ANALYSIS OF COMPUTER AWARENESS ACROSS AND GENDER IN INTERNET BANKING AND ITS INFRASTRUCTURAL CHALLENGES

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# ABSTRACT

The objective of the study is to analyze the infrastructural challenges of internet banking as per gender and computer awareness of customers. This empirical research was carried on in the Karachi, Pakistan. Set of questions as adopted from literature and 5 point likert scale was picked as dimension scale. Information was accumulated by utilizing Google form which were sent out by emails to the participants. 300 valid questionnaire samples were accumulated and put into SPSS and MS succeed for the evaluation. Data evaluation consisted of easy frequency circulation, mean+SDand mode of various variables. Information existed in the form of tables. It was indicated from the results that 60/258 males had not done any computer course and they strongly agreed for banks` websites were easily accessible (36/258), service was very easy to use (36/258), user-friendly (30/258), very reasonable (30/258), reliable (10/258), easily available (30/258), cost effective (30/258), efficient (31/258) and easier as compared to traditional banking (31/258). At the same time, all females (42/42) had not done any computer course and most of them agreed for the above mentioned characteristics of the online banking. When there is the communication space between the client and business person and customer don`t get the wanted product/service or the client is not aware of the product/service; in this situation consumer change his/her choices concerning the products/services. As a result, in the talked about scenario, manufacturer or service provider requires to reduce the gap with his consumer to make sure that he might have understanding regarding the client's demand. On the very same time, if the client don`t understand about the product/service and its features, it is incredibly required to conscious him/her with the detailed knowledge about. This study is going to play the function of bridge in between the customer and provider in regards to consumer's concerns with electronic banking. This study can be carried out at the bigger sample dimension (with varied demographics in regards to geographical areas) for even more precise outcomes and verdict. Originality: Beatrice in 2017 administered a study on the obstacles faced by the internet banking in which the information was accumulated from branch supervisors, branch supervisors, customer service police officers, tellers and credit history police officers. Since, the data was collected from the authorities of banks and because scenario, consumers were not considered. In the heaviness of stated point, the author has left the pointers for future that this job can be further prolonged by conducting the exact same research in the consumers 'way of looking [1]. This study is the expansion of Beatrice's work.

**Keywords:** online banking; internet banking; infrastructure; challenges; gender.

# INTRODUCTION

Information technological innovations (IT) has actually been playing an exceptional role in the handling, computation and access of files [2]. Establishments needs to improve their procedures and practices on the arrival of brand-new innovation [3]. In the recent time, the development in technology has actually impacted business in numerous means, most importantly in terms of management and control; advertising and research; operations and decision making [4]. Monetary system plays an important role in the financial development of the nation [5]. The typical setting of supplying product or services by financial institutions to the customers' is through a single distribution channel and that is physical financial institution branches [6]. In order to cope with the quick adjustments in the business scenario, financial institutions began to depend on circulation networks as a different approach for distinction and acquiring further competitive advantage [6]. Banks improve technology investment costs highly to address income, expense and competitiveness worries [4]. In a globe, which is ending up being significantly open as a result of the Web and the Internet (WWW), Internet banking has been making headway around the world [7]. Financial services sector is establishing due to the introduction of internet, fast technological developments, deregulation, globalization and the effect of transforming competitive and regulatory pressures [6]. Application of internet in banking system has modernized the financial institutions [5]. In financial market, InfoTech is the significant element for future development of financial services market. It is based upon sharing of details, which mainly depends on details and interaction technology for acquiring, assessing and providing details to all pertinent customers [8]. E- Banking is data base and primarily scientific in using the digital tools of the computer system resolution via the substantial use of IT without straight resources to the bank by the clients [5]. E-banking refers to financial activities that are accomplished making use of digital technological advances [9]. E-banking means any customer with a desktop computer and a web browser can get linked to his financial institutions site to execute any one of the online financial functions. In E- financial system the financial institution has a centralized database that is web-enabled [6]. The intro of e-banking solutions is considered an innovation of the financial sector, bringing various advantages to both customers and banks [10]. One of the benefits that financial institutions experience when using e- banking is increased client contentment [4]. It supplies substantial advantages to consumers in terms of the simplicity and expense of purchases [11]. Web banking has stipulation networks that replaces and duplicated numerous tasks currently executing by the bank [12]. E-banking contribute in marketing, publicity and marketing research of the items [7]. It has actually highly affected the strategic service factors to consider for financial institutions by substantially cutting down prices of shipment and transactions [4]. Therefore e-banking currently plays an essential part to execute the individual and company financial tasks implementation [12]. Because of the introduction of information innovation there is an adjustment in the financial sector which has actually paved method for the intro of retail electronic settlement system and has advanced in the recent years in various nations [5]. It has to be noted, however, that while e-banking gives several benefits to consumers and financial institutions, it additionally intensifies typical banking threats [4]. In this age of modern innovation, the execution of e-banking solutions plays a substantial role in assisting banks to remain affordable and adapt to the current modifications of the market [10]. The monetary product or services have appeared over the Internet, which has therefore become an important distribution network for a number of financial institutions [4]. The success of Internet banking depends upon the maturation, sincerity and commitment of individuals. Internet banking system has actually proved to be more versatile than a guy [7].

