</b>	
<b>System Quality</b>	
<b>Customer Satisfaction</b>	
<b>Usability</b>	<b>S. Pratiwi and M. Isa Irawan</b>

### 3.5 Questioner

A questionnaire is "a reformulated written series of questions to which respondents record their responses typically, within very strictly specified options," according to one definition (Sekaran, S., Foster, R. G., Lucas, R. J., & Hankins, M. W. , 2003). Questionnaires were used to collect the data for this study. This technique has been acknowledged as an efficient way to collect data from big samples (McCelland, E. 1994) and It might be regarded as the most widely used technique for gathering data ( Shaw, D., & Clarke, I. (1999).

There are two sections to the questionnaire. Questions on demographics are asked in the first section, and construct-related questions are asked in the last sections.

#### **Section A**

In this section, the demographic information of participants is included.

#### **Section B**

This section includes 25 questions asking respondents to prove our hypothesis.

Participants had to answer by marking based on the scale

<b>Strongly Disagree</b>	<b>Disagree</b>	<b>Neutral</b>	<b>Agree</b>	<b>Strongly Agree</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>

### **3.6 Sample size**

We designed a survey to test our hypotheses in order to collect empirical evidence for the research model. A survey of 350 people was used to test the model. A structured set of questionnaires was used to survey the samples. Before performing a study, a priori analyses are a useful tool for controlling statistical power (Lang, A. G., & Buchner, A. (2007))

The predicted sample size was 138 with a 95% power using the computer program G\*Power 3 with the following input parameters: medium effect size, probability of Type I error = 0.05, probability of Type II error = 0.05, which implies  $(1 - \beta) = .95$ . Nevertheless, we handed out 352 surveys, and 350 people responded (a response rate of 100%)

### **3.7 Data collection Procedure**

The data for this study were gathered using a self-administered questionnaire. "A data gathering technique in which the respondents reads the survey questions and records his or her responses without the presence of a trained interviewer," is known as a self-administered questionnaire (Battor, M. (2010)).

According to the argument, "strong data suggests that people are more likely to offer honest responses to self-administered questions than to interview questions." Additionally, a self-administered survey reduces the likelihood that social desirability bias will be present whenever sensitive information is sought, (Strouse, P. J., & Jan, S. C. 2007)

In this study, a drop-off and collect methodology was used. With this approach, a researcher representative goes to the respondents' location and personally delivers survey forms to each

individual. After the respondents had finished, the representative then gathered the completed surveys (Strouse, P. J., & Jan, S. C. (2007)

With this approach, respondents can answer the survey whenever it is convenient for them. Respondents can therefore take their time to consider their answers and dig up additional information if needed (Rao, S., & Perry, C. (2003). As questionnaires were handed by hand by the representative who works for the same company as the respondents, this method ensures that a person is available to respond to queries. Through interaction between the representative and respondents, this technique also assisted in piquing the respondents' interest in completing the questionnaire.(David, J. (2003)

### 3.8 Demographic Information

352 people were surveyed, and **85.8%** of them claimed to read online news portals; the remaining **14.8%** did not. Then we can see from the survey that most of the people use online news portals about the current situation of the world as well as abroad, game news and so on.

Do you read online news portal?

352 responses

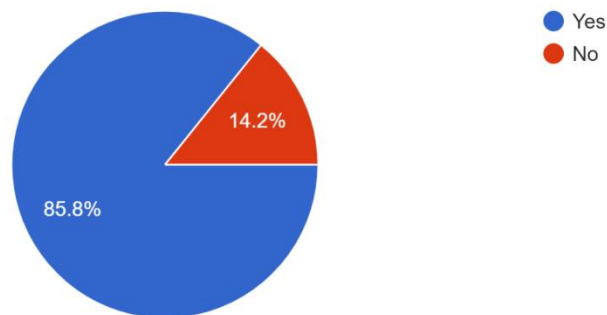


Fig 3.1 : Age range of respondents

We measured Average variance extracted (AVE), Composite Reliability (CR), Discriminant validity, and Effect Size to properly assess our model.

**AVE**: Fornell and Larker (1981) developed the average variance extracted (AVE) as a measure of the shared or common variance in a latent variable (LV), or the proportion of variance that the LV captures compared to the variance caused by its measurement error.( Dillon, W. R., & Goldstein, M. (1984). In different terms, AVE is a measure of the error-free variance of a set of items.

According to Fornell and Larker (1981), sufficiently convergent LVs should have measures with less than 50% error variance and more than 50% explained or common variance in the factor analytic sense. Where is the measurement error of  $x_i$ ,  $\text{Var}$  represents variance, and  $I$  is the loading of  $x_i$  on  $X$  (Fornell, C., & Larcker, D. F. 1981).

