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EXPLORING THE FACTORS CONTRIBUTING TO USER EXPERIENCE AND THEIR IMPACT ON POST-USAGE BEHAVIOUR TOWARDS IOT DEVICES IN CHENNAI DISTRICT

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ABSTRACT

Today, the internet has become unavoidable in our daily life. Appropriate use of the internet makes life easier, faster and simpler. Billions of things get connected in the IoT landscape and information is transferred in an uninterrupted way over the internet. Experience of the users on these devices and their behaviour are evolving continually, both adapting to and influencing them permanently. A good user experience has a strong impact on positive post-usage behaviour towards products and services.

The aim of this study is to explore and examine the factors that contribute to user experience and favourable post-usage behaviour towards IoT devices at home usage in Chennai district. The study is also conducted to examine the relationships among these factors, user experience and post-usage behaviour towards IoT devices at home. The study is descriptive and exploratory in nature and adopted a mixed research approach. The primary data was collected through questionnaire by adopting Purposive Sampling method from 125 users of IoT devices residing in Chennai district. The researcher carried out descriptive (Frequency & Percentage and Mean) analysis and inferential analysis (Independent Sample "t" test, One-way ANOVA, Correlation Analysis and Multiple Regression) in this study.

Keywords: *IoT Devices, User Experience, Post-usage behaviour, Usefulness, Convenience, Privacy & Security, Reliability.*

INTRODUCTION

Today, the internet has become unavoidable in our daily life. Appropriate use of the internet makes life easier, faster and simpler. As the internet grew, phones, office equipment like printers and scanners, and industrial machinery were added to the internet. Today, just about any device we use in our homes, offices, factories, or simply wear on our bodies can be online and connected, hence the "internet of things".

IoT technology and markets continue to evolve rapidly. The technology innovation continues at a high rate in areas such as endpoints and sensors, wireless networks such as 5G, edge architectures and AI. The IoT market remains complex and fragmented with more verticalization and many vendors seeking new roles and offerings. Commercial opportunities involving monetizing data are challenged by weak semantic standards and ownership issues. Additionally, the risks such as cybersecurity will increase, and IoT is becoming subject to more regulations, guidelines, and certifications. However, the opportunities will greatly outweigh the

challenges, and the rapidly growing capabilities of IoT are driving digital transformation in a wide range of industries. (Source: https://www.gartner.com)

Billions of things get connected in the IoT landscape and information is transferred in an uninterrupted way over the internet. In this context, understanding the factors that affect the consumers' experience and its impact on their post-usage behaviour with respect to those IoT devices are important today. Therefore, this study is conducted to explore and examine the factors that contribute to user experience, post-usage behaviour and the relationships among these factors towards IoT devices at home usage in Chennai district.

STATEMENT OF PROBLEM

The entire purpose of IoT is to add Internet connectivity to regular devices and appliances, thus making them operable in different scenarios. The Internet of Things also has a lot of scope in the various fields connected to the daily life of the people. In India, the space already widely covers products such as speakers, air purifiers, security systems, cleaning robots, bulbs and plugs, to name a few. According to Michael Georgiou, the number of IoT devices is expected to reach 29 billion by 2030, up from a mere 9.7 billion in 2020, globally. It means the Internet of Things is going to be a huge connected network between people-to-people, people-to-things and things-to-things. Following this trend, the number of Smart Devices is expected to double by 2025. Consumers are the most empowered ones in today's world as they have unlimited access to enormous information at the tip of their fingers. Through different connected devices, consumers have a bigger voice and several channels to connect with brands to share their opinions. But as the speed of trends and technology in consumer experience and their behaviour is moving ahead, tech companies need to evolve faster.

The behaviour of consumers is evolving continually, both adapting to and influencing the permanently connected world. Many organizations are not trying to understand the experience of consumers towards the products and they also tend to ignore the post purchase behaviour of a customer as the sale has already been made but what is important here is that if the customers are not happy then the probability of repeat business would reduce significantly. Repeat business is one of the parameters on which a business can sustain for a long term. The post purchase dissonance can impact the brand image and the overall sales in the market due to poor word of mouth. If the customer is happy after a purchase, they would not only come back to buy again but also, they would recommend the product to others as therefore helping the brand and sales further. Therefore, this study is conducted to identify and analyse the factors that contribute to user experience and their impact on post-usage behaviour towards IoT devices at home in Chennai district of Tamil Nadu state.

