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# WAYS TO IMPROVE THE QUALITY OF PUBLIC TRANSPORT SERVICES

**Abstract**. Organizations which give public transportation administrations ought to get inspiration to work on the nature of their administrations while diminishing the expenses. Essential point of the momentum research is to do examination concerning nature of transportation framework in Bukhara – quite possibly of the main city in Uzbekistan as far as being verifiable and social spot, in this manner drawing in additional vacationers. The strategy followed by this exploration is to utilize subjective review which has been done in light of the overview and

quantitative review which depended on the outcomes got from a specific gathering. Understudies who made the portrayal of test were the significant clients of transport. A portion of the elements which enormously affect the general fulfillment level are: regulator conduct, innovation, drivers conduct, comfort, conveniences lastly the cost. For the most part, understudies feel disappointed with the public transportation quality. While innovation is most invited factor, accommodation is the last to be valued. By considering the outcomes, the ongoing review will attempt to concoct a few creative ways to deal with work on the productivity and nature of public transportation in the city.

**Keywords:** transport services, exploratory factor analysis, transportation quality, regression analysis, satisfaction, qualitative analysis, public transportation, servqual stands.

**Introduction.** It is constantly thought to be fundamental to have sufficient data with respect to transportation quality gave in nations since it is viewed as a main thrust and impetus for efficient improvement [1]. The general client discernment with respect to an encounter of utilizing administrations is viewed as quality in the writings [2]. There is a lot of devices to secure client assumptions and encounters while doing subjective examination. Having said that, SERVQUAL stands apart among numerous others by being regularly utilized and known apparatus to gauge nature of administrations [3]. This device is accepted to be a complex instrument utilized while completing exploration which is intended to plainly figure out what the customer discernments and assumptions are for a given help. This estimation device has scale which proves to be useful while making estimation of client discernment and assumptions about execution of gotten administration. Since the quality can't be ignored, to regard the client assumptions who utilize public vehicle, quality ought to be the fundamental concentration for organizations which are considered capable as far as conveyance of administrations [4]. The nature of given public transportation administration in Bukhara began getting viewed as an essential concentration for the organization which is responsible for public transportation. Initially, local network of buses was improved, leading to the introduction of new buses. Since the student are the significant clients of the public transportation, they were designated to gather measurable information which is the main part in this work.

Assessment of transportation quality – literature review. Administrations connected with public transportation are considered as a transportation through movement which make arrangement of explicit or general transportation to clients [5]. There a many examinations did to make evaluation of public transportation framework, the greater part of which with the emphasis on the transports. Most examinations approach nature of this specific kind of administration in specific topographical regions. In 1998, interviews were organized and written complaints were collected to make analysis. What was finished up from that study was that every one of the wellsprings of disappointment were going on again and again in the space where the exploration was led furthermore, the elements which were bringing down the nature of transportation were reliability and drivers discourteousness [6]. Research done by Kumarv Kanagaluru Sai [1] makes difference clear between traveler discernment and assumptions. Moreover, the scientist fostered this exploration further to concentrate on the distinction among various respondents, for example, ladies, men and different travelers who have different occupations.

The exploration, which was completed by Sanchez Pérez, Manuel et all [7] researched the association between buy aim and nature of administration in open transportation administration in Spain by applying SERVPERF adjusted scale. Following this is another scale called QUALBUS which was utilized to make appraisal of the transport administration locally in Spain. From the perspective on Kennedy.J [8], low quality of administration originates from for the most part two elements and they are: disregarding the work of the perfect individuals and ignoring the estimation of results coming from specific exercises presented in open transportation. As per Gronroos.C [9], there are significant six rules: availability and adaptability, unwavering quality and reliability, amazing skill and abilities, notoriety, mentalities, ways of behaving and recuperation. Quality of public transport service in two Indian cities was under investigation in a research which was carried out by Randheer, AL-Motawa and Vijay [5] to know how users perceive the quality. They made

use of scale in SERVQUAL by using 28 different items in six different dimensions and those dimensions are: responsiveness, reliability, assurance, empathy, cultural and tangibility. To decrease factors and find suitable dimensions, factor analysis proposed earlier was made use of. Elimination of dimension tangibility was done. From what was done, it was concluded that reliability, assurance and responsiveness were considered to be important dimensions. The research results clearly show that some of aspects mentioned in the following are considered to be important: employees who inspire the trust, services which are provided on time (arriving at destination timely), employee's willingness to help passengers, convenience in operating hours (correlation with work schedule) and respect towards for everyone, especially for local values, attention to women, children and disabled people [5]. Barabino.B et al [10] made some modifications to SERVQUAL scale before using it in his own research to evaluate quality of service in urban bus transport system and in his work, on-board security, frequency, cleanliness and reliability were considered as important factors.

**Research methodology.** The primary aim of this research is to make investigation into the current public transport quality in Bukhara. The study focus was on the bus which is one of the popular means of transportation since it was subject to modernization.

What was expected from the research is given below:

- A) determination of factors which can be indicators of public transport user satisfaction
- B) determination of level of satisfaction of users in terms of public transportation.
- C) suggestions for improvement of public transport services.

Among students, the ones who use the bus mostly were chosen to take part in the ongoing research. Two types of research were merged together in this work which were: quantitative research for which, the survey was important and second one was qualitative research for which, the focus group is considered to be important. In the conducted research, there were three different groups, with each group including eight participants. As it was mentioned above, participants are meant to be students since majority part of student population use the bus. Depending on the results obtained from focus groups, questionnaire was prepared which is given below and the satisfaction level was ranging from one to seven, with one meaning total dissatisfaction and seven meaning total satisfaction (Table 1). Apart from the scale in this table, to evaluate the overall experience, another scale was used and gender information was also taken into account for the statistical data.

