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Reliability of Mobile Service Provider Selection by Tertiary Institution Learners in Nigeria

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Abstract

The paper concentrates on the necessity to investigate and determine which of the many influencing factors affects students' selection of mobile service providers. The evaluation of data and description were done using statistical techniques such bar charts, pie charts, line charts and frequency approaches involving Likert scale methodology. According to the study's findings, 51% of the respondents were male students while 49% are female students. Furthermore, majority of the respondents chose MTN network with 40% followed by Airtel network with 30% respectively. Ultimately, Coverage and Network Quality, Data Roller, Device Compatibility, Students Offers and Discounts, Data Speed, Flexibility of Plans and Cost and Pricing Plans are the most significant components that influenced learners' choice of mobile service provider for educational and other academic desires.

Keywords: *Tertiary Learners, Mobile Service Providers, Coverage, Data Speed, Pricing Plans.*

1. Introduction

Kim and Shin (2002) defined Mobile service providers as companies that offer wireless communication services to individuals including learners and businesses through cellular networks (Balasubramanian, 2003; Ahonen 2008). Dholakia and Dholakia (2004) opined that mobile service providers has improved services in voice calls, text messaging and internet access in educational institutions. They explored the emerging outlines of mobile commerce and implications for markets especially in countries with large youth (students) populations (Ahonen, 2008). Both industrialized and developing nations now rely increasingly heavily on GSM and mobile phones as a means of communication. Numerous motivations for having or using a mobile phone, as well as the choice of mobile phone provider, have been documented in recent research (Hamel and Prahalad, 1991; Nagel, 2003; Donner, 2007; De Silva and Zainudeen, 2007). There has also been a rise in network and internet providers in developing nations. Hansen (2003) reports that operator subscriber growth has been significant and that the mobile handset market has grown by five to ten percent. With an estimated population of 120 million people, Nigeria had 450,000 connected phone lines prior to 2001, and the country had only committed approximately US$50 million in the telecommunications sector at that time (Ajala, 2005). After six years, the amount of foreign direct investment (FDI) in the telecommunications industry has reached $9.5 billion, thus becoming the second most important after the oil and gas business. The sector is still expanding in terms of the number of users and the construction of infrastructure (NCC, 2007). Nigeria has become a highly sought-after investment destination globally due to the telecommunications industry, as international investors are now vying for presence in a nation recognized as having one of the most profitable marketplaces (NCC, 2007).

The Nigerian Communication Commission (NCC) held an auction for digital cellular licenses in January 2001. Because of its great degree of openness, it was hailed as one of the greatest in the world. Three mobile carriers emerged as a result of the auction: MTEL, an offshoot of the incumbent operator NITEL, MTN, and ECONET wireless, now known as Airtel (Ajala, 2005). Through yet another open auction procedure, Globacom was granted a fourth Digital Mobile License (DML) in 2002. In an effort to boost competition even further, Emerging Market Telecommunications Services Limited, sometimes referred to as Starcomms, was granted a fifth mobile license in 2005 (with GSM spectrum) (Amusa, 2005; Tella, *et al.*, 2009). Roger (2010) reports that there are thirteen CDMA-based network providers and five GSM network service providers in Nigeria. Airtel, MTN, MTEL, Globacom, and Etisalat are among the GSM network carriers; Multilinks, Starcomms, O'net, and Visafone are among the CDMA network operators. Nigerian consumers of telecommunications goods and services are diverse, as are their requirements, preferences, and expectations (NCC, 2007). In the current corporate environment, customer satisfaction is critical because, as noted by Deng *et al.* (2009), a service provider's capacity to generate high levels of satisfaction is essential for differentiating their offering and forging enduring bonds with customers. Hanif *et al.* (2010) claim that phone customers who are satisfied with their phone service tend to stick with that particular telecom operator. According to Eshghi *et al.* (2007), brands may establish lucrative and long – lasting connections with their people by ensuring their satisfaction. Despite the fact that attracting happy and devoted customers to a product or service is expensive. Nonetheless, Anderson *et al.* (2004) pointed out that the company will eventually generate revenue from it. Ahonen (2008) argued that mobile technology on society and the media landscape have transformative impact.

Mobile devices have become the 7th mass media channel, following print, recordings, cinema, radio, television and internet (Ahonen, 2008). Mobile phones including smartphones have evolved into powerful communication and multimedia devices, fundamentally changing how students consume information, interact with each other and engage with content (Balasubramanian, 2003; Ahonen 2008).

