Internet Anxiety, Internet Self-Efficacy and E-Service Quality

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Abstract: *The present study aims at studying the relationship among Internet Anxiety, Internet Self-efficacy and E-service Quality. A sample of 250 adults (both male and female) within the age group of 25 to 30 years, living in Amritsar City (Punjab) was selected through random sampling. E-S-QUAL, proposed by Parasuraman et al. (2005), internet self-efficacy scale designed by Kim & Glassman (2013) and Internet anxiety scale designed by Joiner et al. (2007) measures have been used to e-service quality, internet self-efficacy and internet anxiety respectively. The results very clearly indicated that there are significant correlations among these three variables.*

Keywords: E-service quality, Internet self-efficacy and Internet anxiety, Internet, websites, Mental Health, etc.

1. Introduction

E-service Quality

The fast growth of Internet use and online purchasing has attracted the interest of both corporate executives and academic scholars to customer happiness and loyalty in the online environment. Because of the competitive spirit of the online industry, spurred by the expansion in the number of on-line shops and service providers, the expectation of online satisfaction and loyalty has increased. In recent years, there has been a greater emphasis on the quality of electronic services (ESQ). Customers' happiness and loyalty are highly influenced by ESQ and it has a good impact on intended attitudinal, behavioural, and financial outcomes (Fassnacht & Koese, 2006). As a result, in order to provide greater service quality, electronic service managers must have a thorough awareness of how customers perceive and evaluate ESQ. As a result, both academic and industry academics have focused on conceiving, measuring, and predicting ESQ (Yi, & Gong, 2008). E-service quality was defined by Parasuraman et al. (2005) as the efficacy and efficiency of online browsing, online purchasing, and online delivery of products and services. Zeithaml et al. (2002) defined quality of e-services as "the extent to which a web site allows efficacious shopping, buying, and delivery. "E-S-QUAL, introduced by Parasuraman et al. (2005), is an evaluation tool for e-service quality that includes efficacy, fulfilment, system availability, privacy, responsiveness, compensation, and contact.

1) **Efficiency** (accessing and using the site easily and quickly). It is indicated by the clients' capacity to locate the desired goods (Jun &Cai, 2001).
2) **Fulfillment** (keeping promises about order delivery and item availability). Keeping promises about order arrival and item availability is what fulfillment entails. Fulfillment is equal to loyalty, according to IBM Sterling (IBM, n. d.).
3) **System availability** (correct technical functioning of the site). The likelihood that a system will not be down or undergoing maintenance when it is needed is determined by system availability (also known as equipment availability or asset availability) (System Availability, n. d.).

4) **Privacy** (site is safe, customer information is protected). Protection of personal information is a significant aspect in increasing trust in internet banking (Al-Sharafi et al., 2016).
5) **Responsiveness** (effective handling of problems). The readiness and quickness to assist clients in the event of an issue is referred to as responsiveness. Customers who use mobile banking expect personnel to respond quickly to their concerns and inquiries (Khan, 2010).
6) **Compensation** (site compensates customers for problems). The payment and settlement system's tech breakthrough has resulted in qualitative changes in operational systems and processes. As a result, market forces of competition have been able to come into play to increase efficiencies and provide better service to system users. The Bank will make every effort to provide services to its customers that make the most use of its technological infrastructure (Union Bank of India, n. d.).
7) **Contact-A**ssistance through telephone or online representatives. CSRs (customer service representatives) assist consumers with their problems in a call or contact centre. They can do so by phone, chat, email, and social media, among other avenues (What Is Contact Center Customer Service Representative CSR, n. d.).