OBJECTIVES OF THE STUDY

This study is conducted with the aim of exploring the factors that contribute to the User Experience and their impact on Post-usage behaviour towards IoT devices at home in Chennai district of Tamil Nadu, India. The following are the objectives of the present study:

- To study and analyse the influence of demographic and IoT device usage related variables on the users' perception on the factors contributing the User Experience on IoT Devices in Chennai district.
- To examine the relationships among the factors that contribute to the User Experience, the level of User Experience and Post-usage behaviour towards IoT devices at home in Chennai district.
- To analyse the contribution of factors of User Experience in predicting the Post-usage behaviour towards IoT devices at home in Chennai district.

LITERATURE REVIEW ON IOT DEVICES

YaPing Chang et al. (2014) studied the mechanism of the influence of the Internet of Things (IOT) product characteristics on consumer purchase intention. The results of the study with a survey of 360 consumers pointed out that 6 dimensions of IOT product characteristics influence purchase intention; namely connectivity, interactivity, telepresence, intelligence, convenience, and security. It is also found that customer experience was the key mediating variable in the relationship between IOT product characteristics and purchase intention.

Bhattacharjee, Moreno, and Ortega (2016) in their study suggested that there was a strong relationship between positive customer experience and a commercial success of companies. They also claimed that emotionally engaged customers are three times more likely to recommend the product and to re-purchase it.

Leszek Marek and Jaroslaw Woznicza (2017) in their study, analysed the IoT as a customer experience tool. For this purpose, the desk research method has been used, including literature review and the analysis of the results of empirical studies. The development of the IoT along with its market potential was discussed, the definitions and terms related to customer experience were presented and the adoption of IoT in the field of customer experience was conceptualized. Finally, various empirical examples of the use of IoT serving as a tool for building positive customer experience with the brand were presented.

XuequnWang, Tanya Jane McGill (2018) in their study revealed that the Internet of Things is a significant part of smart home devices and can offer benefits like convenience and energy efficiency. They are also vulnerable to privacy and security because they constantly collect information. They developed a net value model which integrated both the positive and risk factors to assess how benefits and risk factors affect individuals' intentions to adopt clever home devices. The model was tested using data collected using an online questionnaire. The results showed that people tend to overlook potential risks and concentrate more on the possible benefits of using smart home devices.

Hebah Nasereddin and Moath Jehad (2019) undertook a study about internet of Things on serving passengers at Queen Alia International Airport in Amman, Jordan, by knowing its importance and how to minimize its shortcomings in order to improve customer service at the airport. The results of the study indicated that there was a great impact on Internet things on customer service. The results showed that the variables (safety and scalability) had a statistically significant impact on customer service. While the cost had a clear positive effect, it was not statistically significant. The study also showed that there is a significant impact on the cost of customer service. Security plays an important role in customer service, meaning that there is a significant security impact on customer service.

Fatehi Almugari et al. (2020) carried out a study to examine the impact of awareness, privacy & safety, cost, convenience, social influence, and habits on the adoption of IoT in Indian banks. The sample size of 467 Indian customers had been taken for the study. The Confirmatory Factor Analysis (CFA) was applied for testing the reliability and validity as well as the suitability of the questionnaire for the research. Moreover, the Structural Equation Modeling (SEM) model was used for testing the hypotheses of the study, both CFA model fit and SEM model indices were found satisfactory in comparison with recommended values. The results of the study revealed that convenience, social influence, privacy & safety, and awareness had a significant impact on the adoption of the internet of things in Indian banks. On the other hand, the results found that cost & habits did not impact on the adoption of IoT.

Masoud Moradi (2021) conducted a study to examine the IoT applications in marketing research and provided information on how organizations utilize IoT devices and other new technologies such as artificial intelligence (AI), machine learning (ML), and social media to promote various products and services. The study also explained how IoT can be referred to as a new component of business analytics and digital marketing and discusses the challenges related to introducing IoT solutions. The study also pointed out the most pressing issues that need to be addressed in the IoT context are described as ethical and data privacy issues.