The use of most recent technological advances causes the boosted performance, price performance and increased performance [13]. E-Banking is not something brand-new to Pakistan. The first ever ATM machine was mounted in 1987 in Pakistan. Till late 1990s, the installment and growth price of Automated Teller Machine were stayed reduced and slow-moving [12]. Queue is common incident in life [14]–[16]. The progression of monetary transactions by technological innovations has actually been driven by variations in spreading networks as demonstrated by ATM (automated teller ma- chine), Mobile Phone-banking, Pc-banking, Telebanking and most recently electronic banking [12]. The use of internet banking has proliferated in the last decade, along with the Web [17]. In 2017, 64% of the complete transactions were executed by Automated Teller Machine, 0.40% were carried out through mobile banking, and 4% of them were carried out via internet in Pakistan [12]. One among customers experienced issue with Net and electronic banking is privacy; which makes the safety and security in transactions essential [17]. These findings suggest that what the respondents have most to grumble about concerning Internet banking is the safety [17]. Aggression is brought on by temper and impatience [18], [19]. Researches has actually revealed that more youthful segments are extra going to take risks than the older segments Relating to internet banking, the older segments are even more mindful than typical, [17]. The solution discovers as easy to use, quick, accessible etc., however even though the participants located the use positive, many discovered the safety and security adverse [17]. Even e-banking activities based upon the net or digital private networks possess by the financial institution, for that reason communication channel, circulation channel and transactions channel need to be secure [12]. One of the most essential lawful difficulties for the e-banking system seems to be whether the general rules of contracts give adequate guarantees for the credibility and need of electronic contracts [9].

# LITERATURE REVIEW

There has been a great deal of research is carried out on the electronic banking in terms of obstacles faced by service providers. One of the descriptive research was carried out by Beatrice (2017) in Kenya, in which questionnaire was made use of for information collection. Study examined the challenges dealt with by the electronic banking. Difficulties were indicated by the study were i.e. inadequate internet rate, client awareness, lack of informs of electronic banking, much less penetration on the market and the function of online banking solutions. Study also highlighted the deal safety and security concerns in the banks. It was ended that the degree of awareness among the client relating to electronic banking is fairly less; that's why it was recommended to educate the financial institutions' workers so that they can pass on the obtained knowledge of online banking towards the customers [1]. Study was performed by Rahman et al, (2017) with the objective to examine the current situation, prospects and trouble of online banking (Dutch-Bangla Bank Limited) in Bangladesh. Data was accumulated by carrying out interviews. There were 11 inquiries in the interview and 100 meeting were conducted from the registered clients of the bank. It was concluded that customers of the financial institution had inadequate understanding concerning the e-banking solutions [8]. Deep literary works testimonial was performed in Iran by AlikhaniandZare (2018) in which the concerns and obstacles of electronic banking regulations are highlighted. In the research, lawful obstacles are analyzed for the development of online banking systems to make sure that solution of those concerns can be recommended. It was ended that, the regulations for the customer security were insufficient in regards to web banking and on the same time, there was no clear judicial procedure thereof [9]. Phuong Nam (2014) conducted study on the execution process of electronic banking services in Vietnam. There were two goals in the research study: 1) to uncover the factors and stimulations for the implementation of online banking services; 2) to examine the application procedure and highlight the obstacles dealt with throughout the procedure. It was ended that the expansion of market and the fulfillment of customers were the major motivations behind the implementation of the internet banking; and the significant challenge was the absence of knowledge (concerning the internet banking) amongst client and their objection [10].

AmeenaFarooqui and P. Rajani (2017) carried out as research with the objective of checking out progress of Indian banks in the context of internet banking. On the very same time, obstacles dealt with by Indian banks were likewise highlighted. The internet banking customers enhance from 193204330 (in 2013) to 462124989 (in 2016); which showed that there succeeded application of internet banking in Indian financial institutions. Highlighted factors were; i.e. protection threat, depend on factor, client awareness, privacy danger, strengthening the public assistance, accessibility of employees solutions, competition, implementation of worldwide modern technology and so on. [10].Hussain et al. (2017) showed internet accessibility in financial sector as a reason for customer reluctance to access their checking account online in Pakistan. Because absence of cyber security, clients' count on is substantially influenced by the use electronic banking. Furthermore, authors highlighted the issues of internet banking i.e. technical issues, ATM web link network issues, safety problems, non-technical personnel [12]. Al-Weshah (2013) ended that internet banking offers many readily available possibilities to financial institution enhancement such as simple and quick banking services, affordable communication tools with customers, new banking products and services to financial institution clients, and efficient control concerning financial system errors. On the other hand, internet banking encounters many prospective challenges in bank renovation such as absence of clients' trust and safety and security, lack of staff members' engagement in banking industry improvement, and lack of appropriate employees' abilities and abilities in internet applications due to absence of efficient training for bank employees [20].AshokaandVinay M.L (2016) carried out survey in Mysore Area reveal that the matching percent in respect of rural client is only 60 percentage with the overall sample dimension of 179 the portion for E- Financial in the accumulated group counts for 80 portion the major reason for non-patronization of E-- Banking is illiteracy and fear of shedding cash when E-- Financial is practiced [21]. The association between demographic attributes and the contentment of consumers for electronic banking was examined by Kumbhar, Vijay (2011); furthermore, association between service quality and client's complete satisfaction was also explored he likewise explore the relationship between service quality and customers' complete satisfaction and complete satisfaction in internet banking service supplied by the public market financial institution and economic sector financial institutions. The study figured out that overall complete satisfaction of staff members, business people and experts are higher in electronic banking service. Also it was discovered that there is substantial difference in the customers' perception in electronic banking services supplied by the public and privates sector financial institutions [22]. According to Nath Ravi &Schrick Paul (2001), In every business, the method business is conducted is being transformed by shopping. Obsolete business versions are changed by the new ones. On the very same time, company are pondering over the adjustment of methods of client relationship monitoring and business procedure design. Banks are not jeopardizing on this improvement. In the present research study, sights of bankers are examined on the arrangement of financial services using web site. Outcomes of the research indicated that internet banking in its infancy age and its offered by less variety of financial institutions; overall internet banking benefits are staying to be understood by number of financial institutions for its application [23].Pooja Malhotra and Balwinder Singh (2009), briefly indicated the here and now problem of internet banking in India. This research was performed to search for the connection in between internet banking fostering and performance of bank and the risk. It has been indicated by the research that, internet banking has the considerable and adverse organization with the risk; where it becomes clear that risk profile of banks is not enhanced by the electronic banking fostering in banks [24].

