

[DOI: 10.20472/IAC.2015.018.089](https://doi.org/10.20472/IAC.2015.018.089)

**ABEDNEGO OKOE-AMARTEY**  
UNIVERSITY OF PROFESSIONAL STUDIES, GHANA

## **UNDERGRADUATE STUDENTS' PERCEPTION OF SERVICE DELIVERY IN THE MOBILE TELECOMMUNICATION INDUSTRY IN GHANA**

### **Abstract:**

An analysis of undergraduate students' perception in the mobile telecommunication industry was conducted using four Ghanaian universities. The study adopted a cross sectional and quantitative design methodological approaches and relied on primary data sources for data collection. Using quota and convenience sampling techniques, a total of 400 respondents were selected from the four universities. Results from the study revealed that a gap exists between customer expectations and perceptions in the Ghanaian mobile telecommunication sector. The results further indicated that customers of MTN were the least satisfied in terms of service delivery as compared to the other networks though they remain the market leaders. The study identified three key predictors of customer satisfaction in the industry namely; affordability, wider network coverage and bonuses. The study concludes that underperformance of mobile telecommunication firms does not necessarily correlate positively with churn of student customers. Recommendations were made to help address gaps identified.

### **Keywords:**

customer expectation, customer perception, service delivery, Ghana

**JEL Classification:** M31

## Introduction

Telecommunication is the communication over a distance by cable, telegraph, telephone or broadcasting (Oxford University Press, 2013). In earlier times, this may have involved the use of smoke signals, drums or flags. In modern times, telecommunication typically involves the use of electronic devices such as telephones, computers, television and radio. The world is now a global village. This is because people at different parts of the world are able to communicate and share information from different parts of the world by the help of telecommunication. In 2000, a survey by the International Telecommunication Union (International Telecommunication Union, Annual Report, 2012) revealed that roughly one-third of countries have less than one mobile subscription for every twenty people, and one third of countries have less than one fixed line subscription for every twenty people. By 2012, the International Telecommunications Union identified countries which have made the most progress when it comes to Information and Computer Technology (ICT) development. These dynamic ICT markets are mostly located in the developing world – evidence that many developing countries are catching up quickly in efforts to bridge the so-called ‘digital divide’. Strong performers include Bahrain, Brazil, Ghana, Kenya, Rwanda and Saudi Arabia.

In the mobile sector, developing countries now account for the lion’s share of market growth. Mobile-cellular subscriptions registered continuous double-digit growth in developing country markets, for a global total of six billion mobile subscriptions by the end of 2011. Both China and India each account for around one billion subscriptions.

Mobile broadband continues to be the Information and Communication Technology (ICT) service displaying the sharpest growth rates. Over the past year, growth in mobile-broadband services continued at 40% globally and 78% in developing countries (ITU, annual report, 2012). There are now twice as many mobile-broadband subscriptions as fixed-broadband subscriptions worldwide. Over the past 10 years, Ghana has seen an unprecedented increase in the number of mobile telecommunication companies. This is due to the deregulation and the liberalization of the economy. Because of this, a lot of foreign companies have taken this opportunity to establish their companies in the country. Currently, there are six mobile telecommunication companies in Ghana. These are MTN, Vodafone, Tigo, Airtel, Expresso and Glo. However, it still remains an open secret that customer perception of service delivery in the sector is still poor.

## Problem Statement

The choice of the undergraduate students’ market is a result of the fact that the segment is expanding, virtually every student possesses a mobile telephone and more importantly, the segment can be recognized as a market for the future.

The objective of the study was to examine undergraduate students' perception of service delivery in the mobile telecommunication industry in Ghana using four Ghanaian universities. The rest of the paper is organized as follows:

Section one reviewed the relevant literature on service quality. Section two encapsulates the methodology whiles, section three presented and discussed the results of the study. The final section summarized the key findings, drew conclusions and made appropriate recommendations for future research.