Internet Anxiety

The fear or apprehension that people have when utilizing the Internet is known as Internet anxiety (Presno, 1998). It makes it difficult for people to use e-mail, instant messaging, or online databases. It must be handled because of its impact on behaviour in order to provide greater opportunities for everyone to benefit from the web. An unpleasant emotional state or condition characterised by tension, apprehension, and worry is known as anxiety (Spielberger, Gorsuch, and Lushene, 1970). Because it is a sort of mental pain produced by dread of danger and impotence when dealing with individuals on the Internet, Internet anxiety is a situation-specific anxiety (Joiner et al., 2007). Individuals with Internet anxiety are unable to use many aspects of the Internet, such as e-mail, instant messaging, and online activities. Internet anxiety is adversely connected to perceived Internet applicability, joy,

and efficiency, according to previous study (Zhang, 2005); nevertheless, perceptions of supportive resources and trust in technology diminish Internet anxiety (Thatcher et al., 2007). Anxiety induced by the usage of web-enabled technology is known as internet anxiety. Because it demands users to learn new vocabulary and comprehend new applications that may be unfamiliar to them, the Internet can generate anxiety (Macaulay, 2003). Furthermore, because it involves engagement with unfamiliar settings or people, the Internet may elicit strong emotions. Additionally, there are risks associated with accessing the Internet, such as the possibility of infections, malware, and intrusions of user privacy. Of course, internet anxiety is related to computer anxiety, but the two are not the same (Thatcher & Perrewe, 2002). As a result, whereas computer anxiety is based on a lifetime of computer experience, Internet anxiety is based on recent IT interactions with the Internet (Hackbarth, Grover, &Mun, 2003). Many people are wary of doing online shopping. Customers typically utilize the Internet to collect information but use alternative methods to conduct transactions because of this fear (Tsao & Sibley, 2004). Because of the rapid development of new computer applications for the Internet, businesses have been able to increase the amount and variety of Web-enabled services available to customers. The technology has become more powerful as the lot of Internet apps has grown. Despite the fact that many people have access to the Internet, some remain hesitant to take advantage of many of its features.

Internet Self-efficacy

Self-efficacy, according to Bandura, is the most ubiquitous determinant of personal agency, i. e., people's beliefs in their ability to achieve desired results and avoid negative ones through their actions. Self-efficacy attitudes that promote optimism and self-improvement are critical in self-regulating motivation through objectives, challenges, and expected outcomes. The self-efficacy (Bandura, 1986) is both a direct and indirect element in the ability and willingness to fully utilize new information technologies. Those with greater degrees of Internet self-efficacy are more likely to experiment, take risks, and try to solve problems utilizing rapidly evolving Internet applications (such as search engines, blogs, and Wikis). It's crucial to realize, though, that the Internet isn't one-dimensional; it's made up of a variety of distinct task-oriented options. The potential utilize new forms of communication and internetworking capabilities to create and maintain meaningful societies can be assessed in a variety of ways, ranging from self-efficacy in using and completing technically oriented troubles to the capabilities to use new types of communications and internet operating abilities to create and maintain meaningful societies (Kim & Glassman, 2013). In many respects, the Internet presents a new venue for human action that we are only starting to comprehend. The ability of an individual to efficiently traverse this new, continuously growing information landscape is a fundamental element of Internet usage (Glassman & Kang, 2012).

According to Tsai et al. (2011), internet self-efficacy has been conceptualised in a variety of ways depending on what type of web-assisted learning environment being investigated (e. g., Peng, Tsai, & Wu, 2006; Torkzadeh & van Dyke, 2001; Wu & Tsai, 2006). The technique of Kim

and Glassman (2013) to studying internet self-efficacy in face-to-face learning situations, which included the usage of blogs, was applied in this study. Because it is an emotion connected with a person's contact with the Internet, the characteristics of Internet anxiety are derived from computer self-efficacy. As a result, Internet self-efficacy is likewise a concept-specific kind of anxiety.

Dimensions of Internet Self-efficacy

Kim and Glassman (2013) created an internet self-efficacy scale (ISS) and used factor analysis to show that internet self-efficacy has five dimensions:
a) *Communication self-efficacy*-beliefs about one's ability to communicate with others online.
b) *Search self-efficacy*-beliefs about one's ability to search for information online ();
c) *Organization self-efficacy*-beliefs about one's ability to organise the vast array of online information,
d) *Differentiation self-efficacy*-beliefs about one's ability to differentiate among online information on the basis of quality, and
e) *Reactive/Generative self-efficacy*-beliefs about one's ability to react to information published online by others (i. e., reactive ability) and generate educationally valuable information (i. e., generative ability) to contribute to the online knowledge building process.