# RESEARCH GAP

With the advent of technological improvement, it was required for the financial institutions therefore the consumer to move towards the online banking [25]. E-Banking is sensation through which the services and products are immediately supplied to customers through digital system [25]. Lately, due the development in the field of InfoTech and the Internet benefits, financial institutions have been seeking for the provision of number of services for their customers. Unavoidable obstacles are coming in the method of development and development of e-banking [9]. Aside from the benefits of, online banking; there are numerous obstacles in the market of online banking; which are noteworthy for both i.e. service provider and the end user, who operates efficiently from the financial institutions. It is required for them to be familiar with those obstacles so that they can be gotten over efficiently [26]. In the present situation, it is required to recognize the concerns of financial via web on the side of customers to recognize the obstacles which are been encountered by company. In this way, unwillingness concerning the usage of electronic banking among the end individual as it might be reduced for the good of both clients and service providers. There has been a great deal of investigates, that concentrate on the obstacles encountered by the service providers i.e. banks yet a very few of them have actually focused on the challenges with end user (consumer) point of view. Beatrice in 2017 performed a research study on the challenges faced by the electronic banking in which the information was collected from branch supervisors, branch supervisors, customer care policemen, cashiers and debt officers. Since, the data was accumulated from the officials of banks and because situation, consumers were not considered. In the gravity of discussed point, the author has actually left the suggestions for future that this work can be more prolonged by performing the exact same study in the customers 'point of view [1]. This research is the expansion of Beatrice's work.

# RESEARCH OBJECTIVE

Aim of the present paper was to link the customer and service provider; so that the communication gap can be eradicated and this was possible by following objectives.

* To list down the infrastructural challenges of internet banking by in-depth review of literature
* To analyze the infrastructural challenges of internet banking as per gender and computer awareness of customers

# METHODOLOGY

Research method is the subject of methods which have been made use of in the performed research. In this area, research method, research design, populace, segment size, sampling technique, research tool and measurement scale are reviewed briefly.

## Research Philosophy

3 major ideologies of science are there i.e. empiricism, scientific realism and social constructionism [27]. This research study based upon the realism approach. According to McMurray AJ, Rate RWand Scott D (2004) as cited by [28] that in realism philosophy, fact and beliefs that exist in a the atmosphere are focused. Yin (1989, p. 21) as cited by [29] suggested that realism paradigm intends to generalize to academic suggestions and not to populaces. There are 2 branches of realism ideology i.e. critical and straight realism. Sekaran U andBougie R. (2013) as pointed out by [28] explained straight realism is what an individual really feels, sees, hears, etc. On the other hand, in vital realism, the people review their experience in details circumstances.

## Research Approach

Category shows three sorts of research strategies i.e. qualitative, quantitative and the blended method of both. Quantitative research describes the quantification and analysis of variables for obtaining results [30]. By the assistance of various statistical methods, the details (numerical details) is assessed in order to answer the questions like, how much, that, what, the amount of, where and when [1]. According to Aliaga, and Gunderson (2002), as pointed out by [30] describes the quantitative research methods as defining an issue by through collection of data in numbers and examining it with the help of mathematical methods. Statistical approach to research design makes up the quantitative research method. It begins with the statement of the research trouble and incorporates the theory formation, testimonial of literature and quantitative analysis of data [31]. This research method emerged around the duration of 1250 A.D., it was made use of by the scientists for the metrology of records. Considering that, in this research writer has actually collected the details and used various statistical techniques to evaluate it; therefore this research uses the quantitative research viewpoint.

## Research Design

Design of research is framework, research plan and evaluation are put together in order to research the research questions [1]. According to Cooper & Schindler (2006) as mentioned by [1] that descriptive research is utilized for responding to the question like what, where and exactly how of an incident. Study research is referred to as the typical type of descriptive research; in survey research, interrogations are asked from the sample (standing for the team (s)) of individuals to be researched [32]. Important information concerning the population is offered by the use of detailed research design. Descriptive research help research to define the important things which prevail in the population [20]

## Research Instrument

Survey was made use of the research instrument in the study. It was contained 5 sections. Initial area was based on 6 interrogations concerning the information of respondent i.e. age, sex, bank name and education, have you done any type of computer programs? And do you have accessibility to internet? Second area was contained 4 issues relating to the leads of online banking as taken on from [8]. Third section was based upon 9 issues concerning infrastructural problems which were taken on from [1].

## Measurement Scale

Because, the idea of individuals regarding anything are an abstract noun; which cannot be determined by physical numbers; thus, for dimension of viewpoints and perspectives, likert scales are designed [33]. These scales are been composed on the numerous options in a dealt with layout. In the present research, 5-point likert scale ("Strongly Disagree = 1" to "Strongly Agree = 5") was made use of in order to determine the various variables.

## Data Collection

In research language, populace is the complete sum of things from the details sample can be taken [34]. Research populace in this research is the number of individuals that have accounts in any one of the bank in Karachi, Sindh, Pakistan. The consumers of a minimum of 5 financial institutions (operating in Karachi) were approached for the records collection (by Google kind) and details was accumulated from 300 participants. Hassle-free tasting technique was made use of for the data collection.

## Data Analysis

Records was taken into MS stand out and statistical bundle for social scientific researches for evaluation. Details evaluation included basic frequency distribution, means, standard deviations and modes of different variables. The data existed in the form of tables. Analysis of the each of the interrogation was conducted separately according to the two demographic attributes i.e. sex and age.