## **Literature Review**

### **Service Quality**

There is no universal or all-encompassing definition or model of quality. The most common definition of service quality, nevertheless, is the traditional notion, in which quality is viewed as the customer's perception of service excellence. That is to say, quality is defined by the customer's impression of the service provided (Berry et al, 1998). This definition assumes that customers form a perception of service quality according to the service performance they experience and in light of prior experiences of service performance. It is therefore the customer's perception that categorizes service quality. Many researchers accept this approach. Service quality is an important topical issue in service management (Clotey & Collier, 2011). Service quality is the extent to which a service meets customer's needs or expectations (Lewis & Mitchel, 1990). If customers' expectations are greater than performances, then perceived service quality is less than satisfactory hence customer dissatisfaction occurs. (Berry et al, 1998). This implies that service quality can thus be defined as "the difference between customers' expectations of service and perceived service". However, it must be noted that customer dissatisfaction does not usually come from lack of service quality alone.

As an important element for success, the significance of service quality is imperative and is definitely different from customer satisfaction. The distinction has always been that service quality is the overall attitude towards the service of the industry whereas customer satisfaction is specific to an individual service encounter (Zeithmal & Bitner, 2003). Various dimensions for measuring it however have given way for various views.

Bitner and Hubert (1994) defined quality as "the consumer's overall impression of the relative inferiority/superiority of the organization and its services" But their definition of service quality differs from that of the traditional approach, which locates service quality perception within the contrast between consumer expectation and actual service performance ( Berry et al, 1998). They viewed quality as "the degree and direction of discrepancy between customers' service perception and expectations." According to this approach, services are different from goods because they are intangible and heterogeneous and are simultaneously produced and consumed. Additionally, according

to the disconfirmation paradigm, service quality is a comparison between consumers' expectations and their perceptions of service actually received. Based on the traditional definition of service quality, Berry et al, (1998) developed their gap model of perceived service quality, the model incorporates five gaps.

### **Dimensions of Service Quality**

Berry et al, (1998) described service quality as the ability of an organization to meet or exceed customer expectations. Sasser, Olsen, & Wyckoff (1978), listed seven service attributes which they believe adequately embrace the concept of service quality. These include: security, consistency, attitude, completeness, condition, availability and training. Lehtinen (2001) also described service quality in three dimensions: the "physical quality" (of products and/or services), the "corporate quality" (the company image) and "interactive quality" (interaction between the consumer and the service organization). These authors argue that in examining the determinants of quality, it is necessary to differentiate between quality associated with the process of service delivery and quality associated with the outcome of service, judged by the consumer after the service is performed. Johnston, Silvestro, Fitzgerald, and Voss, (1990) identified fifteen dimensions of service quality categorized as "hygiene factors", "enhancing factors" and "dual-threshold factors". "Hygiene factors" are expected by the customer and dissatisfaction of customers would occur if they are not delivered. "Enhancing factors" will lead to customer satisfaction but will not necessarily lead to customer dissatisfaction if they are not delivered. Failure to deliver "dual-threshold factors" will cause dissatisfaction and will enhance customer's perceptions of service and lead to satisfaction if they are delivered above a certain threshold. Berry et al (1998) list ten determinants of service quality that can be generalized to any type of service. The ten dimensions include:

Tangibles - the physical evidence of the service, physical facilities, appearance of personnel, tools or equipment used to provide the service, other customers in the service facility; reliability, responsiveness, competence, access, courtesy, communication, credibility, security and understanding. These ten dimensions were regrouped in the well-known five dimensions in the SERVQUAL model (Berry et al, 1998) which include tangibility, reliability, responsiveness, assurance, and empathy.

### **Servqual Model**

Berry et al (1998) proposed to subjectively measure service quality by finding out the extent of discrepancy between customers' expectations or desires and their perceptions of the actual quality of performed service. Good service quality exists when customer expectations are met or exceeded and is studied in five dimensions as mentioned above: tangibility, reliability, responsiveness, assurance, empathy. The methodology of comparing customer's expectation and perception in five dimensions is the popular

SERVQUAL. The discrepancy between customers' expectations or desires and their perceptions of the actual service performance was elaborated in the Disconfirmation of Expectations Paradigm (Patterson 1993) which related satisfaction to customer's pre-purchase expectations and perceptions of service performance and identified any difference as Disconfirmation. The comparisons which form the basis of the model are as follows;