2. Methodology

Survey research design was the method used in this investigation. This makes it simple to administer questionnaires to Federal Polytechnic, Ado Ekiti students in order to learn more about their opinions on the variables influencing the choice of mobile service providers inside the institution. There were 600 learners in the study population. The number of students at the Polytechnic is around twenty thousand. Six hundred students from the institution's six Schools made up the study's sample size. A purposeful selection strategy was used to choose one hundred students from each School/Faculty in the Polytechnic.

The measurement tool was a questionnaire instrument. Three components made up the questionnaire. Information on demographics, additional relevant data, and variables influencing the selection of mobile service providers. Five (5) elements in Section A deal with demographic data, including gender, age group, school, Academic level, and religion. Items concerning additional pertinent information about the respondents are included in the next section. In order to gather or extract information from respondents on this area, closed – ended alternatives were offered. The final section discusses 24 elements that may influence students' decisions about mobile service providers. A Likert Scale questionnaire with five steps was utilized to get important data from respondents. The responses were divided into five categories: Strongly Disagree (SD), Disagree (D), Undecided (UD), Agree (A) and Strongly Agree (SA). The information obtained from the questionnaires was compiled, coded and analyzed using Statistical Package for Social Science (SPSS) 26.0.

3. Results and Discussions

Demographic Characteristics

Table 1: Distribution of Respondents by Gender

Gender	Frequency	Percentage
Male	266	44.3
Female	334	55.7
Total	600	100%

Table 1 shows the distribution of respondents by Gender. The result reveals that 44.3% of the respondents are male students while 55.7% are female students in the Polytechnic.

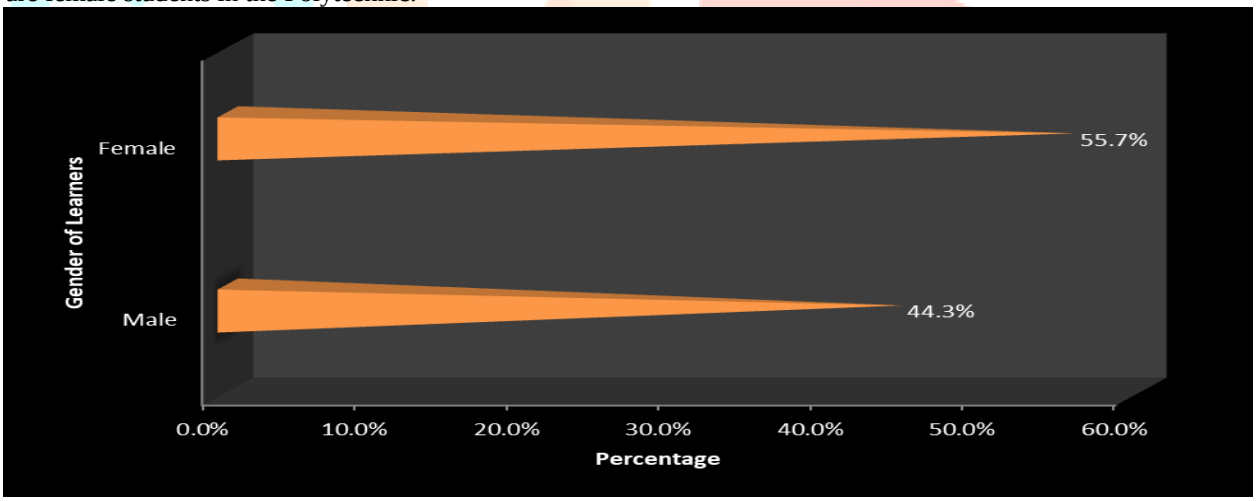

Figure 1: A Bar chart showing distribution of respondents by Gender.

Table 2: Age Distribution of Respondents

Age	Frequency	Percentage
16 – 20	71	11.8
21 – 25	160	26.7
26 – 30	189	31.5
31 – 35	140	23.3
36 – 40	40	6.7
Total	600	100%

Table 2 shows the age distribution of the respondents. The result reveals that majority of the respondents are in the age group 26 – 30yrs with 32% followed by age group 21 – 25yrs while age group 36 – 40yrs is the least with 12% of the respondents.