**CR**: In combination with structural equation modeling, composite reliability is typically calculated. Latent Variable (LV) dependability is an assessment of the connection between an LV and its items, and "correlations smaller than 0.7" neglect measurement error. Square the total factor loadings (call this SSI). sum of each indicator's error variances (call this SEV).

$$\text{SSI}/(\text{SSI}+\text{SEV}) = \text{CR}$$

**Discriminant Validity**: The other entries are squared correlations, and diagonal is the square root of the average variation extracted (AVE). The square root of AVE, which measures the model construct's uniqueness from other constructs, must be bigger than the related construct correlation in order to meet the quality criteria. ( Harrison, D. E. 2010)

**F<sup>2</sup>**: To ascertain the impact of the independent variable, use the F2 measure. According to Cohen (1988), the thresholds of 0.02, 0.15, and 0.35 represent the minor, medium, and large effects, respectively.

## **Chapter 4**

### **Result and Discussion**

#### **4.1 Method of data analysis**

A technique for assessing a research model that has a linear relationship between the variables observed is structural equation modeling (SEM) (Armstrong and Grover, 2009). We calculated data using the partial least squares method (Hair et al. 2014) and the SmartPLS3 program (Ringle et al. 2014) to test our model. Each construct in our model was measured using reflective indicators.

#### **4.2 Model of Measurement**

Researchers should assess the outer model after creating the research model, according to a 2014 proposal by Hair et al. To evaluate the outer model, we looked at the average variance extracted (AVE), composite reliability (CR), and discriminant validity. Examples are included in Tables 1 and 2.



**Table 4.1: AVE**

	<b>AVE</b>
<b>CSQ</b>	<b>0.765</b>
<b>INQ</b>	<b>0.716</b>
<b>SVQ</b>	<b>0.735</b>
<b>SYQ</b>	<b>0.700</b>
<b>UQ</b>	<b>0.744</b>

**Table 4.2: Composite Reliability**

	<b>Composite Reliability (rho_a)</b>	<b>Composite Reliability (rho_c)</b>
<b>CSQ</b>	<b>0.900</b>	<b>0.929</b>
<b>INQ</b>	<b>0.921</b>	<b>0.938</b>
<b>SVQ</b>	<b>0.910</b>	<b>0.933</b>
<b>SYQ</b>	<b>0.893</b>	<b>0.921</b>
<b>UQ</b>	<b>0.914</b>	<b>0.936</b>

**Table 4.3: Correlations between Latent Variables (Discriminant Validity)**

	<b>CSQ</b>	<b>INQ</b>	<b>SVQ</b>	<b>SYQ</b>	<b>UQ</b>
<b>CSQ</b>	<b>0.875</b>				
<b>INQ</b>	<b>0.793</b>	<b>0.846</b>			
<b>SVQ</b>	<b>0.803</b>	<b>0.833</b>	<b>0.857</b>		
<b>SYQ</b>	<b>0.744</b>	<b>0.841</b>	<b>0.796</b>	<b>0.837</b>	
<b>UQ</b>	<b>0.798</b>	<b>0.760</b>	<b>0.766</b>	<b>0.713</b>	<b>0.863</b>

Note: Diagonal represents the square root of Average Variance Extracted (AVE), whereas the other elements show squared correlations.

Based on table 4.1 & 4.2, we can conclude that both quality criteria are met for our variables: AVE must be greater than 0.5, indicating that at least 50% of items explain the construct, and composite reliability must be higher than 0.7 (Hair et al. 2014). According to Table 4.3, the square root of AVE is higher than the corresponding construct correlation, indicating that our construct is truly distinct from others (Hair et al. 2010).

### 4.3 Structural Model:

The structural model was then examined using the evaluation coefficient of determination and the significance level of each path coefficient after the AVE, reliability, and validity of our data were examined.

Focusing on their significance level of their path coefficients, our result shows INQ (Information Quality) inherits 23% variance on CSQ (Customer satisfaction), then SVQ (Service Quality) inherits 29.5% variance on CSQ, SYQ (System Quality) inherits 84.1% variance on INQ. Then Lastly UQ (Usability) inherits 39.8% variance on CSQ.

Significance of hypothesis is measured by the significance level of each path coefficient. This means from our model (see table 4.4), the relationship between SYQ and INQ, we found SYQ ( $\beta = 0.841$ ,  $p < 0.000$ ) has a positive impact on INQ and UQ ( $\beta = 0.398$ ,  $p < 0.000$ ) has a positive impact on CSQ. So our H1 and H2 are supported.

