FACTORS INFLUENCING THE EFFECTIVE USE OF SMART PHONES: A CASE OF RURAL AREAS IN ANDHRA PRADESH

Manchala Chaitanya Reddy*[1], Dr Shilpa Gopal[2]

[1]Final Year Student, National Institute of Technology, Tiruchirappalli, India.

[2]Faculty, Department of Management Studies, National Institute of Technology, Tiruchirappalli, India.

ABSTRACT

Rural India has a large consumer base to tap, but Smartphone manufacturers are experiencing harsh conditions to penetrate the market. Rural consumers are different from their urban counter parts. Somewhere a gap exists between the real demand of the rural mass and the features offered by the smart phone manufacturers. The following study has made an attempt to highlight the concerns of rural Smartphone consumer. This study has identified the usual problems experienced by the rural consumers in making effective use of the smart phones and recommended solutions to resolve the problems. This study will help the Smartphone companies to develop comprehensive approach and to build new models to serve the rural markets in a better way.

Keywords: Consumer Behaviour, effective use of smart phones, user interface, virtual engagement.

1. INTRODUCTION

In the present Digital Era, Smartphone has become an integral part of an Individual. Smartphone which are getting very popular in this advanced world are termed as handheld computers. There are hundreds of Smartphone Manufacturers in the Market who always try to persuade the customer to gain a competitive edge over another Company. Companies bring new editions of Smartphone very frequently to expand their consumer base. India has become the second most significant Smartphone market regarding active unique Smartphone users, reaching 300 million users, surpassing the US market (report by Counterpoint research[1]). On the other hand, India has still a long way to go as the Smartphone penetration of the total population is still below 30 percent. There are about 650 million mobile phone users in India, and just over 300 million of them have a Smartphone (report by Counterpoint research[1]). It means there are about 1 billion Indians who do not yet have a Smartphone -- a tremendous market opportunity.

Till date, Urban India has been the primary market for all the companies. Recently a shift has taken towards Rural India which has 2/3rds or about 830 million Indian population with a

[1] Report by Counterpoint research - http://money.cnn.com/2017/09/26/technology/india-mobile-congress-market-numbers/index.html

significant market share. According to 'The Rising Connected Consumer in Rural India[2]' by Nimisha Jain and Kanika Sanghi (2016), Rapid growth in Internet usage in Rural India is a double-barrelled game-changer, with up to 300 million rural Indian consumers expected to be online by 2020. The above fact implies the rapid evolution of Rural Smartphone Market.

Though Rural India has a large consumer base to tap, Smartphone manufacturers are experiencing harsh conditions to penetrate the market. They are failing to capture the rural market. What could have gone wrong here may be the fact that Companies started targeting the rural areas just looking at it as another piece of the segment. They have been introducing a Smartphone of same model at the same price to target two different consumer bases. However, the rural consumers are different from their urban counter parts and the rural markets need products which suits their need. This study has attempted to find out the preferences of rural consumers, the extent they use the Smartphone effectively and the frequent problems they experience. The findings of the study aim to deliver a report that will provide insights for mobile manufacturers to look back for the actual needs of a Rural consumer and serve them in the best way.

2. LITERATURE REVIEW

An extensive review of the previous research works conducted empirically laid a path to the present study. This research study has come across many studies which focused on the influence of smart phones, but the focus of this study is mainly on the effective usage of the smart phones.

The Rising Connected Consumer in Rural India[2]by Nimisha Jain and Kanika Sanghi (2016), states that, there is a difference among the rural and urban consumers regarding the usage of apps. According to the environment and demographic factors the purposes for which the same apps were used differ in rural and urban areas. This theoretical study implied that Companies need to develop new models to serve the specific purposes of these rural markets.

AR Murgai states that "Rural markets are most heterogeneous in nature" in the chapter 'Rural marketing strategies of consumer durables in India[3]' in his book. He has discussed the characteristics of the Rural market, Socioeconomic environment, challenges and opportunities in Rural Market. According to AR Murgai Consumers in Rural Area have their own specific needs and the products they buy should meet these demands.