Debajyoti Pala et al. (2022) in their study on the effect of trust and its antecedents towards determining users' behavioral intention with voice-based consumer electronic devices reveal that the functional aspects of performance and effort expectancy, and the social aspects of presence and cognition affect the trust factor, whereas privacy concerns do not affect trust. Overall, the findings highlight usability, privacy concerns, and trust-related challenges with VCED devices, which are still seen as immature by users.

CONCEPTUAL FRAMEWORK OF THE STUDY

INTERNET OF THINGS (IOT)

The Internet of Things (IoT) is a term that describes the increasingly sophisticated ecosystems of online, connected devices we share our world with. **Steenstrup and Dale Kutnick (2015)** defined IoT as "a network of dedicated physical objects (things) that contain embedded technology to sense or interact with their internal state or the external environment". **Rio and Banker (2014)** defined "IoT as connecting intelligent physical entities (sensors, devices, machines, assets, and products) to each other, to internet services and to applications". The basic principle of IoT includes the autonomous communication of physical objects, interconnected devices and services within the existing internet infrastructure. It profoundly helps bring intelligence to the physical products, thereby making all products smartly connected. There are various applications of IoT which span across numerous areas such as wearables, smart homes, smart cities, industrial automation and many more.

INTERNET OF THINGS (IOT) DEVICES

IoT devices are basically smart devices which have support for internet connectivity and are able to interact with other devices over the internet and grant remote access to a user for managing the device as per their need. IoT devices are basically physical devices integrated with software and can connect with each other over the internet to exchange information, they

help the user for more simple and direct integration of the physical world. These devices support the expansion of internet connection beyond the usual standard devices like computers, laptops, smartphones etc. These devices are purely integrated with high-definition technology which makes it possible for them to communicate or interact over the internet smoothly and can also be managed and controlled remotely when required. The technologies used in these devices are low energy wireless, Bluetooth, NFC, LTE, ZigBee, wireless protocols etc. Smart bulbs and plugs, smart refrigerators, smartwatches, smart fire alarms, smart door locks, smart bicycles, medical sensors, fitness trackers, smart security systems, etc., are a few examples of IoT products.

FACTORS OF INTERNET OF THINGS (IOT)

There are various factors relating to IoT that contribute or lead to user experience and post-usage behaviour towards IoT devices at home. In this research, the five factors (Usefulness, Convenience, Connectivity & Accessibility, Reliability and Privacy & Security) are taken into consideration to explore the contribution of those factors to the User Experience and Post-usage behaviour towards IoT devices at home use in Chennai district.

USER EXPERIENCE

User experience is made of all the interactions a user has with a product or service. It is the personal, internal experience customers go through when using a product's interface. It can be a differentiator in a crowded marketplace and also covers other aspects of the product/interface such as branding, design and function. It deals with people interacting with a product and the experience they receive from such interaction and it is a part of customer experience. According to Don Norman and Jakob Nielsen "User experience" encompasses all aspects of the end-user's interaction with the company, its services, and its products. The first requirement for an exemplary user experience is to meet the exact needs of the customer. In order to achieve high-quality user experience in a company's offerings there must be a seamless merging of the services of multiple disciplines, including engineering, marketing, graphical and industrial design, and interface design.
(https://www.nngroup.com/articles/definition-user-experience/)

POST-USAGE BEHAVIOUR

Post-purchase/usage behaviour is defined as 'the way a person thinks, feels, and acts after they make a purchase/usage.' It is the reaction of the consumer, it gives an idea of his likes and dislikes, preferences and attitudes and satisfaction towards the product or service. It indicates whether or not the purchase and consumption motives have been achieved. Post usage behaviour indicates whether or not repeat purchases/usages will be made. Whether the customer will recommend the product to others or not. It indicates whether long-term profits can or cannot be expected. All this can be found out by the post-purchase/usage behaviour of the consumers.