We can also observe the relationship between SVQ and CSQ, also INQ and CSQ we found SVQ ( $\beta = 0.295$ ,  $p < 0.000$ ) has significant positive impact on CSQ and INQ ( $\beta = 0.230$ ,  $p < 0.002$ ) has a positive impact on CSQ. So our H3 and H4 are also supported.

**Table 4.4: Breaks down the significance of each path**

	<b>Original sample (o)</b>	<b>T statistics ( O/STERR )</b>	<b>P Value</b>	
<b>INQ-&gt;CSQ</b>	<b>0.230</b>	<b>3.154</b>	<b>0.002</b>	<b>Supported</b>
<b>SVQ-&gt;CSQ</b>	<b>0.295</b>	<b>3.771</b>	<b>0.000</b>	<b>Supported</b>
<b>SYQ-&gt;INQ</b>	<b>0.841</b>	<b>47.639</b>	<b>0.000</b>	<b>Supported</b>
<b>UQ-&gt;CSQ</b>	<b>0.398</b>	<b>6.642</b>	<b>0.000</b>	<b>Supported</b>

Final research model validation using data from survey is given in figure :

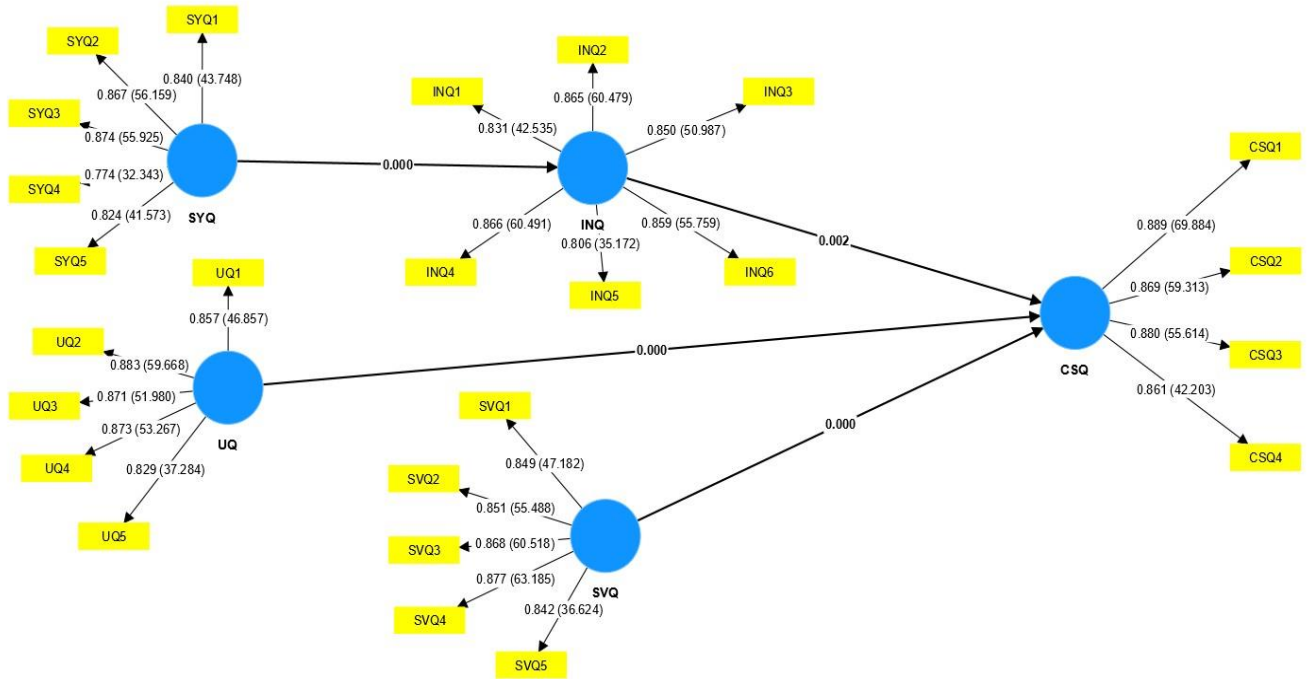


Fig 4.1: Tested Model with result

#### **4.4 Discussion:**

Perceived convenience is the most critical factor in determining whether an online news portal will continue to provide its services, which suggests that reader contentment and the value of accurate information are crucial to the success of the website's services. The findings show that perceived convenience has a substantial impact on readers' continued usage of online website services since these services make it possible to access readers' personal information and distribute it effortlessly at any time.

