

Student Satisfaction with 3G Mobile Services in Bangladesh: Evidence from Rajshahi University

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Abstract

This article revisits student satisfaction with 3G mobile services in Bangladesh at a time when mobile broadband was still gaining ground. Using survey responses from 200 students at Rajshahi University, it examines five recurring dimensions in the technology and service literature: perceived ease of use, perceived cost, perceived service quality, perceived usefulness, and perceived enjoyment. The findings point to a generally positive assessment of 3G, although the dimensions do not carry equal weight. Perceived enjoyment (5.22) and perceived service quality (5.11) received the strongest ratings, followed by perceived usefulness (4.81) and perceived ease of use (4.77), while perceived cost (4.49) emerged as the comparatively weaker dimension. The correlation pattern is modest but informative: affordability is closely linked with ease of use ($r = .568$, $p < .01$) and is weakly associated with enjoyment ($r = .148$, $p < .05$). Overall, the results suggest that students judged early mobile broadband not only in terms of utility, but also in terms of experience. The study adds evidence from Bangladesh to the literature on mobile service evaluation in emerging markets and offers practical insight for telecom operators. Because the analysis is exploratory and based on a single purposive sample, the findings should be read with caution rather than treated as causal.

Keywords: *3G mobile services; customer satisfaction; technology acceptance; service quality; Bangladesh; university students*

Introduction

Mobile internet has changed the scope of telecommunications by moving users beyond voice calls into browsing, multimedia communication, and data-intensive everyday tasks. In emerging economies, however, technical rollout alone rarely guarantees success. Continued use depends just as much on how people experience the service in practice—whether it feels useful, affordable, reliable, and worth returning to. These perceptions matter most during the early diffusion of a new technology, when expectations are still taking shape and operators are competing to influence usage habits.

Within that broader transition, 3G marked an important step in mobile communication. Compared with earlier network generations, it offered faster internet access, richer media use, and a wider bundle of value-added services. In Bangladesh, those capabilities created new possibilities for communication, information access, learning, and entertainment. Yet adoption was never a purely technical matter. Users also had to feel that the service was easy enough to use, affordable enough to maintain, and valuable enough to fit into everyday life.

Earlier studies have examined 3G adoption and mobile-service evaluation in settings such as China, Malaysia, Botswana, Pakistan, Thailand, South Africa, and metropolitan Dhaka. Taken together, that literature shows that technology-related beliefs such as usefulness and ease of use matter, but it also points to the role of cost, service quality, and enjoyment. Evidence from Bangladesh remains relatively limited, especially outside the capital and at the level of everyday users. As a result, we still know less than we should about how young consumers in a developing-country setting judge the value of mobile broadband services.

Against this backdrop, the article examines student evaluations of 3G mobile services at Rajshahi University. Drawing on the Technology Acceptance Model (TAM) and related work on service quality and customer value, it considers five dimensions: perceived ease of use, perceived cost, perceived service quality, perceived usefulness, and perceived enjoyment. The study contributes a Bangladesh-based case from the early diffusion phase of 3G and, more importantly, shows why both functional and experiential explanations matter when mobile service satisfaction is assessed. Given the cross-sectional and exploratory design, the analysis is interpretive rather than causal.

Literature Review and Hypothesis Development

The framework is grounded primarily in the Technology Acceptance Model, which places perceived usefulness and perceived ease of use at the center of technology-related attitudes and responses. Because mobile communication services are not only technologies but also lived service experiences, TAM is complemented here with insights from research on price perceptions, service quality, customer value, and intrinsic motivation. This broader lens suggests that satisfaction with mobile services is unlikely to rest on a single judgment. It is more plausibly shaped by a blend of utilitarian, economic, and hedonic evaluations.

Perceived ease of use

Perceived ease of use refers to the extent to which users believe that engaging with a service requires little effort. Within TAM, this construct influences both attitudes toward a technology and perceptions of its performance benefits. Prior studies consistently show that systems perceived as clear, manageable, and easy to learn attract more favorable evaluations. This is particularly relevant for 3G services, where small screens, interface limitations, and unfamiliar features can create barriers for new users. When students can learn and navigate the service without difficulty, they are more likely to evaluate it positively. Hypothesis 1 therefore proposes that perceived ease of use is positively associated with student satisfaction with 3G mobile services.