Marketing communications should supply beliefs and evaluations that reinforce the consumer's choice and help him/her feel good about the products. Marketers must monitor post-purchase/usage satisfaction and post-purchase/usage behaviour. Dissatisfied customers communicate more negative word of mouth than satisfied customers communicating positive

word of mouth. Satisfaction or dissatisfaction with the product would influence subsequent behaviour of the consumers. A dissatisfied consumer may abandon or may return the product. The modern consumers have a lot of options to express their post purchase/usage feelings and reactions. Consumers can use social media, reviews and other means to immediately recommend or complain about a product.

RESEARCH METHODOLOGY

The researcher has followed a combination of descriptive and exploratory research design along with a mixed research approach (qualitative and quantitative approach) because of the nature of the research. The methodology (research & sampling design, data collection, etc.) adopted in this research is provided in the following table 1.

Table 1 : RESEARCH METHODOLOGY

Research Design	**Descriptive and Exploratory Research**
Research Approach	**Qualitative and Quantitative Approach**
Population	**Users of IoT devices at home**
Sample size	**125 users of IoT devices at home**
Sampling Area	**Chennai district**
Sampling Method	**Purposive Sampling (Non-Probability Sampling)**
Data Collection Method	**Survey through Questionnaire**
Data type	**Primary data (mainly) and Secondary Data**
Sources of Primary Data	**Questionnaire and Personal Interview**
Sources of Secondary Data	**Reports, Books, Research Articles, Internet sources, Newspapers, Magazines, Theses, etc.**
Research instrument	**Structured Questionnaire**
Period of data collection	**July 2024 to August 2024**
Statistical tools employed for data analysis	**Descriptive (Percentage & Mean Analysis) Inferential (Independent 't' Test, One-way ANOVA, Correlation and Multiple Regression**
Software used for data analysis	**SPSS (Version 20)**

(Prepared by Researcher)

The researcher collected primary data through structured questionnaires from the respondents (Users/Consumers) who are using IoT devices at their homes in Chennai district. The respondents (users) were selected based on 'Purposive Sampling'. Here, the purpose is based on the "Years of usage of IoT devices at home". The respondents were selected based on the purpose that they have been using IoT devices at their homes for a minimum 2 years. This criterion would be useful to get better responses about the users' experience on the IoT Devices. The respondents (users) were selected randomly from the various parts of Chennai district. The study covered only home users of IoT devices in Chennai district.

DATA ANALYSIS AND RESULTS

Table 2 : DEMOGRAPHIC AND IOT DEVICES USAGE PROFILE OF USERS

VARIABLES	OPTIONS	FREQUENCIES	(%)
Gender	Male	72	57.60
	Female	53	42.40
Qualification	School/Diploma	22	17.60
	UG/PG	74	59.20
	Professional	29	23.20
Type of IoT device mostly using now (Choose any One)	Smart Home Appliances	48	38.40
	Smart Energy meters	23	18.40
	Wearable devices	18	14.40
	Connected Cars	12	9.60
	Smart Healthcare Devices	08	7.20
	Smart Home Security Devices	10	8.00
	Others	05	4.00
Years of Usage of IoT Devices	2 – 4 Years	84	67.20
	More than 4 Years	41	32.80
How did you know about IoT Devices?	Media Sources (Internet, TV, Print media, etc.)	76	60.80
	Non-Media Sources (Family, personal, friends, etc.)	49	39.20

Source: Primary Data

The table 2 provides the information about Demographic Profile of the users and Usage Profile of IoT devices at home. It is inferred from the table that 57.60% (72) of the users are male and 59.20% of the users are Under/Post Graduates. As far as the type of IoT device used by the users is concerned, 38.40% (48) of them are using 'Smart Home Appliances'. In terms of Years of usage of IoT devices, 67.20% (84) of the users are using the IoT Device for 2 – 4 years. Majority of the users (60.80%) came to know about IoT devices through media sources.