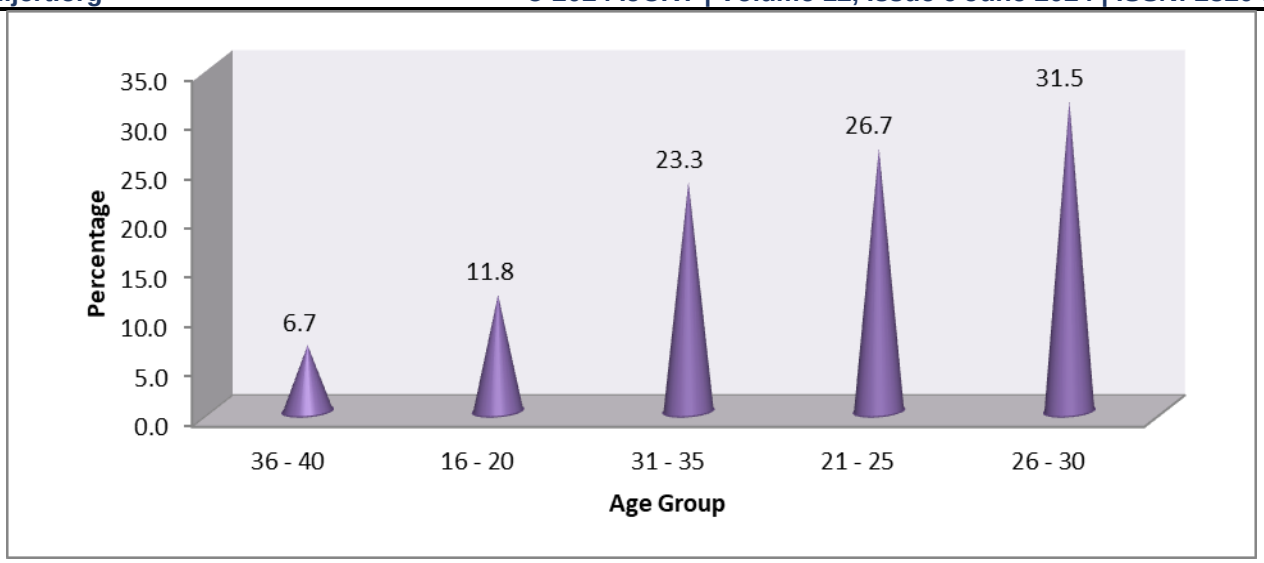

Figure 2: A Bar chart showing distribution of the respondents by Age

Table 3: Distribution of Respondents by Academic level

Class Level	Frequency	Percentage
ND I	67	11.2
ND II	112	18.7
HND I	258	42.9
HND II	163	27.2
Total	600	100%

Table 3 shows distribution of the respondents by academic level. The result reveals that majority of the respondents are in the HND I with 43% followed by HND II with 27% while ND I is the least with 11% of the respondents.

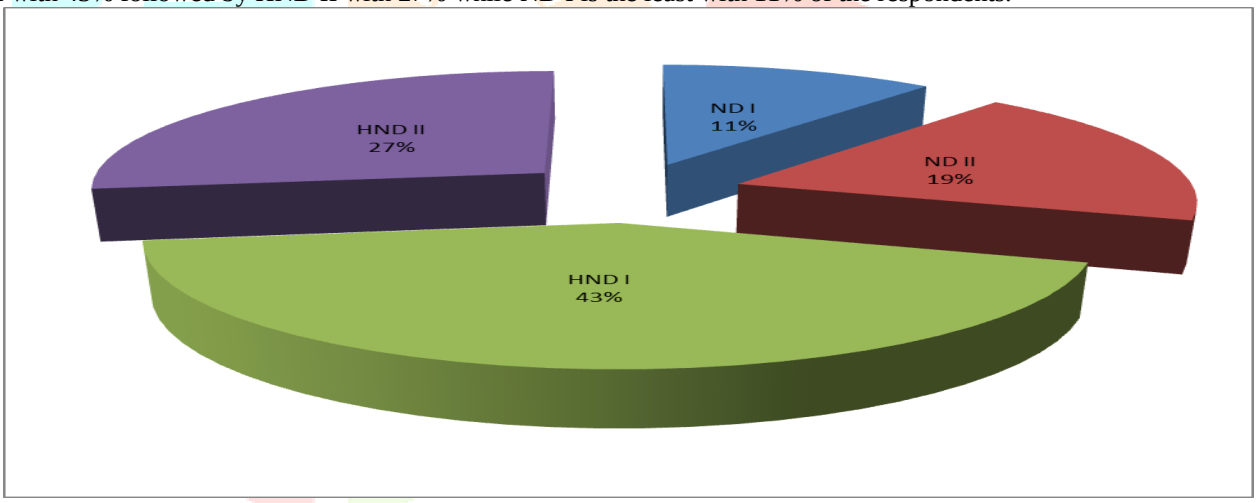

Figure 3: A Pie chart showing distribution of the respondents by Academic Level

Comment: Majority of the respondents are Higher National Diploma students. This means the respondents most likely understand research questions.