Perceived cost

Perceived cost captures the extent to which users view the monetary sacrifice of adoption and continued use as reasonable. In telecommunications markets, such judgments are shaped not only by actual tariffs but also by package design, competing offers, and users' own financial constraints. This dimension is especially salient for students, whose usage decisions are often tightly linked to affordability. When the service is seen as fairly priced, users are more likely to evaluate it favorably. Hypothesis 2 therefore proposes that more positive cost perceptions are associated with higher student satisfaction with 3G mobile services.

Perceived service quality

Perceived service quality refers to the user's overall judgment of service excellence in relation to expectations. In the context of mobile communication, this usually involves reliability, clarity, responsiveness, coverage, and the range of available functions. A service that feels stable, dependable, and rich in features is more likely to generate satisfaction, especially when users rely on it for communication, internet access, and multimedia activity. On this basis, Hypothesis 3 proposes that perceived service quality is positively associated with student satisfaction with 3G mobile services.

Perceived usefulness

Perceived usefulness refers to the degree to which a user believes that a technology improves performance, convenience, or productivity. For mobile services, usefulness may be experienced through faster task completion, better communication, and greater mobility. Prior research repeatedly shows that when communication technologies are seen as practically beneficial, users are more willing to adopt them and continue using them. Hypothesis 4 therefore proposes that perceived usefulness is positively associated with student satisfaction with 3G mobile services.

Perceived enjoyment

Perceived enjoyment captures the intrinsic pleasure users derive from engaging with a service. The construct broadens purely instrumental accounts of technology use by recognizing that digital services are often valued for entertainment, novelty, and experience as much as for utility. In a 3G context, enjoyment may stem from browsing, gaming, video-related functions, and richer social interaction. A service that is enjoyable is more likely to encourage repeat use and positive affect toward the provider. Hypothesis 5 therefore proposes that perceived enjoyment is positively associated with student satisfaction with 3G mobile services.

Taken together, the framework treats satisfaction as a multidimensional evaluation shaped by usability, affordability, service performance, practical value, and hedonic appeal. The analysis that follows uses the reported survey output to examine both how respondents rated these dimensions and how the dimensions related to one another.

Research Method

The study uses a cross-sectional exploratory survey design. Although the original manuscript framed the research as causal, the reported evidence is better interpreted as explanatory and associational, since it relies on self-reported survey data, descriptive statistics, and Pearson correlations. Recasting the design in this way makes the claims more consistent with the sampling strategy and analytical procedures actually employed.

Data were collected from students at Rajshahi University through a structured questionnaire administered face to face. The sample included 200 respondents. The manuscript indicates purposive non-probability sampling, which is reasonable given the focus on a specific user group expected to be familiar with mobile services and relatively open to new technology. University students are a meaningful population for this topic because they are often early adopters of mobile internet while remaining acutely sensitive to price and usability.

The questionnaire covered demographic characteristics, usage behavior, reuse intention, and attitudinal evaluations of 3G services. Most perception items were measured on a seven-point Likert-type scale, with higher scores indicating more favorable evaluations. The reported indicators captured five focal constructs: perceived ease of use (two items), perceived cost (one item), perceived service quality (one item), perceived usefulness (three items), and perceived enjoyment (two items). The single-item treatment of cost and service quality limits construct depth, but it still provides a useful exploratory picture of how respondents interpreted the service.

Data analysis was conducted in SPSS. The reported output includes descriptive statistics, KMO and Bartlett's tests, and Pearson correlation coefficients. In this revised version, the results are read cautiously: mean scores are used to identify the relative strength of respondents' evaluations, while correlations are treated as evidence of association rather than proof of direct causal influence. This approach preserves the value of the original dataset while bringing the interpretation closer to accepted methodological standards.

Results

Sample profile

The sample was heavily male (82.0%), while female respondents accounted for 18.0% of participants. In terms of experience with 3G, half of the respondents were first-time users, 34.5% had used the service for two to six months, and 15.5% reported more than six months of experience. Reuse intention was broadly favorable: 46.0% said they intended to use the service again, 48.0% remained undecided, and only 6.0% reported no intention to reuse it. The income and home-division distributions suggest some socio-economic and regional variation within the sample, although the study remains confined to a single university and should not be read as representative of the broader Bangladeshi population.