A study of consumer preference for smartphone: a case of Solan town of Himachal Pradesh[4]by Deepa Guleria, Dr Yashwanth Singh Parmar has identified the factors responsible for building consumer preference for Smartphone and various usability features. Some factors

[2]The Rising Connected Consumer in Rural India- Nimisha Jain and Kanika Sanghi (2016); Publication Link- www.bcgperspectives.com/content/articles/globalization-customer-insight-rising-connected-consumer-rural-india/

[3]AR Murgai, Rural marketing strategies of consumer durables in India,

Publication link -https://goo.gl/6tudQt

[4]Deepa Guleria, Dr. Yashwanth Singh Parmar, A study of consumer preference for smartphone: a case of Solan town of Himachal Pradesh, IJMRR
Publication link - http://ijmrr.com/admin/upload_data/journal_Deepa%20%207mar15mrr.pdf

which are prominent in their study are Usage Ease, Internet Browsing features, Gaming and Processing speed.

A detailed framework of how Mobile phone can affect the economic and social standards of people in Rural area and how Mobile helps people in terms of agriculture, communication and in Dairy farming has been drafted by Balwant Singh Mehta in his study "Capabilities, costs, networks and innovations: impact of mobile phones in rural India[5]". He found that In Punjab, private mobile operators like Idea and Spice provide information related to agriculture and the prices of agricultural instruments regularly. They also provide marketing information on agricultural products during the harvest season.

A study conducted by S. Kang (2014)[6] on the factors influencing the intention of mobile applications use throws light on the three aspects of mobile usage, viz; Entertainment, communication and social utility. These are measured in terms of performance enhancement, effort expectancy and social influence. He found that mobile users consider human connection and social utility to be more important than entertainment in creating performance enhancement.

The researchers have observed the findings from the studies conducted on opportunities and challenges in Rural Market for E-commerce, Telecom and Manufacturing Industry. Some authors have drawn the differences between Rural and Urban Consumer lifestyle and have attempted to find out the consumer buying behaviour. To some extent, they have tried to understand the rural consumer preferences for a smartphone. Like how they attach it with prestige, and also how it helps them to improve their business or livelihood activities.

Though these studies have made an attempt to define the preferences of rural consumers, there is still a gap existing in this area of consumer behaviour. The expectations and need gap of the rural consumers demands more exploration and analysis. So, the present study has been aimed to know the exact demand of the rural consumers and main problems they face in the usage of smartphone and other features.

3. OBJECTIVES

The objectives of this research have been framed considering previous research studies and is aimed to fill the voids. The General purpose of this research is to derive an in-depth insight of Rural Consumer preferences that will aid Mobile Manufacturers to develop new Models and customized operating system for India's vast rural consumer base market.

The specific objectives of the study are:

- To assess the satisfaction level of consumers towards the usability features in the smartphone.
- To determine the problems experienced by the consumer in using the smartphone.

[5]Balwant Singh Mehta, Capabilities, costs, networks and innovations: impact of mobile phones in rural India – Publication link - www.researchgate.net/publication/254969764_Capabilities_Costs_Networks_and_Innovations_Impact_of_Mobile_Phones_in_Rural_India

[6]S.Kang ,Factors influencing the intention of mobile applications use, International Journal of Mobile Communications, Vol12, No 4 ,2014.

- To evaluate the cause of problems and hindrances caused by the problems on the effective usage of features available.

4. RESEARCH METHODOLOGY

4.1. Study Area and Sampling

The study was conducted in Rural Areas of Andhra Pradesh where Agriculture and daily works are the primary sources of income. People are leading their lives with basic standards. The study was carried out in two different Gram Panchayats and the surrounding villages, Rami Reddy Palli and Peddakottala.

The two areas have a difference in Strength of Internet Signal and their proximity to the town. Rami Reddy Palli and its neighbouring villages has a supply of inadequate bandwidth, and the nearest town is 70 kilo meters far away, whereas Peddakottala area and its surrounding villageshas a supply of good bandwidth and the nearest town is just 7 kilo meters away.

The sample size of 500 has been collected to conduct the field study.250 responses have been received from each village to evaluate the difference in preferences of the consumers and also problems they encounter. Personal Interviews have been conducted to collect the responses.