# RESULT

Result is based on the thorough analysis of numerous variables of infrastructural challenges of electronic banking throughout gender and individuals` awareness regarding computer. The analysis consists of the in-depth frequency distribution in addition to mean and standard deviations of the variables along with the mode. The results are presented in the tabular format.

## Q1. Bank’s website is very easily accessible

Frequency distribution, mean+SD and mode of Q1 were calculated on the basis of responses (Yes/No) of the question i.e. have you done any computer course? The response (mean+SD, mode) of male respondents who had and had not done computer course was calculated to be 3.44+0.91, 4 and 4.07+0.86, 4 respectively as can be seen in the Table 1.

Table 1. Frequency distribution, mean+SD and mode of the responses of the participants across gender and computer awareness

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Gender** | **Have you done any computer course?** | **Bank’s website is very easily accessible** | **Total** | **Mean+SD, Mode** |
| **1****n(%)** | **2****n(%)** | **3****n(%)** | **4****n(%)** | **5****n(%)** |
| Male | Yes | - | 16(5.33%) | 79(26.33%) | 103(34.33%) | - | 198(66%) | 3.44+0.91, 4 |
| Male | No | 8(2.67%) | - | 8(2.67%) | 8(2.67%) | 36(12%) | 60(20%) | 4.07+0.86, 4 |
| Female | Yes | - | - | - | - | - | - |  |
| Female | No | - | - | - | 42(14%) | - | 42(14%) | 4.00+1.07, 4 |
| **Total** | 8(2.67%) | 16(5.33%) | 87(29%) | 153(51%) | 36(12%) | 300(100%) |  |

There were no female respondents who had conducted the computer course; moreover, female respondents who had not conducted computer course, their mean response was computed to be 4.00+1.07, 4 as presented in the Table 1.

## Q2. Accessing internet banking Services is very easy

Frequency distribution, mean+SD and mode of Q2 were calculated on the basis of responses (Yes/No) of the question i.e. have you done any computer course? The response (mean+SD, mode) of male respondents who had and had not done computer course was calculated to be 3.47+1.01, 4 and 4.20+1.12, 4 respectively as can be seen in the Table 2.

Table 2. Frequency distribution, mean+SD and mode of the responses of the participants across gender and computer awareness

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Gender** | **Have you done any computer course?** | **Accessing internet banking Services is very easy** | **Total** | **Mean+SD, Mode** |
| **1****n(%)** | **2****n(%)** | **3****n(%)** | **4****n(%)** | **5****n(%)** |
| Male | Yes | - | 20(6.67%) | 73(24.33%) | 103(34.33%) | 2(0.67%) | 198(66%) | 3.44+0.91, 4 |
| Male | No | 6(2%) | - | 8(2.67%) | 10(3.33%) | 36(12%) | 60(20%) | 4.17+0.90, 4 |
| Female | Yes | - | - | - | - | - | - |  |
| Female | No | 3(1%) | - | - | 39(13%) | - | 42(14%) | 3.79+1.11, 4 |
| **Total** | 9(3%) | 20(6.67%) | 81(27%) | 152(50.67%) | 38(12.67%) | 300(100%) |  |

There were no female respondents who had conducted the computer course; moreover, female respondents who had not conducted computer course, their mean response was computed to be 2.86+1.43, 5 as presented in the Table 2.

## Q3. Online banking services are very user friendly

Frequency distribution, mean+SD and mode of Q3 were calculated on the basis of responses (Yes/No) of the question i.e. have you done any computer course? The response (mean+SD, mode) of male respondents who had and had not done computer course was calculated to be 3.11+0.88, 3 and 3.17+0.88, 4 respectively as can be seen in the Table 3,

Table 3. Frequency distribution, mean+SD and mode of the responses of the participants across gender and computer awareness

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Gender** | **Have you done any computer course?** | **Online banking services are very user friendly** | **Total** | **Mean+SD, Mode** |
| **1****n(%)** | **2****n(%)** | **3****n(%)** | **4****n(%)** | **5****n(%)** |
| Male | Yes | 2(0.67%) | 20(6.67%) | 82(27.33%) | 94(31.33%) | - | 198(66%) | 3.35+0.91, 4 |
| Male | No | 6(2%) | - | 14(4.67%) | 10(3.33%) | 30(10%) | 60(20%) | 3.97+0.87, 4 |
| Female | Yes | - | - | - | - | - | - |  |
| Female | No | 1(0.33%) | - | 1(0.33%) | 40(13.33%) | - | 42(14%) | 3.90+1.03, 4 |
| **Total** | 9(3%) | 20(6.67%) | 97(32.33%) | 144(48%) | 30(10%) | 300(100%) |  |

There were no female respondents who had conducted the computer course; moreover, female respondents who had not conducted computer course, their mean response was computed to be 3.88+0.68, 4 as presented in the Table 3.

## Q4. The response time of internet banking system is very reasonable

Frequency distribution, mean+SD and mode of Q4 were calculated on the basis of responses (Yes/No) of the question i.e. have you done any computer course? The response (mean+SD, mode) of male respondents who had and had not done computer course was calculated to be 3.55+1.12, 4 and 3.87+1.05, 4 respectively as can be seen in the Table 4,

Table 4. Frequency distribution, mean+SD and mode of the responses of the participants across gender and computer awareness

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Gender** | **Have you done any computer course?** | **The response time of internet banking system is very reasonable** | **Total** | **Mean+SD, Mode** |
| **1****n(%)** | **2****n(%)** | **3****n(%)** | **4****n(%)** | **5****n(%)** |
| Male | Yes | 2(0.67%) | 20(6.67%) | 67(22.33%) | 104(34.67%) | 5(1.67%) | 198(66%) | 3.45+0.93, 4 |
| Male | No | 6(2%) | - | 8(2.67%) | 16(5.33%) | 30(10%) | 60(20%) | 4.07+0.87, 4 |
| Female | Yes | - | - | - | - | - | - |  |
| Female | No | - | - | 6(2%) | 36(12%) | - | 42(14%) | 3.86+0.98, 4 |
| **Total** | 8(2.67%) | 20(6.67%) | 81(27%) | 156(52%) | 35(11.67%) | 300(100%) |  |

There were no female respondents who had conducted the computer course; moreover, female respondents who had not conducted computer course, their mean response was computed to be 3.38+0.47, 4 as presented in the Table 4.