Perceived Performance > Expectation: High satisfaction (Delight), Perceived Performance = Expectation: (Merely Satisfied) and Perceived Performance < Expectation: Dissatisfaction

The publication of the first results of the SERVQUAL instrument provoked a debate on how best to measure service quality and in the subsequent decade there have been many attempts to demonstrate the efficacy of the SERVQUAL instrument. It is generally agreed, however, that SERVQUAL instrument is suitable for measurement of service quality because it measures key aspects of service quality. Managers know that results obtained using the model are probably not objective truth but that they help identify the direction in which the firm should move. Some researchers have, however, suggested that SERVQUAL model also has weak points both theoretically and operationally. SERVQUAL's five dimensions may not cover all service aspects of the organization and are not universals. The number of dimensions comprising service quality is contextually determined; Babakus and Boller (1992) suggested that the number of service quality

Oliver (1997) also pointed out the traditional model's difficulty distinguishing service quality from satisfaction. While perception of quality may come from external mediation rather than experience of service, consumers must experience satisfaction in person. In addition, judgments and standards of quality are based on ideals or perceptions of excellence, while judgments concerning satisfaction involve predictive expectations, needs, product category norms, and even expectations of service quality. Moreover, while judgments concerning quality are mainly cognitive, satisfaction is an affective experience (Bitner & Hubert, 1994). Service quality is influenced by a very few variables (e.g., external cues like price, reputation, and various communication sources); satisfaction, in contrast, is vulnerable to cognitive and affective processes (e.g., equity, attribution, and emotion). Quality is primarily long-term, while satisfaction is primarily short-term (Oliver, 1997). Despite these shortcomings the SERVQUAL model is still the most commonly used.

## **Methodology**

### **Research Design**

The research design is quantitative in nature. A quantitative field of study was used to collect data. Data involved is numeric and subjected to quantitative analysis and was

collected through questionnaires. On the basis of the existing literature on the service dimensions and customer perception, the study sought to understand the undergraduate students' perception of these concepts and further support or disagree on the conclusions made by other researchers on service delivery. This study relied on cross sectional survey method. A cross sectional study involves the observation of all the population or a representative subset, at one specific point in time.

### **Target Population**

The population of the study consists of all subscribers of Mobile Telecommunications services in Ghana which according to NCA report (March 2014) stands over twenty eight (28) million subscribers. The unit of analysis was the undergraduate students market.

### **Sampling Method**

Three aspects of the sampling method are discussed namely sampling unit, sampling size and sampling procedure.

#### *Sampling unit*

The sampling unit of the study is defined as undergraduate students of Ghana. The choice of this market is relevant because of the following reasons;

- The undergraduate student segment is expanding
- Almost every undergraduate student owns a mobile phone
- They can be considered as a good market for the future.

#### *Sampling size*

This study considered four (4) Ghanaian universities which comprised two (2) state universities namely; University of Professional Studies, Accra (UPSA) and University of Ghana, Legon (UG) and two (2) private universities namely; Valley View University (VVU) and Central University College (CUC). UG was chosen because it is the premier university in Ghana while UPSA is the premier professional university. VVU is the premier private university in Ghana and CUC is chosen because it is the largest private University. On the whole therefore, a variety of students will form part of the respondents to enable comparisons to be drawn. The total sample size was four hundred (400) with hundred (100) respondents from each of the universities.

#### *Sampling Procedure*

A non- probability sampling technique was employed for the study. The choice of the non- probability sampling technique is as a result of the absence of the sampling frame. Quota

sampling is used to allocate hundred (100) students to each university. Convenience sampling is then used to select the hundred (100) respondents from each university.

### Data Instrument

The study is a cross-sectional survey and therefore the instrument employed for the collection of data was the questionnaire. To ensure a balanced questionnaire, both-open and closed-ended questions were used to gather information on customer perception of service delivery in the mobile telecommunication industry in Ghana.

### Data Collection

Questionnaires were administered personally to respondents at the campuses of the various universities within a (3) week period. Primary data were used for the study with the aim of identifying customer perception of service delivery in the telecommunication industry. Data was collected on the field from respondents.

### Validity and Reliability

The data instrument was adopted and adapted from previous studies conducted and as a result the use of this instrument guaranteed validity and reliability of the study.