4.2. Data Collection

The study is based on the primary data collected from the respondents. This basically involved field study with the help of a pre-structured close-ended Questionnaire. The sections of the questionnaire are set to measure the Socio-economic profile, Preferences, Usage of Apps, Satisfaction level towards features and Problems faced by them. The entire field study was carried in the form of One to one Interviews.

Secondary Data collection involves previous researches, Journals, Websites, Online Magazines, Articles and Reports by Mc Kinsey, BCG and Bain.

4.3. Tools and Techniques

To analyse the Interdependence of the data some standard and sophisticated Statistical tools are employed. PERCENTAGE METHOD has been used to test the Demographic variations and also to find the most weighted problems faced by the smartphone user. FACTOR ANALYSIS is used to group the most valued Purposes of smart phone to arrive at the efficiency of usage. CHI-SQUARE TEST has been employed to test the significance of satisfaction level of smart phone usage among the Demographic variables. ANOVA has been applied to examine the interdependence of the Problems faced with the usage of the smartphone and also to test the impact of Problems on the satisfaction level towards usability features.

5. FINDINGS & DISCUSSION

5.1. Demographic Variables of Respondents

Table1 shows the demographic details of the respondents. The study has been conducted in two areas which have a difference in the Signal strength. The analysis shows that irrespective

of the place, the primary users of the smartphone are Male (96%, 80%)[7]. It also tells that the smartphone usage is maximum among the Age group 15-30 years (80%, 72%)[7]. Most of the respondents are Graduates (56%, 48%)[7]. In both the areas, people whose occupational status is Agriculture (24%, 36%)[7] has a significant share among the total respondents.

Table 1: Demographic Variables of Respondents

Demographics	Variables	Area				
		Poor Internet Connection		Good Internet Connection		Total responses
		No. of responses	Percentage	No. of responses	Percentage	
Gender	Male	240	96%	200	80%	500
	Female	10	4%	50	20%	
Age	15-30 years	200	80%	180	72%	500
	30-45 years	40	16%	70	28%	
	Above 45 years	10	4%	0	0%	
Highest Educational Qualification	Primary Education	50	20%	70	28%	500
	Secondary Education	30	12%	50	20%	
	Graduate	140	56%	120	48%	
	Post Graduate	30	12%	10	4%	
	Illiterate	0	0%	0	0%	
Occupation	Student	40	16%	60	24%	500
	Business	30	12%	50	20%	
	Agriculture	60	24%	90	36%	
	Home maker	10	4%	10	4%	
	Job Search	60	24%	10	4%	
	Employee	50	20%	30	12%	
Annual Income	Less than 1 lakh	90	36%	60	24%	500
	1-5 lakh	110	44%	160	64%	
	No income	50	20%	30	12%	
No. of years one has been using smartphone	Less than 1 year	60	24%	20	8%	500
	1-2 years	80	32%	90	36%	
	More than 2 years	110	44%	140	56%	
Brand	Vivo	30	12%	30	12%	500
	Redmi	80	32%	50	20%	
	Lenovo	30	12%	30	12%	
	Samsung	30	12%	80	32%	
	Oppo	20	8%	30	12%	
	Celkon/Honor	30	12%	10	4%	
	others	30	12%	20	8%	

[7] (a%, b%): a- Percentage of responses in Poor Internet Connection Area
b - Percentage of responses in Poor Internet Connection Area

5.2. Effective Purposes of Smartphone used by Consumers

To analyse the utility of the smart phones Factor analysis is used to group the various purposes into most effectively utilized purposes. Table 2 shows the result of Factor Analysis, where closely related variables are grouped and are termed into new factors.

Table 2: Utility of the smart phones

Component Matrix				
	Component			
	1	2	3	4
Social Networking	**0.887**	-0.077	0.046	0.008
Agricultural uses	**0.337**	-0.683	0.292	0.137
Entertainment	**0.608**	-0.388	-0.186	0.327
Govt. Welfare programmes	**0.44**	0.302	0.458	-0.373
Weather	-0.035	0.165	0.281	0.84
Online Payments	**0.75**	0.536	-0.12	0.06
Online Shopping	**0.74**	-0.221	-0.079	-0.212
Education/ Job search	**0.214**	0.365	-0.773	0.152
Professional	**0.177**	0.513	0.537	0.118