Table 4: Distribution of Respondents by Religion

Religion	Frequency	Percentage
Christianity	290	48.3
Islamic	205	34.2
Others	105	17.5
Total	600	100%

Table 4 shows distribution of the respondents by Religion. The result reveals that majority of the respondents are Christians with 48% followed by Muslims with 34%.

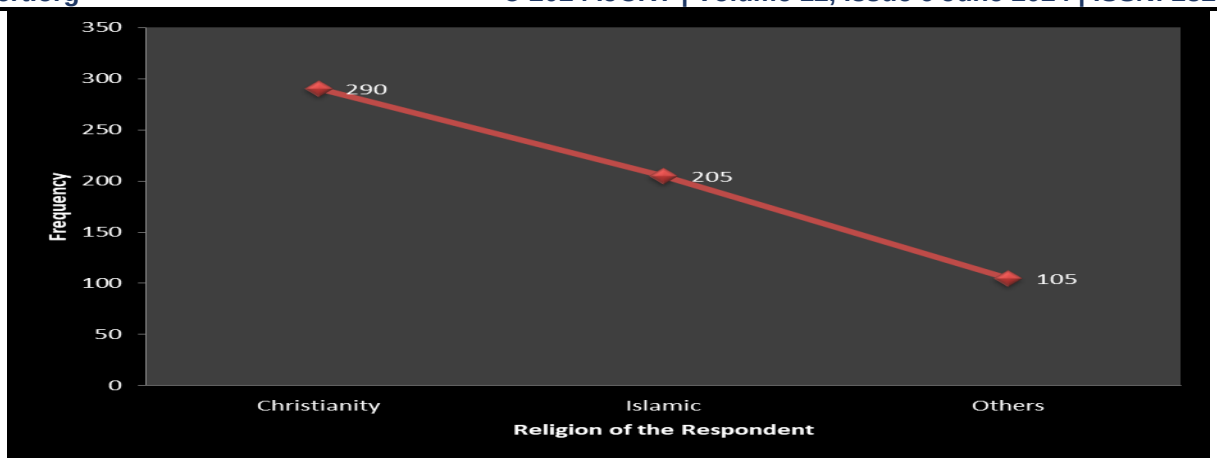

Figure 4: A Line chart showing distribution of the respondents by Religion

Table 5: Distribution of Respondents by Mobile Service Providers used

MSP used	Frequency	Percentage
Airtel	190	31.7
MTN	213	35.5
Glo	167	27.8
Etisalat	30	5
Total	600	100%

Table 5 shows distribution of respondents by Mobile Service Providers used. The result reveals that majority of the learners preferred MTN with 36% followed by Airtel with 32%, 28% of the learners preferred Glo while the least preferred mobile service provider is Etisalat with 5% respectively.