### Procedure for Data Analysis

The researcher employed quantitative technique in analyzing the data. The data gathered from the various questionnaires were sorted out, collated, edited, coded and tables and charts were generated for the analysis using the Statistical Package for Social Sciences (SPSS) version 18.0. The gap analysis instruments is used to identify gaps between desired levels of service and actual levels of service performance by conducting a sample survey.

## Findings

**Table 1: Consumer Expectation of Service Delivery**

		Valid percentages		
		Strongly Agree/ Agree	Neutral	Strongly Disagree/ Disagree
1.	My network should offer services that meet my needs	93.3	4.3	2.6
2.	I expect the coverage to go through the first time	87.4	7.8	4.9

3.	My network must give me the call charges that are moderate	95.7	3.3	1.1
4.	When I have a problem I expect my network to be efficient in handling my needs	95.1	3.3	0.8
5.	My network should have enough branches for easy access	93.5	4.8	1.8
6.	I expect the staff to work together to meet my needs	91.8	7.2	1.0
7.	I expect the frontlines staff to be customer friendly and polite	96.6	2.8	0.8
8.	The network should come with new products regularly to meet my needs	89.1	9.5	1.5
9.	I expect my network to create favorable conditions for me	92.7	5.5	1.8
10.	I expect my network to make it easy for me to call other networks	94.4	4.3	1.3

**Source: survey data 2014**

The table above shows that the expectation of the respondents from their service with respect to each item, over 80% of the respondents expect their services to meet their needs, wider coverage, affordable call charges, efficiency, easy access, staff knowledge, customer service, innovative products, favorable environment, and also being convenient. Relatively less than 5% in each case of respondents agreed otherwise. From the above responses, mobile service providers must embark on strategies to meet such high expectations of their customers.

**Table 2: Customer Perception of Service Delivery**

**Valid percentages**

		Strongly Agree/ Agree	Neutral\	Strongly Disagree/ Disagree
1.	The services of my network meet my needs	61.4	20.8	18.5
2.	My network coverage goes through the first time I make a call	49.9	23.1	27.1
3.	The call charges are moderate	43.2	25.0	31.8
4.	My network is efficient in handling my needs	40.0	33.4	26.6
5.	My network has enough branches which allows for easy access	42.7	30.4	26.8

6.	The staff work together to work my needs	39.4	39.8	20.8
7.	The Frontline staff and call centers are friendly and polite	60.9	23.7	15.5
8.	My network comes out with new products regularly to meet my needs	46.1	34.8	19.4
9.	My network creates favorable conditions for me to enjoy the service	44.7	31.9	23.4
10.	My network makes it easy for me to call other networks	47.7	24.7	27.5

**Source: survey data 2014**

From table above, on average less than 50% of respondents were convinced that the network providers meet their needs, have a wider coverage, affordable call charges, are efficient, have easy access, their staff are knowledgeable, have good customer service, sell innovative products, operating in a favorable environment, and after convenient service. This finding is in sharp contrast to the findings on respondents' expectations where majority of them had high expectation of their network providers.

**Table 3: Customers overall perception of service delivery**

	Frequency	Percent
Very bad	25	6.8
Bad	55	14.9
Neither good nor bad	67	18.1
Good	191	51.6
Very Good	32	8.6
<b>Total</b>	<b>370</b>	<b>100.0</b>

**Source: survey data 2014**

Table shows customers overall perception of service delivery. About half of the respondents (51.6%) believe service delivery in the telecommunication industry to be good. Only 8.6% of the respondents perceived the service to be very good. About 20% of respondents representing one-fifth at least perceived the service to be bad. The 18.1% of respondents who hold a neutral view of the service may not have had any direct interaction with the service providers on an issue hence their position. Compared to the number of respondents who had high expectation of the service, there is a low overall positive perception of service delivery in the telecommunication industry.

**Table 4: In order of priority the three (3) most important things respondents expect from their network providers.**

	Frequency	Percent %
Affordability	264	22
Coverage	177	14.75
Bonus	118	9.8

**Source: survey data 2014**

From the above table the respondents were asked to give three most important things they expect from their network providers. Affordability was the top most priority (22%) followed by network coverage (14.75%) and giving bonus credits (9.8%) in that order. Customers want their network providers to make their services affordable, give them a wider coverage of their services by making their products accessible in every town and running promotions on their services to get bonuses. Marketing strategies of the telecommunication companies should therefore take these factors into account.