## Q5. Internet banking system is very reliable

Frequency distribution, mean+SD and mode of Q5 were calculated on the basis of responses (Yes/No) of the question i.e. have you done any computer course? The response (mean+SD, mode) of male respondents who had and had not done computer course was calculated to be 3.52+0.83, 4 and 3.60+0.79, 4 respectively as can be seen in the Table 5.

Table 5. Frequency distribution, mean+SD and mode of the responses of the participants across gender and computer awareness

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Gender** | **Have you done any computer course?** | **Internet banking system is very reliable.** | **Total** | **Mean+SD, Mode** |
| **1****n(%)** | **2****n(%)** | **3****n(%)** | **4****n(%)** | **5****n(%)** |
| Male | Yes | - | 19(6.33%) | 69(23%) | 108(36%) | 2(0.67%) | 198(66%) | 3.47+0.88, 4 |
| Male | No | 6(2%) | - | 8(2.67%) | 16(5.33%) | 30(10%) | 60(20%) | 4.07+0.83, 4 |
| Female | Yes | - | - | - | - | - | - |  |
| Female | No | - | - | 6(2%) | 36(12%) | - | 42(14%) | 3.86+0.98, 4 |
| **Total** | 6(2%) | 19(6.33%) | 83(27.67%) | 160(53.33%) | 32(10.67%) | 300(100%) |  |

There were no female respondents who had conducted the computer course; moreover, female respondents who had not conducted computer course, their mean response was computed to be 3.38+0.64, 4 as presented in the Table 5.

## Q6. Internet is easily available across the country

Frequency distribution, mean+SD and mode of Q6 were calculated on the basis of responses (Yes/No) of the question i.e. have you done any computer course? The response (mean+SD, mode) of male respondents who had and had not done computer course was calculated to be 2.63+0.98, 2 and 3.60+1.05, 2 respectively as can be seen in the Table 6.

Table 6. Frequency distribution, mean+SD and mode of the responses of the participants across gender and computer awareness

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Gender** | **Have you done any computer course?** | **Internet is easily available across the country.** | **Total** | **Mean+SD, Mode** |
| **1****n(%)** | **2****n(%)** | **3****n(%)** | **4****n(%)** | **5****n(%)** |
| Male | Yes | - | 33(11%) | 67(22.33%) | 98(32.67%) | - | 198(66%) | 3.33+0.94, 4 |
| Male | No | 6(2%) | - | 8(2.67%) | 16(5.33%) | 30(10%) | 60(20%) | 4.07+0.96, 4 |
| Female | Yes | - | - | - | - | - | - |  |
| Female | No | 6(2%) | - | 3(1%) | 33(11%) | - | 42(14%) | 3.50+1.20, 4 |
| **Total** | 12(4%) | 33(11%) | 78(26%) | 147(49%) | 30(10%) | 300(100%) |  |

There were no female respondents who had conducted the computer course; moreover, female respondents who had not conducted computer course, their mean response was computed to be 1.76+1.23, 4 as presented in the Table 6.

## Q7. Online banking services are very cost effective

Frequency distribution, mean+SD and mode of Q7 were calculated on the basis of responses (Yes/No) of the question i.e. have you done any computer course? The response (mean+SD, mode) of male respondents who had and had not done computer course was calculated to be 2.37+0.98, 2 and 2.27+1.01, 2 respectively as can be seen in the Table 7,

Table 7. Frequency distribution, mean+SD and mode of the responses of the participants across gender and computer awareness

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Gender** | **Have you done any computer course?** | **Online banking services are very cost effective.** | **Total** | **Mean+SD, Mode** |
| **1****n(%)** | **2****n(%)** | **3****n(%)** | **4****n(%)** | **5****n(%)** |
| Male | Yes | 6(2%) | 27(9%) | 71(23.67%) | 94(31.33%) | - | 198(66%) | 3.28+1.01, 4 |
| Male | No | 6(2%) | 7(2.33%) | 8(2.67%) | 9(3%) | 30(10%) | 60(20%) | 3.83+1.00, 4 |
| Female | Yes | - | - | - | - | - | - |  |
| Female | No | 3(1%) | 4(1.33%) | - | 34(11.33%) | 1(0.33%) | 42(14%) | 3.62+1.25, 4 |
| **Total** | 15(5%) | 38(12.67%) | 79(26.33%) | 137(45.67%) | 31(10.33%) | 300(100%) |  |

There were no female respondents who had conducted the computer course; moreover, female respondents who had not conducted computer course, their mean response was computed to be 1.88+0.92, 2 as presented in the Table 7.

## Q8. Online banking services are effective and efficient

Frequency distribution, mean+SD and mode of Q8 were calculated on the basis of responses (Yes/No) of the question i.e. have you done any computer course? The response (mean+SD, mode) of male respondents who had and had not done computer course was calculated to be 4.05+0.94, 4 and 3.42+0.94, 4 respectively as can be seen in the Table 8.