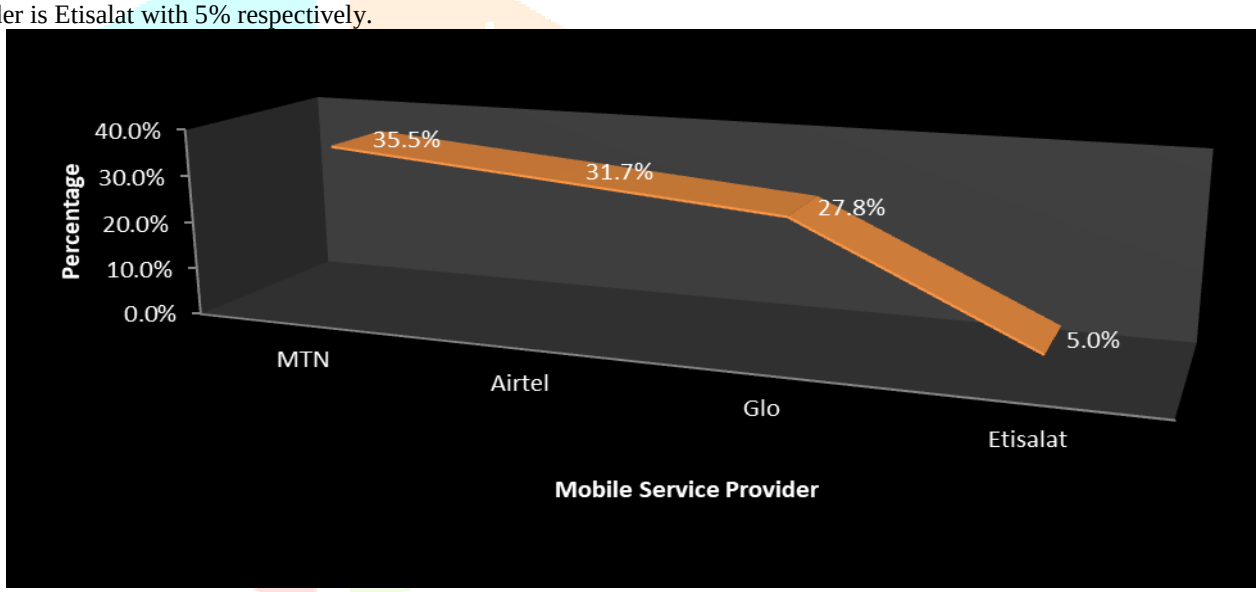

Figure 5: A Line chart showing distribution of the respondents by Preferred Mobile Service Provider.

Table 6: Distribution of Respondents by number of GSM lines owned

GSM Lines owned	Frequency	Percentage
One	201	33.5
Two	315	52.5
Three	54	9.0
Four	30	5.0
Total	600	100%

Table 6 shows distribution of the respondents by number of GSM lines owned. The result reveals that 52.5% of the respondents are using two GSM lines, followed by 33.5% of the respondents are using one GSM line while only 5% of the respondents are using 4 GSM lines.

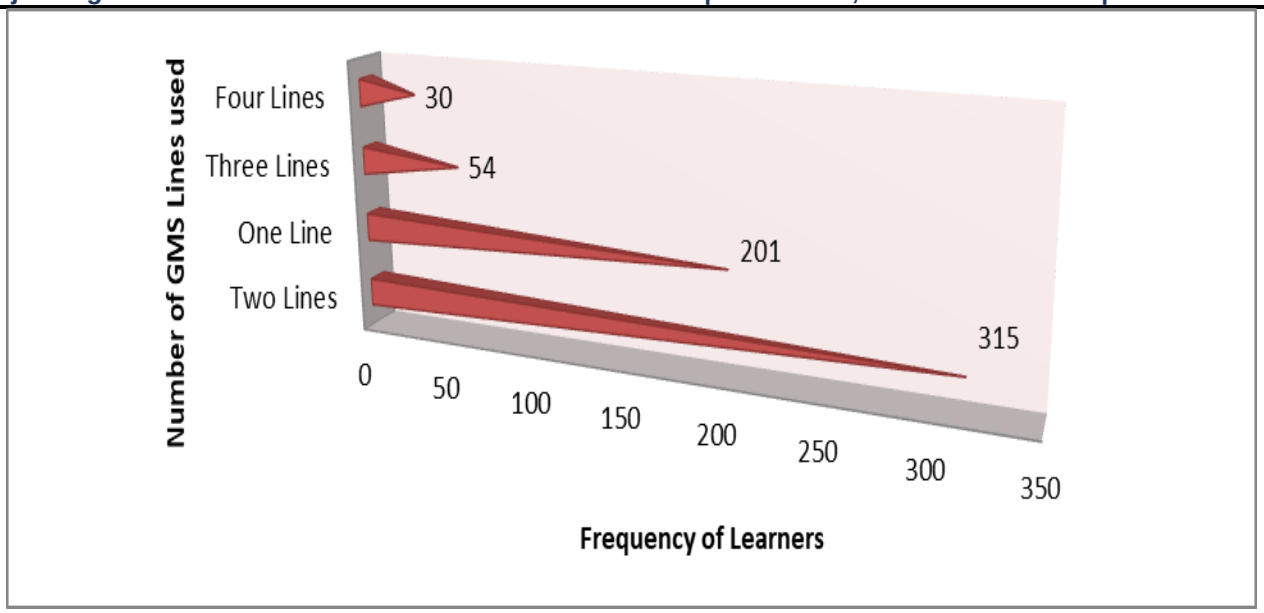

Figure 6: A Bar chart showing distribution of the respondents by number of GSM lines owned.