Table 2 shows that, the respondents give equal importance for the utilization of smart phones for Social Networking, Online shopping and Payments. So, these three latent variables are grouped together and termed as ***Virtual Engagement***. Entertainment which is the next importance utility comes in the form of games, music and movies. Hence this termed as ***Recreation.***

The next effective purposes of smart phones are Educational and Professional uses, where the respondents use the smart phone applications for job related uses and Educational activities like pursuing courses, studying through E-books, and also Graduates use for Job search and Competitive Exam Notifications. These variables are termed as ***Skill Enhancement.*** Agricultural applications and Governmental services are used by the consumers to help them to improvise their basic activities and also to get the schemes and concessions provided by the government. Hence these are termed as ***Effort Enhancement***. The results have depicted that respondents are using their smartphone mainly to interact and engage virtually. They are using for recreation too. Many students and professionals are using to develop their skills.

Though our agriculturists can be highly benefitted with these apps for up gradation and smart farming, the study shows that the smart phones are not used effectively for these purposes. So, it needs a further analysis to find the reasons for not using them effectively and also to find their satisfaction level.

5.3. Consumer Satisfaction level

A statistical test was conducted to measure the variation of satisfaction levels of Consumers towards the features of the phone among the demographic variables.

5.3.1 User Interface vs Demographics

User interface is the aspect which improves the effective utilization of the smart phones. Hence an attempt is made here to check the influence of the demographic factors and the user interface. The analysis is shown in Table 3.

Table 3: User Interface vs Demographics

Demographic Variables	Value	df	Asymptotic Significance (2-sided)
Gender	1.839	4	0.765
Age	11.845	8	0.158
Education	15.887	12	0.196
Occupation	17.667	20	0.609
Income	9.744	8	0.283
Years	15.971	8	**0.043**
Brand	26.7	24	0.319

Chi-Square test shows that except in the case of period of usage of smart phones, all other demographic factors are not having any association with the user interface. There is a significant association between User Interface and period of smart phone usage. (Number of years)

It has been observed from the Table 3, that the value 0.043 which is significant represents the experience of User Interface of a smartphone by the Consumers who have been using it over the years.

5.3.2 Battery Performance vs Demographics

Battery performance is another aspect which influences the usage of smart phones. Table 4 explains the association of demographic factors and battery performance. Chi square test shows that there is highly significant association between the period of usage (0.025) and brand (0.007) of smart phone and the performance of the battery.

Table 4: Battery Performance vs Demographics

Demographic Variables	Value	df	Asymptotic Significance (2-sided)
Gender	2.402	3	0.493
Age	6.895	6	0.331
Education	2.256	9	0.987
Occupation	13.954	15	0.529
Income	7.207	6	0.302
Years	17.507	6	**0.007**
Brand	31.538	18	**0.025**

It can be recollected that the analysis in the Table 1 shows that Samsung and Redmi are the widely used smartphones. It also has been observed from field survey data that Samsung users are not satisfied with the battery Backup. Redmi Users are moderately happy.

5.4. Major Problems faced while using smart phones effectively

Table 5 shows the most common problems faced by smartphone users in rural area. The analysis will help to find the reasons why the smart phones are not utilized effectively in the study area.

Table 5: Major Problems

Problems	Percentage
Hanging	62%
Poor Internet connection	60%
Low Battery performance	54%
Communication	8%
More Unutilized features	90%

More unutilized/unknown features on the phone is the top prioritized problem (90%) which has been observed to have occurred due to Digital Illiteracy of the Rural consumers. Another 62% of the respondents are facing a problem of Phone Hang which has a reflection on the customer dissatisfaction.

Poor Internet connection is another problem faced by the consumers (60%). It is worth mentioning here that as per the percentage analysis, poor signal strength emerged out to be an important factor influencing the effective utilization of smart phones. Thus, the study helps to understand that the ignorance of the rural consumers about the various features available coupled with poor internet connection are the major reasons behind the underutilization of the features and smart phones.

The next major problem is low battery performance (54%) of the smart phones.

A further attempt is made in the study to examine the Inter relationship between the identified major problems. The association between the problems shows the effect of one problem on the other and how these issues lead to the dissatisfaction of Consumers.