Table 8. Frequency distribution, mean+SD and mode of the responses of the participants across gender and computer awareness

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Gender** | **Have you done any computer course?** | **Online banking services are effective and efficient.** | **Total** | **Mean+SD, Mode** |
| **1****n(%)** | **2****n(%)** | **3****n(%)** | **4****n(%)** | **5****n(%)** |
| Male | Yes | - | 14(4.67%) | 74(24.67%) | 103(34.33%) | 7(2.33%) | 198(66%) | 3.52+0.91, 4 |
| Male | No | 8(2.67%) | 1(0.33%) | 8(2.67%) | 12(4%) | 31(10.33%) | 60(20%) | 3.95+0.87, 4 |
| Female | Yes | - | - | - | - | - | - |  |
| Female | No | - | - | - | 39(13%) | 3(1%) | 42(14%) | 4.07+1.08, 4 |
| **Total** | 8(2.67%) | 15(5%) | 82(27.33%) | 154(51.33%) | 41(13.67%) | 300(100%) |  |

There were no female respondents who had conducted the computer course; moreover, female respondents who had not conducted computer course, their mean response was computed to be 3.98+1.18, 4 as presented in the Table 8.

## Q9. Online banking is easier than conventional banking

Frequency distribution, mean+SD and mode of Q9 were calculated on the basis of responses (Yes/No) of the question i.e. have you done any computer course? The response (mean+SD, mode) of male respondents who had and had not done computer course was calculated to be 3.24+1.29, 4 and 3.48+1.25, 4 respectively as can be seen in the Table 9,

Table 9. Frequency distribution, mean+SD and mode of the responses of the participants across gender and computer awareness

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Gender** | **Have you done any computer course?** | **Online banking is easier than conventional banking?** | **Total** | **Mean+SD, Mode** |
| **1****n(%)** | **2****n(%)** | **3****n(%)** | **4****n(%)** | **5****n(%)** |
| Male | Yes | 6(2%) | 14(4.67%) | 74(24.67%) | 101(33.67%) | 3(1%) | 198(66%) | 3.41+0.96, 4 |
| Male | No | 7(2.33%) | - | 8(2.67%) | 14(4.67%) | 31(10.33%) | 60(20%) | 4.03+0.91, 4 |
| Female | Yes | - | - | - | - | - | - |  |
| Female | No | - | - | 5(1.67%) | 36(12%) | 1(0.33%) | 42(14%) | 3.90+1.03, 4 |
| **Total** | 13(4.33%) | 14(4.67%) | 87(29%) | 151(50.33%) | 35(11.67%) | 300(100%) |  |

There were no female respondents who had conducted the computer course; moreover, female respondents who had not conducted computer course, their mean response was computed to be 3.10+1.15, 4 as presented in the Table 9.

# DISCUSSION

The idea of financial activities began in 18th century BC [35]. This phenomenon has the capacity to primarily enhance the banks and so the banking market. And speculation from the severe sights have actually appeared that this occurrence will certainly abolish the models and the method just how financial institution services were established and used [24]. On the top, the benefit of e-banking is the enhanced satisfaction for customers[4]. Esther and Rajasekaran showed that there were many individuals who don`t learn about the e-banking and they recommended to banks that the consumers need to be ensured the safety and security and security of their exchanges [36]. Yang et al, 2007 ended that there were much less number consumers of E-banking in Georgia not as a result of absence of understanding however since lack of reliable promotional strategies [37].PremchandNarware, 2016 showed E-banking the perfect future banking mode and it will conquer the conventional banking undoubtedly [38]. The better use web services has actually promoted the business owners since so long to sell their items anywhere by using web [35]. The banks supplying the platform of on the internet exchange were classified as larger, extra profitable and efficient banks [24]. Ingle andPardeshi, 2016 examined the advertising and marketing approaches for electronic banking; approaches consisted of competitors, expense performance, geographical reach, branding, customer demographics, benefit, obliquity, exchange rate, transfer rate, effectiveness and performance [35].Bahl, 2012 recommended policy ramifications for E-banking: that included licensing, validating an individual's identity, safety and security, capability preparation, consumer education, adaption, legalisation, harmonization and assimilation [11].AlikhaniandZare concluded lots of challenges in the way to implementation of e-banking i.e. lawful and monetary regulative problems, procedure issues, business society problems, system and infrastructural issues and most of all the legal obstacle was reported in Iran [9].Gurme, 2011 conducted a review and ended that the primary obstacle for the adoption of e-banking by the client was the protection of monetary system because any individual might quickly run it [39].KazmiandHashim reported e-banking issues in Pakistan as; IT telecommunication infrastructural problem, capacity concern, website layout problem, safety problem, trust fund problem and money laundering issue [40]. Lakshmi Bhai, 2018 assessed the problems of e-banking as: confidentiality, integrity, verification, client contentment, schedule of personnel solutions, competitors, taking care of modern technology, protection threat, personal privacy threat, count on aspect, consumer awareness and much less net infiltration in Indian context [41]. Rahman et al., 2017 when asked the concerns from the participants with his already developed questionnaire that "internet banking is simple to operate" after that 64% of them responded of course and rest of 36% replied no [8].LusayaandKalumba, 2018 asked the concern from his respondents concerning the E-banking use; 42% addressed no and remainder of 28% participants responded to of course: furthermore, from that 58%, 8% of them use e-banking for funds transfer, 2% for bill payment and remainder of 48% utilized it for various other cash transactions [25]. Yahiya performed a research study in which he presented the results as: 74.4% users of e-banking were people, 11.2% were small and moderate ventures and rest of 14.4% were corporates [34]. It was indicated from the results that 60/258 males had not done any computer course and they strongly agreed for banks` websites were easily accessible (36/258), service was very easy to use (36/258), user-friendly (30/258), very reasonable (30/258), reliable (10/258), easily available (30/258), cost effective (30/258), efficient (31/258) and easier as compared to traditional banking (31/258). At the same time, all females (42/42) had not done any computer course and most of them agreed for the above mentioned characteristics of the online banking.