FACTORS THAT CONTRIBUTE TO USER EXPERIENCE ON IOT DEVICES AT HOME

Fifteen Questions with respect to five factors (3 questions for each factor) that contribute to User Experience on IoT Devices based on 5-point Likert scale, (Strongly Disagree to Strongly Agree) were given in the questionnaire. Users' perception on these factors (Usefulness, Convenience, Connectivity & Accessibility, Reliability and Privacy & Security) which contribute to User Experience on IoT Devices at home is measured by using Mean Analysis using descriptive and inferential statistics.

H_0: There is no significant difference between Male and Female users with respect to the perception of the factors that contribute to User Experience on IoT Devices at home.

An independent-samples t-test was conducted to compare the difference between Male and Female users with respect to the perception of the factors that contribute to User Experience on IoT Devices at home.

Table 3 : GENDER – PERCEPTION ON THE FACTORS THAT CONTRIBUTING USER EXPERIENCE ON IOT DEVICES AT HOME

VARIABLES	GENDER OF THE USER						t - value	p – value
	MALE			FEMALE				
	N	Mean	SD	N	Mean	SD		
Usefulness	72	13.10	2.237	53	11.54	2.382	4.520	0.000**
Convenience	72	12.02	2.856	53	12.93	2.136	3.754	0.008**
Connectivity & Accessibility	72	11.84	3.333	53	10.46	3.569	3.827	0.000**
Reliability	72	11.30	3.540	53	10.78	3.218	2.423	0.012*
Privacy & Security	72	10.56	3.698	53	9.86	3.667	2.004	0.033*
FACTORS THAT CONTRIBUTING USER EXPERIENCE ON IOT DEVICES AT HOME	**72**	**58.82**	**3.447**	**53**	**55.57**	**3.965**	**3.998**	**0.000****

Source: Primary Data

(1% Level of Significance and *5% Level of Significance)**

As the *P* values are lesser than Sig. Value (0.01 and 0.05) in all the five factors and also in the overall Perception on the factors that contribute to User Experience on IoT Devices Score (0.000), the Null Hypotheses are rejected. It is inferred that the male users have perceived more on "Usefulness" (M = 13.10) and have perceived lesser on "Privacy & Security" (M = 10.56) when compared with others. Similarly, the female users have perceived more on "Convenience" (M = 12.93) and have perceived lesser on "Privacy & Security" (M = 9.86) when compared with others.

Based on the factors that contribute to User Experience on IoT Devices Mean Score, we can say that the mean score of the Male users (M = 58.82) is more than the female users (M = 55.57). This indicates that the male users have more perception on various factors that contribute to User Experience on IoT devices at home than their counterpart. Hence, there is a significant difference between Male and Female users with respect to the perception of the factors that contribute to User Experience on IoT Devices at home.

LEVEL OF USER EXPERIENCE ON IOT DEVICES

Five Questions based on 5-point Likert scale, (Strongly Disagree to Strongly Agree) were given in the questionnaire to measure the level of 'User Experience' on IoT Devices at home by using descriptive and inferential statistics.

H_0: There is no significant difference between Male and Female users with respect to the 'User Experience' on IoT Devices at home.

An independent-samples t-test was conducted to compare the difference between Male and Female users with respect to the 'User Experience' on IoT Devices at home.

Table 4 : GENDER – USER EXPERIENCE ON IOT DEVICES AT HOME

VARIABLE	GENDER OF THE USER						t - value	p – value
	MALE			FEMALE				
	N	Mean	SD	N	Mean	SD		
USER EXPERIENCE ON IOT DEVICES AT HOME	72	21.36	2.852	53	20.12	3.258	4.132	0.000**

Source: Primary Data
(1% Level of Significance)**

As the *P* value is lesser than Sig. Value (0.01) in the User Experience on IoT Devices Score (0.000), the Null Hypothesis is rejected. Based on the 'User Experience' on IoT Devices Mean Score, we can say that the mean score of the Male users (M = 21.36) is more than the female users (M = 20.12). This indicates that the User Experience on IoT devices at home is more for male users than their counterpart. Hence, there is a significant difference between Male and Female users with respect to the User Experience on IoT Devices at home.

H_0: There is no significant difference among the Qualification of the users with respect to the User Experience on IoT Devices at home.

A one-way between-groups analysis of variance (ANOVA) was conducted to explore the significant difference among the Qualification of the users with respect to the User Experience on IoT Devices at home.