## Discussions

This discussion is done on the basis of service delivery theories which focus on the measurement of customers' assessments of the perception and expectation variables. The study found that Ghanaian undergraduate students in the four universities have high expectations of their mobile telecommunication service providers but their perception (or experiences) of the service fall below their expectations. These findings appear to support previous studies in Ghana by Simon (2010) which concluded that irrespective of mobile telecom networks in Ghana, customer service is low.

On the basis of the responses given, irrespective of the university involved, over 80% of the respondents have very high expectations. In line with a study conducted by Lim et al (2006), mobile service providers need to develop high quality data services as a powerful marketing tool. The finding further drew attention to emotional value in the consumption of mobile services. Mobile service providers in Ghana need to increase performance by introducing new strategies to meet such high expectations of customers to improve overall performance in the Industry.

More than 50% of the respondents had their service providers not meeting their needs, though they had very high expectations from the customers, creating a contrast between the two. This could be that mobile network providers have not taken consideration of the high expectations of customers but rather focusing on strategies to increase market share. This means that there is still a potential for these network providers to increase their market share by meeting the high expectations of their consumers. A study by Simon (2010) concluded that in Ghana customer service is low; therefore the need for improvements to meet customer's expectations. Respondents emphatically stated that

they were dissatisfied with the services of their mobile telecom providers. Thus the findings from these studies seem to suggest that when perceived performance exceeds expectation there is high satisfaction causing delight, and when perceived performance equals expectation there is mere satisfaction and finally when perceived performance is less than expectation there is dissatisfaction.

Findings from the research also identified affordability, network coverage and bonuses (Table 4) as the key predictors of students' perception of their mobile networks which supports the study of Rajkumar & Harish (2011). This study indicated that price has a significant and positive impact on consumer perception and choice in selecting telecommunication service providers. They further stated product quality from the marketing perspective is associated with communication, price, features, function or performance of a product.

## **Conclusions**

This study is a descriptive quantitative study which sought to understand undergraduate students' perception of service delivery in the mobile telecommunication industry in Ghana. On the basis of the analysis and findings, conclusions have been drawn in relation to the research objectives and research questions.

### **Students' Perceptions of Mobile Telecommunication Services**

The first research objective and its attendant research question was to ascertain students' perceptions of service delivery of mobile telecommunications in Ghana. The study found that students' perception (or experience) with the mobile telecommunication services were relatively low. In other words, students experienced frustrations with the service. Since students' expectations exceeded their perceptions of the services, a gap is created resulting in customer dissatisfaction.

### **Students' Expectations of Mobile Telecommunication Service**

The second objective and subsequent research was to determine students' expectations of service delivery of mobile telecommunications in Ghana. The study revealed that students have high expectations with regards to their mobile telecommunication services. Specifically, they expect the following attributes from their network providers: to meet their needs, provide wider coverage, low call charges, efficiency, easy access, staff knowledge, customer service, innovative products, favorable environment and convenience. The study revealed students' expectations are primarily influenced by family members and friends and a favorable attitude towards the service.

### **Key Predictors of Student's Perception of Mobile Telecommunication Service**

The third objective and subsequent research question was to determine the key predictors of student's perception of their mobile telecommunication service. The study revealed that the most important reason adduced by most respondents which will compel them to continue to stay with their service provider is affordability. Other important reasons advanced by respondents include wider network coverage and bonuses which relate to add on services that students may consider trendy.