# CONCLUSION

In traditional financial, there was variety of functional issues i.e. slow retrieval of information, better opportunity of scams, better efforts of customer for transaction. Because of these issues, web banking was presented into the banking sector. There are number of benefits of electronic banking and on the same time, there are variety of issues in the means of e-banking to be fully adopted by the clients. The clients preserve their funds and cash in bank for the future requirements, businesses and for personal belongings and they intend to be ensured in regards to safety and security of their storage tanks. Considering that, most of the scientists has actually reported the safety concern in the way to successful fostering of e-banking by the customers [34]. For that reason, it is of greatest requirement to concentrate the transactional safety on the e-banking sensation. There is variety of clients that are utilizing the services of electronic banking so it when there is the question of challenges about e-banking; client recognition need to not be discovered in the answer yet the lack of marketing events pertaining to the e-banking. It was surprising to reveal that those respondents who had not done any computer course strongly agreed to the features of internet banking in the comparison of those respondents who had.

# FUTURE IMPLICATIONS

This study can be carried out at the bigger sample dimension (with varied demographics in regards to geographical areas) for even more precise outcomes and verdict.

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# CONFLICT OF INTEREST

No conflict of interest was found among the authors of the present research paper.

# REFERENCES

[1] C. Beatrice, “CHALLENGES FACING INTERNET BANKING: A CASE STUDY OF FAMILY BANK LIMITED IN NAIROBI,” United States International University-Africa, 2017.

[2] M. A. Kalwar and M. A. Khan, “Optimization of Procurement & Purchase Order Process in Foot Wear Industry by Using VBA in Ms Excel,” *International Journal of Business Education and Management Studies*, vol. 5, no. 2, pp. 80–100, 2020, [Online]. Available: https://www.ijbems.com/doc/IJBEMS-124.pdf.

[3] M. S. Arain, M. A. Khan, and M. A. Kalwar, “Optimization of Target Calculation Method for Leather Skiving and Stamping: Case of Leather Footwear Industry,” *International Journal of Education and Management Studies*, vol. 7, no. 1, pp. 15–30, 2020.

[4] J. Chavan, “Internet Banking- Benefits and Challenges in an Emerging Economy,” *International journal of research in business management*, vol. 1, no. 1, pp. 19–26, 2013, [Online]. Available: https://www.academia.edu/13233924/INTERNET\_BANKING-BENEFITS\_AND\_CHALLENGES\_IN\_AN\_EMERGING\_ECONOMY.

[5] A. Farooqui and P. Rajani, “E-Banking Issues & Challenges,” *IOSR Journal of Business and Management*, vol. 19, no. 10, pp. 31–39, 2017, doi: 10.9790/487X-1910063139.

[6] N. M. Anand, “E-Banking Trends in India : Evolution , Challenges and Opportunities,” *Shanlax International Journal of Management*, vol. 3, no. 2, pp. 107–117, 2015.

[7] I. D. Adewuyi, “The Challenges of Internet Banking in Developing Countries,” *The Nigerian Academic Forum*, vol. 9, no. 2, pp. 2–5, 2005.

[8] M. Rahman, N. K. Saha, M. N. I. Sarker, A. Sultana, and A. S. Prodhan, “Problems and Prospects of Electronic Banking in Bangladesh: A Case Study on Dutch-Bangla Bank Limited,” *American Journal of Operations Management and Information Systems*, vol. 2, no. 1, pp. 42–53, 2017, doi: 10.11648/j.ajomis.20170201.17.

[9] M. Alikhani and A. Zare, “Reviewing the Issues and Challenges of Electronic Banking Regime in Iran,” *Economics*, vol. 7, no. 1, pp. 1–9, 2018, doi: 10.11648/j.eco.20180701.11.

[10] P. N. Dao, “Implementation of E-banking in Vietnam: Motivations and challenges – Case Company A,” 2014.

[11] S. Bahl, “E-Banking: Challenges & Policy Implications,” 2012.

[12] Z. Hussain, D. Das, Z. A. Bhutto, M. Hammad-u-Salam, F. Talpur, and G. Rai, “E-Banking Challenges in Pakistan: An Empirical Study,” *Journal of Computer and Communications*, vol. 05, no. 02, pp. 1–6, 2017, doi: 10.4236/jcc.2017.52001.

[13] M. A. Kalwar and M. A. Khan, “Increasing Performance of Footwear Stitching Line by Installation of Auto-Trim Stitching Machines,” *Journal of Applied Research in Technology & Engineering*, vol. 1, no. 1, pp. 31–36, 2020, [Online]. Available: https://riunet.upv.es/handle/10251/148631.

[14] M. A. Kalwar, S. I. Mari, M. S. Memon, A. Tanwari, and A. A. Siddiqui, “Simulation Based Approach for Improving Outpatient Clinic Operations,” *Mehran University Research Journal of Engineering and Technology*, vol. 39, no. 1, pp. 153–170, 2020, doi: 10.22581/muet1982.2001.15.

[15] M. A. Kalwar, S. A. Khaskheli, M. A. Khan, A. A. Siddiqui, and M. A. Gopang, “Comfortable Waiting Time of Patients at the OPD with Varying Demographics,” *Industrial Engineering Letters*, vol. 8, no. 2, pp. 20–27, 2018, [Online]. Available: https://core.ac.uk/download/pdf/234685697.pdf.

[16] S. A. Khaskheli, H. B. Marri, M. Nebhwani, M. A. Khan, and M. Ahmed, “Compartive Study of Queuing Systems of Medical Out Patient Departments of Two Public Hospitals,” in *Proceedings of the International Conference on Industrial Engineering and Operations Management*, 2020, vol. 1913, pp. 2702–2720, [Online]. Available: http://www.ieomsociety.org/ieom2020/papers/177.pdf.

[17] T. Josefsson, “Challenges with Internet banking,” pp. 1–11, 2017.