Table 1. Sample profile of respondents (N = 200)

Domain	Category	n	%
Family income (BDT)	Less than 10,000	8	4.0
	10,001-20,000	79	39.5
	20,001-25,000	29	14.5
	25,001-30,000	24	12.0
	30,001-35,000	31	15.5
	35,001-40,000	20	10.0
	40,001-45,000	5	2.5
	45,001-50,000	4	2.0
Home division	Dhaka	31	15.5
	Khulna	81	40.5
	Rajshahi	56	28.0
	Rangpur	19	9.5
	Barisal	9	4.5
	Sylhet	4	2.0
Gender	Male	164	82.0

Domain	Category	n	%
	Female	36	18.0
Duration of 3G use	First time	100	50.0
	2 to 6 months	69	34.5
	More than 6 months	31	15.5
Reuse intention	Yes	92	46.0
	Under consideration	96	48.0
	No	12	6.0

Sampling adequacy

The reported KMO value was 0.599, and Bartlett's test of sphericity was statistically significant (chi-square = 573.051, df = 10, p = .005). This KMO value is modest, yet still acceptable for an exploratory study, while the significant Bartlett result indicates that the variables are sufficiently interrelated to justify further analysis. These statistics do not establish scale quality on their own, but they do suggest that the data are workable for preliminary examination.

Table 2. Sampling adequacy statistics

Statistic	Value
Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy	0.599
Bartlett's test of sphericity (chi-square)	573.051
Degrees of freedom	10
Significance level (p-value)	0.005

Descriptive results

Across the five focal dimensions, respondents evaluated 3G services positively overall, although the strength of those evaluations varied. Perceived enjoyment recorded the highest construct mean (5.22), followed by perceived service quality (5.11). Perceived usefulness (4.81) and perceived ease of use (4.77) also stood above the scale midpoint, indicating generally favorable functional assessments. Perceived cost received the lowest mean (4.49), but it too remained above the neutral threshold. Taken together, the overall average of 4.88 suggests a moderately positive orientation toward 3G services in this setting.

Table 3. Descriptive statistics of study constructs

Construct	Indicator	Mean	SD	Construct mean
Perceived ease of use	Learning to use 3G	4.62	1.226	4.77
	Using 3G is clear and understandable	4.92	1.034	
Perceived cost	Adoption cost is reasonable	4.49	1.027	4.49
Perceived service quality	3G provides a wide variety of services	5.11	0.996	5.11
Perceived usefulness	Allows tasks to be completed faster	4.93	1.262	4.81
	Improves quality of communication	5.36	1.094	
	Increases degree of mobility	4.13	1.194	
Perceived enjoyment	More enjoyable than previous service	4.80	0.974	5.22
	Using mobile service is fun	5.63	1.062	

Construct	Indicator	Mean	SD	Construct mean
Overall average	Across all reported perception statements	4.88		4.88

Correlation results

The correlation output points to only a limited number of statistically significant relationships. The strongest positive association emerged between perceived ease of use and perceived cost ($r = .568, p < .01$), suggesting that respondents who viewed the service as more affordable also tended to experience it as easier to use. A smaller positive relationship appeared between the learning-to-use-3G item and perceived cost ($r = .261, p < .01$), while cost was also weakly associated with enjoyment ($r = .148, p < .05$). The only statistically significant negative association in the reported matrix was between perceived cost and perceived service quality ($r = -.168, p < .05$). Most other pairwise relationships were not statistically significant, which implies that these dimensions were related but not interchangeable. In other words, respondents seemed to distinguish clearly between affordability, usefulness, enjoyment, and service performance.

Table 4. Selected statistically significant correlations reported in the survey

Variable pair	r	p	Interpretation
Learning to use 3G and perceived ease of use	.147*	.037	Small positive association
Learning to use 3G and perceived cost	.261**	.000	Modest positive association
Perceived ease of use and perceived cost	.568**	.000	Strongest positive association observed
Perceived cost and perceived service quality	-.168*	.017	Small negative association
Perceived cost and perceived enjoyment	.148*	.037	Small positive association

Note. * $p < .05$; ** $p < .01$. The table reports only those statistically significant associations retained from the original output.

Discussion

The descriptive picture is fairly clear: students did not evaluate 3G negatively, but neither did they respond to every dimension in the same way. Enjoyment and service quality received the strongest ratings, suggesting that what mattered most was not simply whether the service worked, but whether it worked well and made mobile use more engaging. That pattern is important because it shows that even in a developing-country context, evaluations of mobile internet services extend beyond narrowly instrumental concerns.