Table 7: Distribution of Respondents by Purpose of GSM lines

Purpose for GSM Lines	Gender / Frequency		Total	Gender/Percentage		Total
	Male	Female		Male	Female	
Communication	49	38	87	18.4	11.4	14.5
Advertisement	17	26	43	6.4	7.8	7.2
Research	42	53	95	15.8	15.9	15.8
Social Media Networking	49	76	125	18.4	22.7	20.8
Learning Resources	23	33	56	8.7	9.9	9.3
Schedule Organisation	16	21	37	6.0	6.3	6.2
Entertainment	70	87	157	26.3	26.0	26.2
Total	266	334	600	100%	100%	100%

Table 7 shows Distribution of the learners by purpose for GSM lines.

Male learners; it is revealed that 26.3% of them purposely used GSM lines for entertainment followed by Social Media Networking and Communication purposes (18.4%) each while they purposely used GSM line for Research (15.8%) respectively.

Female learners; it is observed that 26.0% of them purposely used GSM lines for Entertainment followed by Social Media Networking purposes while they purposely used GSM lines for Research (15.9%) and 11.4% for Communication purposes respectively.

Finally, it is discovered that learners generally preferred GSM lines for Entertainment, Social Media Networking, Research and Communication purposes in that scale of preference.

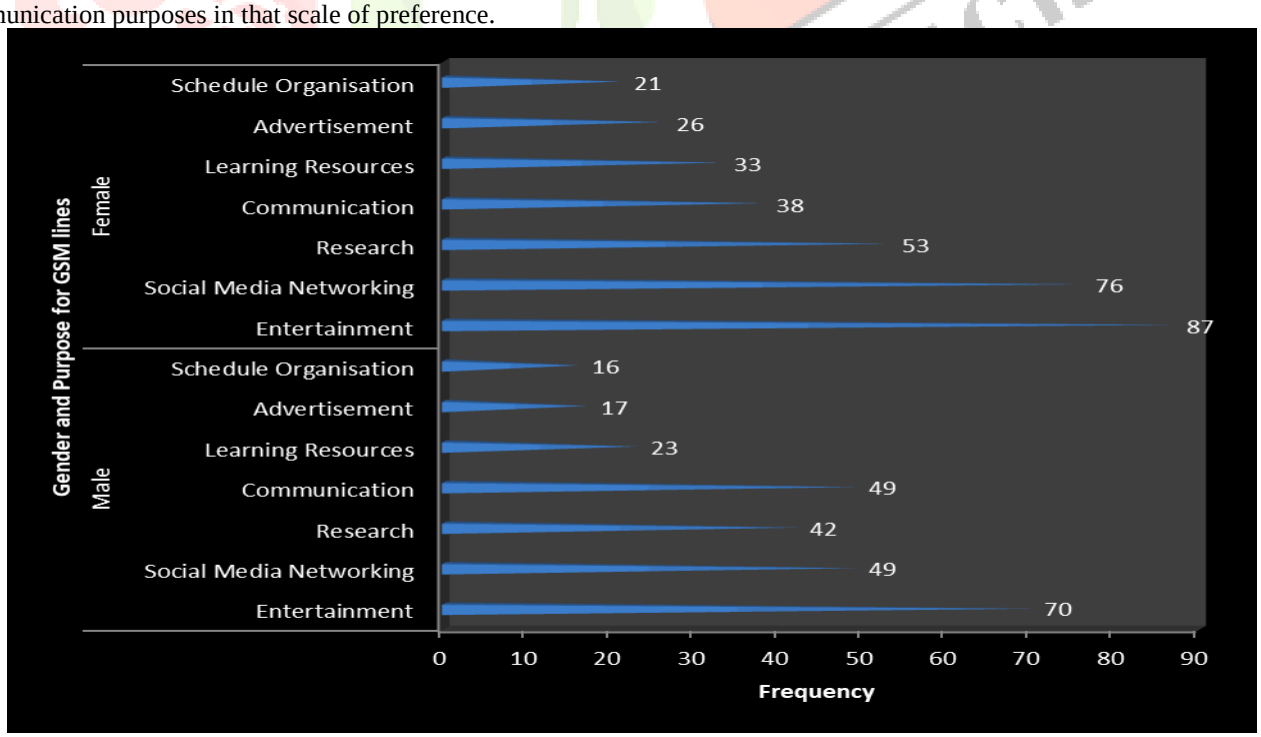

Figure 7: A Multiple Bar chart showing distribution of the learners by purpose for GSM lines.