Information quality is the second most crucial factor, according to the empirical findings. Users can connect with correct information, breaking news, etc. through online portal services. In addition, useful and genuine words can catch readers' attention. Because of this, readers come back to that gateway and promote it to others.

An access point to news is known as a "news portal." While a "Portal" is typically thought of as an Internet link to a news source, the term can also refer to a newspaper, magazine, or any other access to news. Any point of access to the Internet is a web portal. Viewers can access the news directly from their tablet or smartphone. Instant access to news is available. A newspaper that is read online can be read in greater detail than one that is printed. With just a mouse click, it's incredibly simple to read back issues. improves writing and reading abilities. provides news about sports and entertainment. best source for general information. learn the latest political news. helpful suggestions for projects and study. enhances vocabulary abilities. Give them a good speaker.

This study aims to investigate the connection between user friendliness, system quality, and customer satisfaction of online news portals..

System quality is the third most significant determining value, per the research findings. In order to manage numerous accounts and perform instant access without the burden of time and space, the majority of online portal services enable users or readers to engage with their current Google accounts. As a result, readers may continue to utilize online news portal services as they view them as valuable for sustaining their level of pleasure.

Usability is found to be a substantial predictor of online news portal service satisfaction and retention intention, which is another component of great value. Users of news portal services can lower risk and other considerations. Readers may find online news portal services helpful for their satisfaction and continue to use them since they can utilize portal services without risk at any time and in any location.

So here we can see that although the System quality, Service quality and Usability had a direct impact on customer satisfaction and retention it turned out to be the most impactful factor in the proceeding. So not only do direct relationships affect customer satisfaction ,indirect relationships can do that too.

In conclusion, we can state that ensuring client happiness is the most crucial component. It was found that user intention is significantly influenced by customer satisfaction. All online stores must therefore develop their items



## Chapter 5

### Conclusions & Recommendations

**5.1 Implication:** Our research has significant limitations, as does every studies. Our sample initially concentrated on young readers. As a result, some people might have picked traits other than the news' currency. Second, we employed IQ and SQ to conduct study on readers who access the online newspaper straight from their computer or mobile device. SQ wouldn't be valid if readers were accessing newspaper articles through Facebook or Twitter. Third, we disregarded a number of factors that could have an effect on satisfaction, such as subjective norms as a positive stimulus or technological stress as a negative stimulus. Finally, the small sample size limits the generalizability. The fact that almost two thirds of the participants were students could also have had an impact.

The modern era's cutting-edge technology enables clients to access websites conveniently without service provider disruption. When websites are user-friendly, the user gets a great shopping experience.

The study also sheds light on how various website feature adjustments affect consumers' happiness with online news portal readers. Examining the websites' features and system quality has revealed new information.

## 5.2 Research limitations:

Additionally, it was determined from the convergent value of validity what the issue was with the quality component of the website for the online news portal and how it affected consumer happiness. According to the validity based on the convergent results, the elements connected to giving the most recent news and articles at this time need to be enhanced in terms of timing and design layout so that later users can quickly access updated news and information.

Despite adopting a diametrically opposed and fair stance, the research has the following shortcomings:

- Firstly, because of time constraints, the sample size of the research is not enough contrast to online news portal readers in Bangladesh. Enhanced sample size can lead to better comprehensiveness of study results.
- Secondly, the survey was derived through non-probability survey data collection because of some list of respondents that would not want to give their opinion for online news portal surveys.
- Thirdly, in an online news portal context, we measured unidimensional constructs of system quality, benefit, website quality and; service quality, benefit, and risk were not investigated.
- Finally, this research is a snapshot that focuses on online news portal usability on readers satisfaction and also revisits the website; it does not take into account the changing and dynamic nature of online platforms use phenomena.

### **5.3 Recommendations for Further Research**

- To generalize the study's findings, additional research with a larger sample size should be conducted.
- Future research should look into other aspects of the quality and risks of using online news portals, which are likely to gain prominence from time to time.
- Website specific research, private and public or regional and international news portal sites, may yield more specific results regarding customer satisfaction in Bangladesh's online news portal websites.
- Access to a list of customers who read online news portals enables the use of probability sampling to ensure that the survey sample is more representative of the general population.