Research has indicated a link between Internet self-efficacy and Internet usage, and that people's faith in their own capacities to learn new technologies is critical for adoption (Kulviwat, Bruner II & Neelankavil, 2014). The *technology acceptance model (TAM)* is a frequently used hypothesis that explains a person's behavioural intention to adopt a new piece of technology. The model examines an individual's attitude toward technology from the perspectives of perceived utility and perceived ease of use (Holden & Karsh, 2010). Internet self-efficacy can be thought of as a predictor of perceived usability. Self-efficacy in health information technology (HIT) is linked to behavioural intentions to use digital services, according to research (Kim & Park, 2012).

Rationale of the Study: E-services have become very important aspect of daily life. Uses of different kinds of e-services like as banking apps (G-pay, Phone-pe, etc.), net banking, ATM swipes and other various kinds of electronic media based services make life easy but they bring lot of insecurity, doubts, and safety issues leading to anxiety. In order to effectively deal with e-services and anxiety related to e-services, self-efficacy related to internet anxiety and to avail e services is quite important and this, ultimately, makes this study very pivotal. That's why these variables have been selected to do research.

2. Research Methodology

Research design
This is a correlational research where by means of a correlational study, the researcher is trying to find the significant correlation between E-service Quality (ESQ), internet self-efficacy and internet anxiety.

Hypothesis
The following hypotheses can be charted out:

1) There will be significant correlation between Internet self-efficacy and internet anxiety among adults.
2) There will be significant correlation between E-service Quality and internet anxiety among adults.
3) There will be significant correlation between E-service Quality and Internet self-efficacy among adults.

Operational definition

1) **E-service Quality (ESQ)-**E-service quality that includes efficacy, fulfillment, system availability, privacy, responsiveness, compensation, and contact.
2) **Internet Self-efficacy**-The confidence in one's ability to plan and carry out the Online activities necessary to achieve specific goals, also known as internet self-efficacy, is a critically significant aspect in attempts to bridge the technology gap between new and experienced Netizens.
3) **Internet Anxiety** – it is a kind of anxiety induced by the usage of web-enabled technology is known as internet anxiety.

Sample

For the present study the sample consisted of 250 adults (both male and female) with in the age group of 25 to 30 years, living in Amritsar City (Punjab). Random sampling method had been used to collect data.

Psychological Tools

In the present study the researcher used the following tools.

1) **E-S-QUAL Scale**-A measurement instrument for e-service quality is E-S-QUAL, proposed by Parasuraman et al. (2005), comprising of efficiency, fulfillment, system availability, privacy, responsiveness, compensation and contact. The scale encompasses the following **seven dimensions**: *Efficiency, Fulfillment, and System availability, Privacy, Responsiveness, Compensation and Contact*. It is a 31-item five-point rating scale. It has good validity and reliability.
2) **Internet Self-efficacy Scale (ISS)** – The 17-item internet self-efficacy scale (Kim & Glassman, 2013) was used to assess internet self-efficacy, which was divided into five sub-scales: communication self-efficacy (two items); search self-efficacy (two items); organization self-efficacy (three items); differentiation self-efficacy (four items); and reactive/generative self-efficacy (six item). On a scale of 1 (not at all confident) to 7 (very confident), participants stated how confident they were in their ability to do each activity satisfactorily. For reactive/generative self-efficacy, differentiation self-efficacy, organisation self-efficacy, communication self-efficacy, and search self-efficacy, the Cronbach's alphas were.91,.90,.88,.83, and.78, respectively.
3) **Internet Anxiety Scale** – Joiner et al. (2007) designed a rating scale for measuring Internet anxiety which was based on a computer anxiety scale. The Likert scale is a five-point scale with a Cronbach's alpha of 0.77.