5.4.1 Association between Unutilized/Unknown features and Hanging

Table 6 shows the influence of unutilized/unknown features on hanging of phones. A variance of 0.006 shows highly significant association between unutilized/unknown features and Hanging.

Table 6: Relation between Unutilized/ Unknown features and Hanging

Bayesian Estimates of Coefficients a, b, c					
				95% Credible Interval	
Parameter	**Mode**	**Mean**	**Variance**	**Lower Bound**	**Upper Bound**
More Unutilised/ Unknown features = Yes	1.422	1.422	**0.006**	1.271	1.573
More Unutilised/ Unknown features = No	1.6	1.6	0.053	1.147	2.053

The respondents who have experienced a problem with More Unutilized/Unknown features in their smartphone also have the problem of Hanging. This relation depicts that Higher the Number of Unutilized/ Unknown features, the more are the chances of hanging which in turn affects the effective utilization and efficient performance of smartphones.

5.4.2 Association between Unutilized features and Low Battery Performance

Table 7 shows relationship between More Unutilized/ Unknown features and Low Battery Performance. Variance value 0.006 which is highly substantial has shown the dependency level between these problems.

Table 7: Relation between Unutilized features and Battery performance

Bayesian Estimates of Coefficients a, b, c					
				95% Credible Interval	
Parameter	**Mode**	**Mean**	**Variance**	**Lower Bound**	**Upper Bound**
More Unutilised features =Yes	1.467	1.467	**0.006**	1.314	1.619
More Unutilised features =No	1.4	1.4	0.054	0.943	1.857

The above results have notified that more number of Unutilized/ Unknown features leads to Low Battery performance. It is clearly observed that unutilized features are consuming dominant share of Battery and causes low Battery Backup. From this analysis, it can be concluded that out of the major three problems – More number of Unutilized features have emerged to be the major cause which leads to the other problems of hanging and low battery performance.

As a matter of fact, User interface is the major factor which leads to actual satisfaction level of the consumers and results in effective utilization of the features and smart phones. The inter relationship and linkage between the problems has shown two most important problems faced by consumers. Of all the issues, unutilized features and hanging are found to be the primary problems which have a remarkable effect on User interface - the major factor for the satisfaction level.

5.5 Effect of the Problems on the User Interface

ANOVA is employed to test the impact of the major problems –Unutilized/Unknown features and hanging on the User interface.

5.5.1 Effect of Unutilized/Unknown features on User Interface

ANOVA test variance values 0.025 shown in Table 8, clearly shows the effect of More number of Unutilized/Unknown features on the satisfaction level towards user Interface. There is a highly significant impact of unutilized/unknown features on user interface.

Table 8: Unutilized/Unknown features impact on User Interface

Bayesian Estimates of Coefficients a, b, c					
Parameter	**Mode**	**Mean**	**Variance**	**95% Credible Interval**	
				Lower Bound	**Upper Bound**
More Unutilised/ Unknown apps = Yes	3.422	3.422	**0.025**	3.11	3.735
More Unutilised/ Unknown apps = No	4.4	4.4	0.227	3.463	5.337

More number of unutilized features results in the negative impact on the experience of User Interface. From the results, it has been observed that Rural Area Consumers' unawareness and unsuitability about the high-end features of smart phones leads to low satisfaction level in user interface.

5.5.2 Effect of Hanging on User Interface

The ANOVA test performed to analyse the effect of Hanging on the Satisfaction levels towards User Interface has provided the valid results with variance 0.024. The results are shown in Table 9.

Table 9: Hanging impact on User Interface

Bayesian Estimates of Coefficients a, b, c					
Parameter	**Mode**	**Mean**	**Variance**	**95% Credible Interval**	
				Lower Bound	**Upper Bound**
Hanging = Yes	2.893	2.893	**0.024**	2.585	3.2
Hanging = No	4.318	4.318	0.031	3.971	4.665

Hanging mainly occurs when a Smartphone is inefficient to run the commands given by the user. Inefficient response leads to the dissatisfaction of a consumer towards User Interface. Thus, it can be concluded that hanging has its significant impact on user interface and thus leads to dissatisfaction of the consumers.

Therefore, the study highlights that two major problems – Unutilized features and hanging has its significant impact on the satisfaction level of user interface.