Usefulness and ease of use were also rated positively, which aligns with the central expectations of TAM-based research. Students generally felt that 3G improved communication, helped them complete some tasks more quickly, and was manageable to learn. At the same time, these dimensions were not rated quite as strongly as enjoyment and service quality. One plausible reading is that once a service clears the threshold of basic usefulness, satisfaction depends more heavily on how dependable and engaging the actual user experience feels.

Cost sits in a more ambivalent position. Although respondents rated the cost item above the midpoint, it was still the weakest of the focal dimensions. Yet cost also showed the strongest positive correlation with perceived ease of use and a smaller positive link with enjoyment. For a student sample, this makes intuitive sense: when service packages appear affordable, experimentation becomes easier, and the service may feel less burdensome and more enjoyable to adopt. Conversely, higher perceived cost may dampen the value of the overall experience.

The correlation pattern also cautions against treating these constructs as interchangeable. Most relationships were weak or statistically insignificant, which suggests that respondents kept relatively distinct judgments about usability, affordability, usefulness, service quality, and enjoyment. From a publication standpoint, that is a more defensible interpretation than claiming blanket causal support for every

hypothesis. The evidence here is exploratory, and its main value lies in showing that student evaluations of 3G were layered rather than one-dimensional.

Practical Implications

For telecommunications operators, three practical priorities stand out. First, service quality should remain central. Reliable connectivity, stable data performance, and a meaningful service bundle are likely to shape user satisfaction more than price cuts alone. Second, affordability still matters, especially for student and youth segments. Transparent tariffs, clearly communicated packages, and low-entry plans can reduce perceived barriers to adoption. Third, operators should not overlook enjoyment. Services that support entertainment, social interaction, streaming, gaming, and interactive learning can deepen users' emotional attachment to mobile broadband offers.

The findings also matter at the policy level. Efforts to expand digital connectivity cannot be judged only by network coverage or infrastructure rollout. Continued use depends on whether services are experienced as understandable, affordable, and worthwhile in everyday life. In educational settings, mobile broadband can support communication, information search, and access to learning resources. Policy initiatives aimed at digital inclusion may therefore benefit from paying attention not just to supply, but also to how end users perceive value.

For researchers, the study reinforces the importance of connecting service-marketing constructs with technology-acceptance frameworks. A narrow focus on usefulness and ease of use may miss experiential dimensions that matter strongly to younger users. Even in the legacy context of 3G, satisfaction appears to reflect a combination of cognitive, economic, and affective judgments.

Limitations and Future Research

Several limitations should be kept in view. First, the study relies on a purposive sample from a single university, so the findings speak to one student population rather than the wider Bangladeshi market. Second, the analysis is cross-sectional and based on self-reported perceptions, which limits both causal interpretation and behavioral validation. Third, some constructs in the original instrument were measured with only one item, and the available output does not include a full multivariate model or a distinct satisfaction scale. These features restrict the level of construct validation that can be claimed in a submission-ready paper.

Future research could strengthen this line of inquiry by using validated multi-item scales, broader multi-site samples, and multivariate techniques such as regression or structural equation modeling. Comparative studies across 3G, 4G, and 5G settings would also help clarify whether the weight of cost, enjoyment, and service quality changes across successive generations of mobile technology. Qualitative or mixed-method designs could add further insight into how students interpret service value in relation to study, entertainment, and everyday social communication.

Conclusion

This study revisits student evaluations of 3G mobile services in Bangladesh through survey evidence from Rajshahi University. The results point to a generally positive assessment of 3G, with the strongest evaluations attached to enjoyment and perceived service quality. Usefulness and ease of use were also rated favorably, while cost remained relevant but comparatively weaker. The reported correlations further suggest that affordability is tied most clearly to usability and, to a lesser extent, to enjoyment.

Taken together, the findings show that satisfaction with mobile broadband services is multidimensional. For operators, that means network performance, value perception, and experiential quality need to be managed together rather than in isolation. For researchers, the paper illustrates the value of combining TAM-based reasoning with service-quality and customer-value perspectives. The evidence remains exploratory, but it offers a useful foundation for more contemporary and methodologically rigorous work on digital service satisfaction in Bangladesh and other emerging-market settings.

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