[18] M. A. Kalwar, M. A. Khan, S. A. Shaikh, A. Salam, M. S. Memon, and S. A. Khaskheli, “Aggressive Driving Behavior: A Case Study of Mehran UET, Jamshoro, Sindh, Pakistan,” in *Proceedings of the International Conference on Industrial Engineering and Operations Management Dubai,* 2020, pp. 2350–2359, [Online]. Available: http://www.ieomsociety.org/ieom2020/papers/175.pdf.

[19] S. A. Khaskheli, M. A. Kalwar, A. A. Siddiqui, M. A. K. Nagar, and T. H. Wadho, “Impatience Among Drivers With Varying Demographics,” in *Professional Trends in Industrial and Systems Engineering*, 2018, pp. 465–469.

[20] G. A. Al-Weshah, “The role of internet banking in continuous improvement areas: Quantitative evidence from Jordanian banks,” *International Journal of Business Performance Management*, vol. 14, no. 2, pp. 181–196, 2013, doi: 10.1504/IJBPM.2013.052950.

[21] A. M L. and V. S., “Problems And Prospects Of E-banking Services - An Empirical Study in Mysore District,” *Journal of Chemical Information and Modeling*, vol. 2, no. 2, pp. 14–23, 2016, doi: 10.1017/CBO9781107415324.004.

[22] V. M. Kumbhar, “Service Quality Perception and Customers’ Satisfaction in Internet Banking Service: A Case Study of Public and Private Sector Banks,” *Cyber Literature: The International Online Journal*, vol. 4, no. 2, pp. 21–30, 2011.

[23] N. Ravi and P. Schrick, “Banker s Perspective on Internet Banking,” *E-Service Journal*, vol. 1, no. 1, pp. 21–36, 2001.

[24] P. MALHOTRA and B. SINGH, “The Impact of Internet Banking on Bank Performance and Risk: The Indian Experience,” *Eurasian Journal of Business and Economics*, vol. 2, no. 4, pp. 43–62, 2009, doi: 10.1057/palgrave.jbr.2340189.

[25] S. Lusaya and B. Kalumba, “The Challenges of Adopting the Use of E-Banking to the Customers : The Case of Kasama District Banking Customers,” *Scholar Journal of Applied Sciences and Research*, vol. 1, no. 2, pp. 26–31, 2018.

[26] P. Revathi, “Digital Banking Challenges and Opportunities in India,” *EPRA International Journal of Economic and Business Review*, vol. 7, no. 12, pp. 20–23, 2019, doi: 10.36713/epra2985.

[27] B. D. Haig, “The philosophy of quantitative methods,” in *Studies in Applied Philosophy, Epistemology and Rational Ethics*, 2012, pp. 6–30.

[28] R. Andriukaitiene, J. Vveinhardt, and P. Zukauskas, “Philosophy and Paradigm of Scientific ResearchBandas, Cornelia,” in *Web of science*, 2013, pp. 121–139.

[29] R. Sobh and C. Perry, “Research design and data analysis in realism research,” *European Journal of Marketing*, vol. 40, no. 11/12, pp. 1194–1209, 2006, doi: 10.1108/03090560610702777.

[30] O. D. Apuke, “Quantitative Research Methods: A Synopsis Approach,” *Kuwait Chapter of Arabian Journal of Business and Management Review*, vol. 6, no. 10, pp. 40–47, 2017, doi: 10.12816/0040336.

[31] C. Williams, “Research methods,” *Journal of Business & Economic Research*, vol. 5, no. 3, pp. 65–72, 2007, doi: 10.1017/9781108656184.003.

[32] E. . Koh and W. . Owen, “Descriptive Research and Qualitative Research,” in *Descriptive research and qualitative research: Introduction to Nutrition and Health Research*, 2000, pp. 219–248.

[33] L. Rensis, “A technique for the measurement of attitudes,” *Archives of Psychology*, vol. 22, no. 140, p. 55, 1932.

[34] S. Yahiya, “Prospects and Challenges of Electronic Banking in Ghana- A Case Stdy of the SG-SSB Limited,” Institute of Distance Learning, Kwame Nkrumah University of Science and Technology, 2011.

[35] A. Ingle and R. Pardeshi, “Internet Banking in India: Challenges and Opportunities,” *IBMRD’s Journal of Management & Research*, vol. 1, no. 1, pp. 13–18, 2012, doi: 10.1017/CBO9781107415324.004.

[36] M. Esther and R. Rajasekaran, “Commerce A Study on Customer Awareness Towards E-Banking Services in Coimbatore City,” *Indian Journal of Research*, vol. 4, no. 9, pp. 230–233, 2015.

[37] J. Yang, M. Whitefield, and K. Boehme, “New issues and challenges facing e-banking in rural areas : an empirical study,” *International Journal of Electronic Finance*, vol. 1, no. 3, pp. 336–354, 2007, [Online]. Available: http://inderscience.metapress.com/index/d8mt84hx6125ehw5.pdf.

[38] P. Narware, “E-BANKING – CHALLENGES & POLICY IMPLICATIONS,” *International Journal of Enterprise Computing and Business Systems*, vol. 6, no. 2, 2016.

[39] V. M. Gurme, “Issues and Challenges in Mobile Banking In India : A Customers’ Perspective,” *International Research Journal of Engineering and Technology (IRJET)*, vol. 6, no. 1, pp. 161–163, 2011.

[40] S. S. A. Kazmi and M. Hashim, “E-Banking in Pakistan: Issues and Challenges,” *International Journal of Academic Research in Business and Social Sciences*, vol. 5, no. 3, pp. 50–54, 2015, doi: 10.6007/ijarbss/v5-i3/1498.

[41] L. B. P.S, “ E-BANKING IN INDIA - PROBLEMS AND PROSPECTS,” *Technical Research Organization India*, vol. 5, no. 1, pp. 77–81, 2018.