3. Results and Discussion

The current investigation aims to investigate relationship among e-service quality, internet anxiety and internet self-efficacy among adults. The study's goals were to determine the connections between e-service quality and internet anxiety, e-service quality and internet self-efficacy, and the connections between internet anxiety and internet self-efficacy.

In order to comprehend the distribution of the collected data, descriptive statistics were initially examined. Concise informative values known as descriptive statistics are used to sum up a particular data set, which may be a sample of a population or a depiction of the complete population. Measurements of central tendency and measures of variability make up descriptive statistics (spread). The mean, median, and mode are measurements of central tendency, while the standard deviation, variance, maximum and minimum variables, kurtosis, and skewness are variability measures (Hayes, Brock and Logan, 2022, August 1).

Table 4.1: Showing Means, Standard Deviations, Kurtosis and Skewness of Different Variables under study (N=250)

Variable	M	SD	Sk	Ku
E-S-QUAL	4.00	3.03	.455	.122
Internet Self-efficacy	21.41	4.56	.123	.217
Internet Anxiety Scale	9.72	3.11	.237	.880

Correlation Analysis

Hypotheses I: *There will be significant correlation between Internet self-efficacy and internet anxiety among adults.* Examining the correlation demonstrates that internet anxiety and internet self-efficacy are inversely correlated ($r = -.420$, $p = 0.01$). Hence, the present research work supports the hypothesis I. the negative direction the of the correlation indicates that as internet self-efficacy increases the internet anxiety decreases and if internet anxiety increases there is decrease in the internet self – efficacy. Paul and Glassman (2017) also found similar results.

Table 4.2: Showing Correlation Coefficients among the Variables under Study (N=250)

	Internet Self-efficacy	Internet Anxiety
Internet Anxiety	-.420**	
E-S-QUAL	.51**	-.41**

Hypotheses II: *There will be significant correlation between E-service Quality and internet anxiety among adults.* Results presented in tables indicate that there is significant negative correlation between e-service quality and internet anxiety among adults. Users are thought to be more satisfied with online banking when the e-service quality is high. The responsiveness, efficiency, and perceived trustworthiness of internet banking services were determined in a study as the e-service quality attributes. The association between e-service quality parameters and consumer satisfaction with online banking is investigated using multiple regression analysis. The dependent variable, consumer satisfaction with internet banking as a dependent variable, and the R square value is 0.655, which indicates that all internet banking services collectively accounted 65.5% of the variation in consumer satisfaction (Singh, 2019).

Hypotheses III: *There will be significant correlation between E-service Quality and Internet self-efficacy among adults.* A significant positive correlation has been found between e-service quality and internet self-efficacy among

adults. Internet use, previous Internet experience, and performance expectancy all strongly and favourably linked with assessments of one's own Internet competence. Internet self-efficacy was adversely correlated with stress and self-criticism (Eastin and LaRose, 2000). Learners who exhibit poor Internet self-efficacy may have Internet anxiety as a result of wanting to use the Internet as effectively as their friends. Greater they relate with the Internet, greater worried they get. In order to motivate learners who have poor Internet self-efficacy to learn more about using the Internet and receive more coaching, teachers and parents must anticipate future these pupils (Hsiao, Zhu and Chen, 2017).

4. Conclusion

From the results and discussion, it can be concluded that e-service quality and internet self – efficacy, both significantly and negatively correlate with internet anxiety. Further, there exists a positive correlation between e-service quality of the banking systems and internet self-efficacy. These aforementioned discoveries have significant consequences for both theoretical and practical grounds. First, the results highlight how self-efficacy might assist learners better identify as mediators and moderators on the Internet. In order to increase their Internet self-efficacy, parents and teachers should actively monitor pupils who score poorly on this metric. These students should be urged to learn more about the Internet and to receive training in its use (Hsiao, Zhu and Chen, 2017).