ANALYSIS ON FACTORS THAT INFLUENCED CHOICE OF MOBILE SERVICE PROVIDERS AMONG TERTIARY INSTITUTION LEARNERS

TABLE 8: RANK OF FACTORS THAT DETERMINE LEARNERS' CHOICE OF MOBILE SERVICE PROVIDERS FOR EDUCATIONAL NEEDS

Impactful Factors	Mean	Rank
Coverage and Network Quality	3.01	1
Data Roller	2.99	2
Device Compatibility	2.98	3
Students Offers and Discounts	2.97	5
Data Speed	2.97	5
Flexibility of Plans	2.97	5
Cost and Pricing Plans	2.96	7
Extra Services	2.95	8
Data Caps and Fair Usage Policies	2.94	10.5
Family and Friends Plans	2.94	10.5
Bundle Offers	2.94	10.5
Privacy and Security	2.94	10.5
Promotions and Discounts	2.92	13
Brand Reputation and Trustworthiness	2.91	14
Customer Service	2.88	15
Community Engagement	2.81	16
Educational Partnerships	2.71	17
Innovation in Services	2.70	18
Ease of Recharging	2.69	19
Social Media Engagement	2.57	20
Accessibility of Customer Service	2.35	21
Environmental Responsibility	2.32	22
Incentives for Referrals	2.31	23
Transparency in Billing	2.30	24

Table 8 revealed the mean scores and ranks of factors that determine learners' choice of mobile service providers for educational needs. The mean score of Coverage and Network Quality have the highest mean scores which indicated that they rank number 1, followed by Data Roller and Device Compatibility while Transparency in Billing is the least rank factor respectively. We can infer that all the 24 factors are important in the selection or choice of Mobile Service Provider for educational needs of the respondents.

TABLE 9: RESPONSES OF LEARNERS ON FACTORS THAT DETERMINE LEARNERS' CHOICE OF MOBILE SERVICE PROVIDERS

ITEMS	SA (%)	A (%)	UD (%)	D (%)	SD (%)	Mean	SD	Decision
Coverage and Network Quality	89 (14.8)	206 (34.3)	49 (8.2)	124 (20.7)	132 (22.0)	3.01	1.424	High impact
Cost and Pricing Plans	142 (23.7)	148 (24.7)	19 (3.2)	171 (28.5)	120 (20.0)	2.97	1.510	High impact
Data Speed	139 (23.2)	148 (24.7)	25 (4.2)	168 (28.0)	120 (20.0)	2.97	1.502	High impact
Customer Service	114 (19.0)	226 (37.7)	48 (8.0)	44 (7.3)	168 (28.0)	2.88	1.523	High impact
Device Compatibility	88 (14.7)	224 (37.3)	35 (5.8)	119 (19.8)	134 (22.3)	2.98	1.433	High impact
Bundle Offers	99 (16.5)	227 (37.8)	20 (3.3)	117 (19.5)	137 (22.8)	2.94	1.465	High impact
Data Caps and Fair Usage Policies	93 (15.5)	235 (39.2)	20 (3.3)	116 (19.3)	136 (22.7)	2.95	1.453	High impact
Promotions and Discounts	102 (17.0)	229 (38.2)	20 (3.3)	115 (19.2)	134 (22.3)	2.92	1.464	High impact
Family and Friends Plans	94 (15.7)	232 (38.7)	22 (3.7)	118 (19.7)	134 (22.3)	2.94	1.450	High impact
Extra Services	97 (16.2)	227 (37.8)	22 (3.7)	115 (19.2)	139 (23.2)	2.95	1.464	High impact
Brand Reputation and Trustworthiness	105 (17.5)	206 (34.3)	49 (8.2)	118 (19.7)	122 (20.3)	2.91	1.431	High impact
Privacy and Security	95 (15.8)	218 (36.8)	43 (7.2)	116 (19.3)	128 (21.3)	2.94	1.431	High impact
Flexibility of Plans	92	224	27	125	132	2.97	1.441	High