It's already found that Poor Internet connection is a Problem has discovered in section 5.5. As Poor Internet Connection has observed as a problem experienced by users, it might have prevented users from utilising the smartphone to the full extent. This study has taken a step to identify the Impact of Poor Internet Connection on the Utilisation of smartphone for different purposes.

5.6 Effect of Poor Internet on Usage of smartphone

As identified in section 5.2, a smartphone is utilized for four major Purposes by the Rural Consumer and they termed as Virtual Engagement, Recreation, Effort Enhancement and Skill Enhancement. ANOVA test has been adopted in order to test the Influence of Poor Internet Connection over the Utilisation of Smartphone for Major Purposes.

5.6.1 Impact of Poor Internet on Virtual Engagement

Virtual Engagement is an act of a consumer to perform activities like Socialising, Shopping etc. virtually i.e. through various Online Channels. From ANOVA results in Table10, variance value 0.034 shows significant Influence of Poor Internet connection on the Virtual Engagement.

Table 10: Effect of Poor Internet on Virtual Engagement

Bayesian Estimates of Coefficients a, b, c					
Parameter	**Mode**	**Mean**	**Variance**	**95% Credible Interval**	
				Lower Bound	**Upper Bound**
Poor Internet connection = Yes	1.686	1.686	**0.034**	1.324	2.048
Poor Internet connection = No	2.733	2.733	0.079	2.18	3.286

It has been observed that Smartphone Consumers experiencing Poor Internet Connection are not able to connect to the world to the full extent. It has also learned that Poor Internet connection is one of the reasons that has ceased the rural consumers in Engaging Virtually.

5.6.2 Impact of Poor Internet on Recreation

Recreation is a daily routine that aid rural consumers to relax after their massive Physical work. ANOVA test has used to test the impact of Poor Internet Connection on Recreation. The variance value 0.037 from Table11 has shown the notable effect of Poor Internet Connection.

Table 11: Effect of Poor Internet on Recreation

Bayesian Estimates of Coefficients a, b, c					
				95% Credible Interval	
Parameter	**Mode**	**Mean**	**Variance**	**Lower Bound**	**Upper Bound**
Poor Internet connection = Yes	4.029	4.029	**0.037**	3.648	4.41
Poor Internet connection = No	4.667	4.667	0.087	4.085	5.249

The results depict that Poor Internet connection is obstructing the Rural Consumer in using his smartphone to Relax and experience fun. It has observed that primary sources of Recreation, like Movies, Music and Games are not downloadable with the Poor Internet prevailing in those areas.

5.6.3 Impact of Poor Internet on Effort Enhancement

Another important Purpose, a smartphone is used by Rural consumer is Effort Enhancement. Andhra Pradesh Government aimed to provide welfare schemes and utilities for Agriculture like Market prices of Crop, smart farming techniques, subsidies for Technical Equipment on a digital platform through apps that helps Rural people to operate from their home instead of roaming around Bureaucrats.

The variance value 0.04 from Table12 shows the influence of Poor Internet Connection on Effort Enhancement.

Table 12: Effect of Poor Internet on Effort Enhancement

Bayesian Estimates of Coefficients a, b, c					
Parameter	**Mode**	**Mean**	**Variance**	95% Credible Interval	
				Lower Bound	**Upper Bound**
Poor Internet connection = Yes	1.714	1.714	**0.04**	1.32	2.108
Poor Internet connection = No	1.667	1.667	0.093	1.065	2.268

It has detected that in Rural area people who use smartphone are not actually experiencing the benefits and resources provided by government digitally due to the Poor Internet connection. Hence a major purpose of the smart phones remains unused.

5.6.4 Impact of Poor Internet on Skill Enhancement

Skill Enhancement is a factor that helps students to build a career and Working professionals to make a Shift in Career. The variance value 0.055 from Table13 tells that Poor Internet does not have a major impact in enhancing their skills.