### **Conclusion:**

According to this study, the use of the online news portal website can, from the user's perspective, hint at a website issue. The model adopted is sound, as evidenced by the R-square analysis results that illustrate the relationship between user happiness and the usability, information quality, system quality, and service quality of the website's online news portal components. In fact, the findings of this R-square analysis support the premise that there is a positive association between user satisfaction and characteristics such as system quality, information quality, and usability. Even though we are consuming more online media,

particularly online news portals, relatively little research has been done to determine how technological elements affect reader pleasure. The predictors of information and system quality are identified in this study. They have a good equal relationship with readers' satisfaction and the likelihood that they will return. The impact of correctness, completeness, and format on information quality as well as how they affect satisfaction were the main topics of this study. This study analyzed the effects of accessibility, website service quality, and usability as well as how they could enhance system quality. Finally, the influence of system and information quality on reader satisfaction and revisit intention was also investigate

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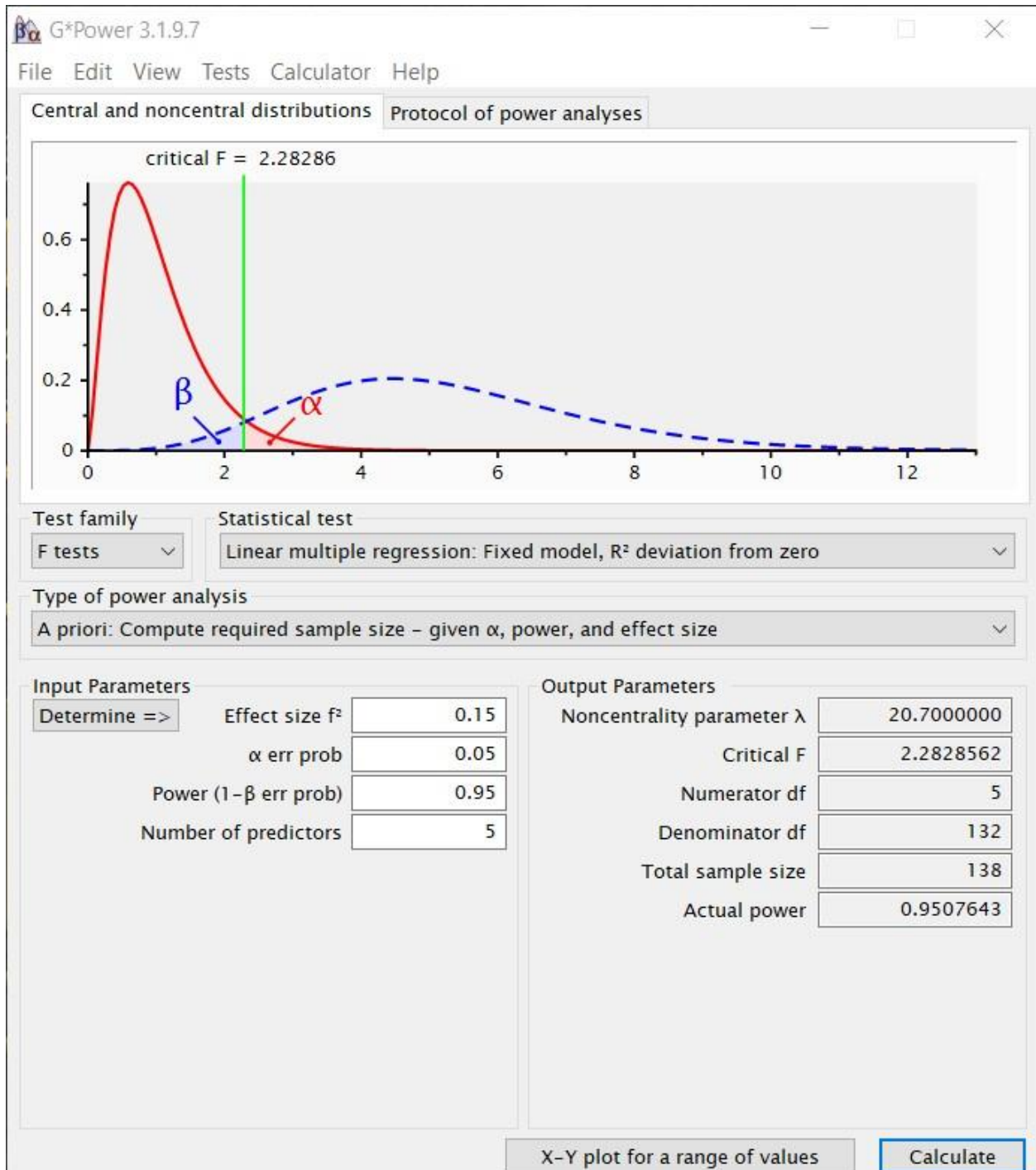
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# Appendix A

## G\* Power



# Appendix B

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