## **RECOMMENDATIONS**

The study will be helpful to mobile telecommunications operators if the following recommendations are adhered to;

- Mobile network operators must thoroughly understand factors influencing students' expectations and factor them into their communication campaigns. Consistent with the findings of the research, Zeithaml et al. (2009) assumed that due to the intangible nature of services, word- of- mouth communications tend to be the most effective communication tool. Since the students' choice of network were mostly influenced by family and friends, network providers must focus on innovative packages that can generate a feeling of excitement among family and friends through targeted communications. The use of celebrities in product and service endorsements will also help in this direction.
- To bridge the gap between student's perceptions and expectations of the services provided, mobile network providers must be realistic in their promises (which form the basis of expectations) and ensure that promises made are fulfilled. Service performance must meet or exceed customer expectations to create delight. It is therefore advisable that network providers must not "over promise" and "under deliver" but rather "under promise" but over deliver' to ensure that expectations are not only met but exceeded to create customer delight.
- The three key predictors of students' satisfaction with respect to mobile telecommunication services have been identified as affordability, wider network coverage and bonuses. These three key variables must be incorporated into the marketing and communication programs of the various network service providers. The network service providers must treat these key variables as critical success factors and invest sufficient resources into these critical areas.
- The telecommunication industry must have continuous improvement programs directed at providing quality services and generating innovative products. This means that network providers must continue to engage in marketing intelligence and market research to thoroughly keep abreast with students' needs.

## Limitations of the Study

One key limitation is in respect of the sample size. Due to time constraints a sample size of only four hundred (400) respondents of four Universities was used out of students' population that runs into thousands. Again convenient sampling was employed as the sampling procedure. The use of this procedure did not allow for equal chance for all students to be represented in the sample. The willingness of respondents to fully cooperate was also a problem; they therefore had to be cajoled to accept to participate in the survey. The limitations imposed by the sample size and sample procedure means that care must be taken in generalizing the findings.

## Further Studies

The study was also limited to the mobile telecommunication industry. Future studies can focus on other industries like the pharmaceutical and financial institutions, among others.

## References

- BITNER, M. J., and HUBERT, A. R. (1994). Encounter Satisfaction versus Overall Satisfaction versus Quality: The Customer's Voice.
- BERRY, L.L.; PARASURAMAN .A. and ZEITHAML, V.A (1998). *SERVQUAL*: A multi-item scale for measuring consumer perception of service quality, *Journal of Retailing*, Vol. 64, No.1, pp12-40
- BABAKUS, E., and BOLLER, G.W. (1992). An empirical assessment of the SERVQUAL scale, *Journal of Business Research*, pp. 253-268
- CLOTTEY T. A., COLLIER D.A, and STODMIC, M. (2011). Drivers of Customer Loyalty in Retail Store Environment. *Journal of Service Science (JSS)*
- INTERNATIONAL TELECOMMUNICATION UNION REPORT (2012)
- JOHNSTON, R., SILVESTRO, R., FITZGERALD, L., and VOSS, C. (1990). Developing the determinants of service quality. *The Service Industries Journal*, Pp. 287-303.
- LEWIS, B.R. and MITCHELL, V.W. (1990). Defining and measuring the quality of customer service, *Marketing intelligence Planning*
- LEHTINEN, UOLEVI (2011). Combining Mix and Relationship Marketing: *The Marketing Review*, pp 117-136.
- LIM HEEJIN, WIDDOWS, R., and PARK, J. (2006). M- loyalty: winning strategies for mobile carriers, *Journal of Consumer Marketing*, Vol. 23 Iss: 4, pp. 208-218 NATIONAL COMMUNICATION AUTHORITY website
- OLIVER, R.L. (1997). *Satisfaction: A Behavioral Perspective on the Consumer*, McGraw-Hill, New York
- OXFORD UNIVERSITY PRESS, 2013
- PATTERSON, PAUL G. (1993). The Role of Expectation and Product Performance For A High Involvement Product, *Psychology and Marketing*.
- RAJKUMAR P. and HARISH R. (2011). Service Quality and customers' preference of cellular mobile service providers. *Journal of Technology Management and Innovation*. Vol. 6 No. 1
- SASSER, W.E.; OLSEN, R.P., and WYCKOFF, D.D. (1978). *Management of Service Operations*
- SIMON GYASI NIMAKO (2010). Overall customer satisfaction in Ghana's Mobile Telecommunication networks: Implication for management and policy. *ATDF Journal*. Vol. 7.
- ZEITHMAL, VALERIE A. BITNER, MARY, J.O GREMLER, and DWAYNE, D. (2009). *Services Marketing; Integrating Customer Focus across the Firm*. Boston: McGraw-Hill Irwin.