5. Implications

- The findings of the present study can be used counselling.
- Understanding the interplay among these three variables i. e., e-service quality, internet self-efficacy and internet anxiety can help us to strengthen our selves by interacting with digital media.
- In order to increase their Internet self-efficacy, parents and teachers should actively monitor pupils who score poorly on this metric.
- Students lacking in this arena should be urged to learn more about the Internet and to receive training in its use.

Delimitations
- It adds to the existing theory related use of digital services and psychological issues.
- Work is well designed and quite applicable in the present scenario, especially for students.

Limitations
- The sample size was small but considering the master's degree and time constraint it could not be increased.
- Large sample would have given a wider scope for more generalization of the research findings.

Future Suggestions

- Large sample could have been taken for the study.
- Different could be included in the study.

- Making base the findings of the present work, further research can be thought of for more in-depth underpinnings.

References

[1] Al-Sharafi, M. A., Arshah, R. A., Abo-Shanab, E. A., &Elayah, N. (2016). The effect of security and privacy perceptions on customers' trust to accept internet banking services: An extension of TAM. *Journal of Engineering and Applied sciences, 11* (3), 545-552.

[2] Bandura, A. (1986). *Prentice-Hall series in social learning theory. Social foundations of thought and action: A social cognitive theory.* Englewood Cliffs, NJ.

[3] Bandura, A. (2001). Social cognitive theory: An agentic perspective. *Annual Review of Psychology, 52* (1), 1-26.

[4] Bandura, A. (2006). Toward a psychology of human agency. *Perspectives on Psychological Science, 1* (2), 164-180.

[5] Chang, M. K., Cheung, W., & Tang, M. (2013). Building trust online: Interactions among trust building mechanisms. *Information & Management, 50* (7), 439-445.

[6] Eastin, M. S., &LaRose, R. (2000). Internet self-efficacy and the psychology of the digital divide. *Journal of Computer-mediated Communication, 6* (1), JCMC611.

[7] Fassnacht, M., &Koese, I. (2006). Quality of electronic services: Conceptualizing and testing a hierarchical model. *Journal of Service Research, 9*, 19–37.

[8] Featherman, M. S., &Pavlou, P. A. (2003). Predicting e-services adoption: a perceived risk facets perspective. *International Journal of Human-Computer Studies, 59* (4), 451-474.

[9] Hackbarth, G., Grover, V., &Mun, Y. Y. (2003). Computer playfulness and anxiety: positive and negative mediators of the system experience effect on perceived ease of use. *Information & Management, 40* (3), 221-232.

[10] Hayes, A., Brock, T., & Logan, M. (2022, August 1). *Descriptive Statistics: Definition, Overview, Types, Example*. Retrieved from: Investopedia. https: //www.investopedia. com/terms/d/descriptive_statistics. asp

[11] Holden, R. J., & Karsh, B. T. (2010). The technology acceptance model: its past and its future in health care. *Journal of Biomedical Informatics, 43* (1), 159-172.

[12] Hsiao, B., Zhu, Y. Q., & Chen, L. Y. (2017). Untangling the relationship between Internet anxiety and Internet identification in students: the role of Internet self-efficacy. *Information Research: An International Electronic Journal, 22* (2), n2.

[13] IBM. (n. d.). *Fulfillment is the heart of the customer experience*. IBM Sterling Order Management. Retrieved August 14, 2021, from https: //www.ibm. com/watson/supply-chain/resources/order-management-fulfillment/

[14] Joiner, R., Brosnan, M., Duffield, J., Gavin, J. & Maras, P. (2007). The relationship between Internet identification, Internet anxiety and Internet use. *Computers in Human Behavior, 23* (3), 1408-1420.

[15] Jun, M., &Cai, S. (2001). The key determinants of internet banking service quality: a content analysis. *International Journal of Bank Marketing, 19* (7), 276-291

[16] Khan, M. A. (2010). An empirical assessment of service quality of cellular mobile telephone operators in Pakistan. *Asian Social Science, 6* (10), 164.