Table 13: Effect of Poor Internet on Skill Enhancement

Bayesian Estimates of Coefficients a, b, c					
Parameter	**Mode**	**Mean**	**Variance**	95% Credible Interval	
				Lower Bound	**Upper Bound**
Poor Internet connection = Yes	1.886	1.886	**0.055**	1.424	2.347
Poor Internet connection = No	1.733	1.733	0.128	1.029	2.438

The above insignificance does not mean that Poor Internet is not troubling students and professionals to enhance their skills. The insignificance is due to the reason that Students travel to nearby small town to study which has good internet connection, and the same happens with professionals too. So, students and professionals use the smartphone for skill enhancement to a large extent during their Working day hours and use only to little extent in village.

Therefore it is found that poor internet connection hinders the rural mass to use the smart phones and features effectively for the major purposes which will enhance their activities and efforts.

5.7 Opinion of the respondents about the improvisation in the smart phones

The field study also collected the opinion of the respondents about the improvements to be made in the smart phones for the better utilisation. The suggestions made by them are more influenced by their 'utilisation of smartphone for various purposes' and 'Age' regardless of their Economic status, Gender, Brand of the smartphone. The suggestions made by the respondents are classified into 4 categories, which the study found to the most prominent purposes- viz: Virtual Engagement, Entertainment, Effort Enhancement and skill Enhancement. The recommendations made for better Virtual Engagement are Applications which can be updated with Low internet consumption , fastest and feasible means of applications to share files, movies etc. like SHAREIT. For suggestions to improve the Entertainment purpose, preinstalled apps/ sources for movies, music and games are demanded. For further Effort Enhancement, major recommendations from farmers and daily workers include Government benefits, Applications aided Smart farming, and daily market updates on crop prices should be inbuilt. For Skill Enhancement, students and professionals are looking for better Apps in the store that serves to develop their expertise.

Another important recommendation made on the basis of Age is respondents above 40 years are demanding for Native language interface among commonly utilised applications.

6. CONCLUSION

The study has constructed some implications after a meticulous analysis of rural smartphone consumer behaviour and problems experienced. Poor Internet Connection has been identified as the one of the major problems experienced by the consumer. It has dreadful effect on the utilisation of smartphone for Virtual Engagement, Recreation and Effort Enhancement. The poor internet facility is arresting the Digitalisation of Rural Andhra Pradesh for which State Government is striving. This study implies that smartphone companies need to build tangible solutions to tackle the problem and serve the rural areas better. Companies can address this problem with the launch of Joint ventures with Telecom operators and extending their services in rural areas and thus targeting the consumer effectively. Companies also can focus on revamping the Microprocessors that helps function of smartphone better even with Poor signals.

The enhancement of Poor internet infrastructure certainly increases the utilisation of smartphone for many more purposes. It also allows the users to make best use of several features they are aware of. Thus, Enhanced Internet infrastructure also helps in minimizing

another major problem **More Number of Unutilised features** to a little extent. The improvement of Internet connection alone does not help to reduce the problem of 'More number of Unutilised/ Unknown features'.

This study further recommends two techniques to resolve this problem- 1. To Build awareness in the Rural Areas on a huge scale – Creating awareness improves the understanding levels of the consumers and results the effective usage of available features.2. To Develop Customised interface for rural areas through development of features which will suit the actual demands with simple easy to follow interface.

When the problem created due to more number of unutilised features is reduced, there will be a Reduction in Hanging and Low Battery performance (results from 5.4). This in turn results in improvising the satisfaction towards User interface. Improvement in customer's satisfaction will have a positive attitude towards the brands and results hike in purchases of smartphones. Thus, solving the problems experienced by a consumer should be prioritised and provide the right product to the right customer.

This study reiterates that there is a significant difference between the behaviour of an Urban and Rural smartphone consumer. There is a need of special focus and unique models in order to serve them effectively. Rural consumers have great expectations towards using the smart phones for the enhancement of their efforts and activities. However the poor internet facilities and moderate technology adoption of these rural areas prevents the effective utilisation of the sophisticated features. Hence mobile manufacturers need to focus on developing features which will improvise task performance. This study also corroborates the existing research in the case of factors to be considered while tapping rural markets viz; service quality, content quality and cost effectiveness. The additional factors which need to be addressed are technical competency in terms of awareness about the high tech features and also revamping the Microprocessors that helps function of smartphone better even with Poor signals. These elements may augment the user experiences which will lead to the customer delight through the effective utilisation of smart phones.

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