Table 5 : QUALIFICATION – USER EXPERIENCE ON IOT DEVICES AT HOME

VARIABLE	QUALIFICATION			*F* – value	*p* – value
	School/Diploma (22)	UG/PG (74)	Professional (29)		
USER EXPERIENCE ON IOT DEVICES AT HOME	18.23	20.69	21.42	4.427	0.000**
	3.765	3.521	2.854		

Source: Primary Data (No. of respondents are shown in brackets)
(1% Level of Significance)**

As the *P* value is lesser than Sig. Value (0.01) in the User Experience on IoT Devices Score (0.000), the Null Hypothesis is rejected. Apart from reaching statistical significance, the actual difference in the mean score of the User Experience on IoT Devices among the 'Qualification of the user' groups is also large (M = 18.23 to 21.42). The Mean score of the User Experience on IoT Devices is higher in case of "Professional Qualification" of users (M = 21.42) than others. This indicates that User Experience on IoT devices is more in case of the

users who have 'Professional Qualification' than others. Hence, there is significant difference among the Qualification of the users with respect to the User Experience on IoT Devices at home.

RELATIONSHIP BETWEEN FACTORS CONTRIBUTING USER EXPERIENCE AND THE LEVEL OF USER EXPERIENCE ON IOT DEVICES

H_0: There is no significant relationship between the factors that contribute to User Experience and the level of User Experience on IOT devices.

A Pearson product-moment correlation was run to determine the relationship between the factors that contribute to User Experience and the level of User Experience on IoT devices.

Table 6 : RELATIONSHIP BETWEEN FACTORS CONTRIBUTING USER EXPERIENCE AND THE LEVEL OF USER EXPERIENCE ON IOT DEVICES

VARIABLE	N	*'r'* VALUE	*P* - VALUE	RELATIONSHIP	REMARKS	
					SIGNIFICANT	RESULT
Usefulness – User Experience	125	0.815**	0.000	Positive	Significant	REJECTED
Convenience – User Experience	125	0.753**	0.000	Positive	Significant	REJECTED
Connectivity & Accessibility – User Experience	125	0.660**	0.000	Positive	Significant	REJECTED
Reliability – User Experience	125	0.674**	0.000	Positive	Significant	REJECTED
Privacy & Security – User Experience	125	0.506**	0.000	Positive	Significant	REJECTED

****. Correlation is significant at the 0.01 level (2-tailed).**

As the P values are lesser than Sig. Value (0.01) in all the above relationships, the Null Hypotheses are rejected. There are high positive and significant correlations between the various factors that contribute to User Experience and the level of User Experience on IoT Devices at home.

Out of five factors, 'Usefulness' has more relationship (r = 0.815) with the level of User Experience on IoT devices than others and 'Privacy & Security' has lesser relationship (r = 0.506) with the level of User Experience on IoT devices than others. Overall, there is a significant relationship between the factors that contribute to User Experience and the level of User Experience on IoT devices at home.

RELATIONSHIP BETWEEN USER EXPERIENCE AND POST-USAGE BEHAVIOUR TOWARDS IOT DEVICES

H_0: There is no significant relationship between the level of User Experience and Post-usage behaviour towards IoT devices at home.

A Pearson product-moment correlation was run to determine the relationship between the level of User Experience and Post-usage behaviour towards IoT devices at home.

Table 7 : RELATIONSHIP BETWEEN USER EXPERIENCE AND POST-USAGE BEHAVIOUR TOWARDS IOT DEVICES

VARIABLE	N	*'r'* VALUE	*P* - VALUE	RELATIONSHIP	REMARKS	
					SIGNIFICANT	RESULT
User Experience – Post-usage behaviour towards IoT devices	125	0.752**	0.000	Positive	Significant	REJECTED

****. Correlation is significant at the 0.01 level (2-tailed).**

As the P value is lesser than Sig. Value (0.01) in all the above relationships, the Null Hypothesis is rejected. There is a high positive correlation (r = 0.752) between the level of User Experience and Post-usage behaviour towards IoT devices at home. Hence, there is a significant relationship between the level of User Experience and Post-usage behaviour towards IoT devices at home.