[17] Kim, J., & Park, H. A. (2012). Development of a health information technology acceptance model using consumers' health behavior intention. *Journal of Medical Internet Research, 14* (5), e133.

[18] Kim, Y., Glassman, M., Bartholomew, M., &Hur, E. H. (2013). Creating an educational context for Open Source Intelligence: The development of Internet self-efficacy through a blogcentric course. *Computers & Education, 69*, 332-342.

[19] Kulviwat, S., Bruner II, G. C., &Neelankavil, J. P. (2014). Self-efficacy as an antecedent of cognition and affect in technology acceptance. *Journal of Consumer Marketing, 31,* 190–199.

[20] Macaulay, M. (2003). The effects of web-assisted learning on students' anxiety. *Journal of Educational Computing Research, 28* (3), 221-230.

[21] Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1985). A conceptual model of service quality and its implications for future research. *Journal of Marketing, 49* (4), 41-50.

[22] Parasuraman, A., Zeithaml, V. A., &Malhotra, A. (2005). ES-QUAL: A multiple-item scale for assessing electronic service quality. *Journal of Service Research, 7* (3), 213-233.

[23] Paul, N., & Glassman, M. (2017). Relationship between internet self-efficacy and internet anxiety: A nuanced approach to understanding the connection. *Australasian Journal of Educational Technology, 33* (4).

[24] Pavlou, P. A., &Fygenson, M. (2006). Understanding and predicting electronic commerce adoption: An extension of the theory of planned behavior. *MIS Quarterly, 30*, 115–143.

[25] Presno, C. (1998). Taking the byte out of Internet anxiety: instructional techniques that reduce computer/Internet anxiety in the classroom. *Journal of Educational Computing Research, 18* (2), 147-161.

[26] Singh, S. (2019). Measuring E-service quality and customer satisfaction with Internet Banking in India. *Theoretical Economics Letters, 9* (02), 308.

[27] Spielberger, C. D., Gorsuch, R. L. &Lushene, R. E. (1970). *Manual for the State-Trait Anxiety Inventory*. Palo Alto, CA: Consulting Psychologists.

[28] System availability. (n. d.). *In Fixsoftware. com*. Retrieved August 15, 2021, from https: //www.fiixsoftware. com/how-do-maintainability-and-reliability-affect-availability/

[29] Thatcher, J. B., &Perrewe, P. L. (2002). An empirical examination of individual traits as antecedents to computer anxiety and computer self-efficacy. *MIS Quarterly*, 381-396.

[30] Thatcher, J. B., Loughry, M. L., Lim, J. & McKnight, D. H. (2007). Internet anxiety: an empirical study of the effects of personality, beliefs, and social support. *Information and Management, 44* (4), 353-363.

[31] Tsao, J. C., & Sibley, S. D. (2004). Displacement and reinforcement effects of the Internet and other media as sources of advertising information. *Journal of Advertising Research, 44* (1), 126-142.

[32] Union Bank of India. (n. d.). *Compensation Policy 2020-21*. Retrieved August 14, 2021, from https: //www.unionbankofindia. co. in/PageMenuDocs/CompensationPolicy-2020-21. pdf

[33] What Is Contact Center Customer Service Representative CSR. (n. d.). *NICE*. Retrieved August 14, 2021, from https: //www.niceincontact. com/call-center-software-company/glossary/what-is-contact-center-customer-service-representative-csr

[34] Yi, Y., & Gong, T. (2008). The electronic service quality model: The moderating effect of customer self-efficacy. *Psychology & Marketing, 25* (7), 587-601.

[35] Zeithaml, V. A., Parasuraman, A., &Malhotra, A. (2002). Service quality delivery through web sites: a critical review of extant knowledge. *Journal of the Academy of Marketing Science, 30* (4), 362-375.

[36] Zhang, Y. (2005). Age, gender, and Internet attitudes among employees in the business world. *Computers in Human Behavior, 21* (1) 1-10