	(15.3)	(37.3)	(4.5)	(20.8)	(22.0)			impact
Environmental Responsibility	183 (30.5)	244 (40.7)	28 (4.7)	90 (15.0)	55 (9.2)	2.32	1.296	Low impact
Accessibility of Customer Service	180 (30.0)	241 (40.2)	28 (4.7)	93 (15.5)	58 (9.7)	2.35	1.311	Low impact
Ease of Recharging	196 (32.7)	143 (23.8)	13 (2.2)	148 (24.7)	100 (16.7)	2.69	1.538	Low impact
Incentives for Referrals	186 (31.0)	244 (40.7)	25 (4.2)	87 (14.5)	58 (9.7)	2.31	1.307	Low impact
Students Offers and Discounts	92 (15.3)	209 (34.8)	52 (8.7)	118 (19.7)	129 (21.5)	2.97	1.422	High impact
Data Roller	89 (14.8)	206 (34.3)	55 (9.2)	121 (20.2)	129 (21.5)	2.99	1.415	High impact
Transparency in Billing	186 (31.0)	253 (42.2)	16 (2.7)	87 (14.5)	58 (9.7)	2.30	1.304	Low impact
Social Media Engagement	168 (28.0)	206 (34.3)	31 (5.2)	107 (17.8)	88 (14.7)	2.57	1.430	Low impact
Educational Partnerships	138 (23.0)	231 (38.5)	42 (7.0)	44 (7.3)	145 (24.2)	2.71	1.505	Low impact
Community Engagement	192 (32.0)	143 (23.8)	18 (3.0)	79 (13.2)	168 (28.0)	2.81	1.655	High impact
Innovation in Services	137 (22.8)	242 (40.3)	32 (5.3)	44 (7.3)	145 (24.2)	2.70	1.506	Low impact

N = 600, SA = Strongly Agree; A = Agree; UD = Undecided; D = Disagree; SD = Strongly Disagree.

Decision: Weighted Average = $67.05 / 24 = 2.79$.

The data analysis shows that majority of the 600 respondents (learners) appeared to believe that these factors collectively influence their choices when selecting a mobile service provider for their educational needs among others. They also believed that Coverage and Network Quality have high impact in choosing preferred mobile network provider. Also, learners believed that cost and pricing plans have high impact to gain insights into their decision making processes on preferred mobile service provider. Furthermore, learners believed that Data Speed has high impact on the selection of preferred choice of mobile service provider and finally, Learners believed that Students Offers and Discounts have high impact and helpful in choosing preferred mobile network provider for their educational needs. However, Respondents (learners) believed factors such as Environmental Responsibility, Transparency in Billing, Incentives for Referrals as well as Accessibility of Customer Service have low impact in their decision making processes on preferred mobile service provider for educational needs.

4. Summary

In this paper, factors that influenced students' choice of mobile service providers have been sufficiently identified. There is distribution of respondents by gender, age group and religion. Some demographic information of the respondents was described using bar chart, pie chart and line chart respectively. The following are listed as findings from the study:

- ✓ 56% of the respondents are female.
- ✓ 32% of the respondents are in age group 26 – 30 years.
- ✓ 70% of the respondents are in Higher National Dilpoma students
- ✓ 48% of the respondents are Christians.
- ✓ 36% of the respondents preferred MTN followed by Airtel with 32%.
- ✓ 26.3% of male learners preferred to use GSM for Entertainment while 15.9% of male learners preferred to use GSM for Research.
- ✓ 26.2% of female learners preferred to use GSM for Entertainment while 22.7% of female learners preferred to use GSM for Social Media Networking.
- ✓ The major factors that influenced or determined students' choice of Mobile Service Providers in order of rank or preferences are Coverage and Network Quality, Data Roller, Device Compatibility, Students Offers and Discounts, Data Speed, Flexibility of Plans and Cost and Pricing Plans respectively.

5. Conclusion

The study's findings indicate the respondents' decisions about which of the mobile service providers to use for their educational – related purposes are significantly impacted by these key criteria. The following factors (criteria) are primarily taken into account: Coverage and Network Quality, Data Roller, Device Compatibility, Students Offers and Discounts, Data Speed, Flexibility of Plans and Cost and Pricing Plans.

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7. Author Contributions

T.S.F.: Original Draft Preparation, Conceptualization, Methodology, Results Discussion and Review and Editing. All authors have read and agreed to the published version of the manuscript.

O.O.O: Methodology, Conceptualization, Review, Editing and Result Discussion.

D.O.O.: Methodology and Original Draft Preparation.

8. Declaration of Competing Interest

The authors declared that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this journal. Finally, the authors agreed that all information supplied here are real and original.

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