MULTIPLE REGRESSION ANALYSIS

Multiple Regression was conducted to determine the best linear combination of the five factors that contribute to User Experience and Post-usage behaviour towards IoT devices.

Table 8 : FACTORS CONTRIBUTING TO USER EXPERIENCE AND POST-USAGE BEHAVIOUR TOWARDS IOT DEVICES

REGRESSION COEFFICIENT

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	9.632	.654		9.632	.000
	Usefulness	**.307**	**.074**	**.335**	**6.542**	**.000**
	Convenience	.280	.079	.287	5.633	.000
	Connectivity & Accessibility	.208	.082	.214	5.241	.000
	Reliability	.195	.086	.209	3.555	.000
	Privacy & Security	.176	.089	.186	2.854	.035

Dependent Variable: PROJECT SUCCESS IN IT COMPANIES

The combination of all the five independent variables i.e., Factors that contributing User Experience significantly predicts the dependent variable i.e., Post-usage behaviour towards IoT devices at home, F (5, 119) = 332.110, *p values are* lesser than .001 and 0.05 (Sig. Value 2-tailed) and Adjusted R Square is 0.723 or 72% which is a large effect according to Cohen.

Out of five independent variables relating to User Experience, "Usefulness" (0.335) is the strongest influencing factor in predicting the dependent variable i.e., Post-usage behaviour towards IoT devices at home. It is also found from the unstandardized coefficient that if one unit increase in the "Usefulness" would increase the Post-usage behaviour towards IoT devices at home by 0.345 units. Convenience (0.287), Connectivity & Accessibility (0.214), Reliability (0.209) and Privacy & Security (0.186) also contribute to Post-usage behaviour towards IoT devices at home but lesser than "Usefulness".

FINDINGS AND SUGGESTIONS

There has been a tremendous revolution in the information technology domain over the years and the network domain is not deprived of the same. The IoT in general is how everything (like people, machines, objects, etc.) can connect together via the Internet, it makes life easier and faster than before. Understanding and improving the factors that contribute to User Experience and their impact on Post-usage behaviour towards IoT devices is an important agenda of IT and IoT related companies in today's context. This study indicates that Gender and Qualification of the users have a significant impact on the perception of the factors that contribute to user experience on IoT devices. The present study also found that the User Experience has a strong and positive relationship with Post-usage behaviour towards IoT devices at home. Out of five factors, the contribution of 'Usefulness' in predicting Post-usage behaviour towards IoT devices is higher than others and 'Privacy & Security' has least contribution in determining the Post-usage behaviour towards IoT devices.

Therefore, it is suggested that management of IT and IoT related companies should understand the importance of studying and examining the factors that contribute to the user experience and post-usage behaviour towards IoT devices periodically. Based on the results of the study, it is suggested that management of IT and IoT related companies should focus their attention more on the Privacy and Security issues (such as leakage of personal information, hacking of sensitive data, data breach, etc.) and technical issues (relating to network connectivity, etc.) and assure the reliability of the performance of IoT devices at all times which would ultimately provide better user experience in the years to come.

CONCLUSION

Customers are the life-blood of any organization and the ability to provide them a great experience on the products and services are important. IoT can improve user experience by monitoring the performance of the devices. The outcomes of this study demonstrate a strong support for the linkage between User Experience and Post-usage behaviour towards IoT devices at home. This study would provide considerable contribution in business practice and academic research with respect to information technology and particularly IoT domain. This

study provides valuable insights on how IT and IoT Service providers and related organizations can take proactive steps to improve the level of user experience on IoT devices and increase the positive and favourable post-usage behaviour of users towards IoT devices. Lack of consistent internet connectivity, bandwidth issues, cost of IoT devices etc. are some of the prevalent challenges. Despite consumer acceptance challenges in IoT, the potential is great on the commercial front. Businesses can be seen taking advantage of the IoT for enabling industrial automation and for efficient operations. The future of IoT in India is very promising with undying support from the Government. If the current progress continues, the prediction about IoT potential in India might come true.

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