#### What means of transportation do you use frequently?

□ bus □ taxi private □ car □ Not public transport

On the scale ranging from one to seven, assess satisfaction level in different following aspects when using the bus in the city.

**Table 1.** Satisfaction level

Aspects	Assess satisfaction level						
Noise	1	2	3	4	5	6	7
Ticket price	1	2	3	4	5	6	7
Unannounced deviation	1	2	3	4	5	6	7
Subscription	1	2	3	4	5	6	7
Displaying traffic schedule	1	2	3	4	5	6	7
Frequency	1	2	3	4	5	6	7
Buying a ticket via SMS	1	2	3	4	5	6	7
Convenience	1	2	3	4	5	6	7
Smell	1	2	3	4	5	6	7
Displays	1	2	3	4	5	6	7
Music	1	2	3	4	5	6	7
Garbage basket	1	2	3	4	5	6	7
Waiting time	1	2	3	4	5	6	7
Comfort	1	2	3	4	5	6	7

<b>m</b>			2		_	_	_
Temperature	1	2	3	4	5	6	7
Video Cameras	1	2	3	4	5	6	7
Ticket scanners	1	2	3	4	5	6	7
Windows	1	2	3	4	5	6	7
Chairs	1	2	3	4	5	6	7
Tidiness	1	2	3	4	5	6	7
Driver's clothing	1	2	3	4	5	6	7
Driver's language	1	2	3	4	5	6	7
Driving style	1	2	3	4	5	6	7
Respect towards passengers	1	2	3	4	5	6	7
Controller's respect towards	1	2	3	4	5	6	7
passengers			3	•	3	O	,
Controller's manner	1	2	3	4	5	6	7
Fair penalties	1	2	3	4	5	6	7
Time to manage controls	1	2	3	4	5	6	7
Safety for accidents	1	2	3	4	5	6	7
Safety against thieves	1	2	3	4	5	6	7
Waiting time	1	2	3	4	5	6	7
Passenger behavior	1	2	3	4	5	6	7
Number of buses in the same line	1	2	3	4	5	6	7

Source: Made by the author according to results obtained and to carry out research

**Overall experience** 

Overan experience						
1	2	3	4	5	6	7

Gender	□Male	□Female
District		
Income per me	onth	

⊠< 500k □500-1000

**Research results.** Overall, 30 subjects were tested for the questionnaire and in order to make questions clearer, some modifications have been made. Validity and accuracy of the content were checked by three professors who work at and commute to university by bus almost every day. Having analyzed the questionnaire, they said they can confirm that all the included aspects can cover all the conditions to carry out survey. Factor analysis was used to verify the construct validity, by grouping the items according to dimensions and correlations among variables. Sample

 $\Box 1000-1500 \quad \Box 1500-2000$ 

 $\square > 2000$ 

**Table 2.** Sample of research

structure can be seen in Table 2.

Table 2. Sample of Tescaren								
				Income per month				
			>500	500- 1000	1000- 1500	1500-2000	>2000	
	Male	Count	28	22	10	0	4	64
Candan	Maie	%	26.9%	32.4%	29.4%	0.0%	100%	30.2%
Gender	Female	Count	76	46	24	2	0	148
	remaie	%	73.1%	67.6%	70.6%	100%	0.0%	69.8%
То	4.1	Count	104	68	34	2	4	212
То	tai	%	100%	100%	100%	100%	100%	100%

Source: Made by the author according to results obtained and to carry out research

To carry out factor analysis, size of the sample should be sufficient. There are some rules which are given below. According to Rule 100, the variables which are used in factor analysis should be five time smaller than the total number of participants who will act as a respondent [11]. According to Rule 150, the size of the sample should be equal to the number which is in the range from 150 to 300 [12]. According to Rule 200, the size of the sample should be no less than 200 in

some cases [13]. In this study, overall, 212 samples were collected from respondents which is totally appropriate size in terms of carrying out factor analysis.

Exploratory factor analysis was used in SPSS which used Principal Components Extraction Method with 33 items included. KMO test value was equal to 0.815 which, in turn, confirms that factor analysis meant for correlations among matrix is appropriate. Values of KMO which is more than 0.7 is the indication of reliable solution. Whereas, values equal to 0.6 or smaller can illustrate factors which are not appropriate [14] [15]. While some researchers highly recommend a level, which is greater than 60 % [17], some researches tend to keep analysis factor around 80% in variance [16].

In all the carried-out researches, the Component Matrix represents loadings of factors, with loadings which is less than 0.3 being considered weak and other ones which are in the range from 0.3 and 0.6 are considered average and finally those which are over 0.6 are regarded as strong [18]. Majority of researchers who made use of exploratory analysis did their work with 0.4 cut-off margin point [19]. In this work, it is impossible to come across values which are lower than 0.4 that's why removal of no item is necessary. Items sharing the same loadings with more than one factor were made to disappear in Rotated Component Matrix.

After removing some of the factors, the new factor analysis was carried out and new six factors were identified which were more than 1 which plays important role to explain 69.71 percent in total variance. Consistency is measured internally with the help of the coefficient called Cronbach-alpha. If this coefficient is around 0.89, it is considered reliable, with the lowest value being 0.7 however, in some cases, cut-off point is 0.75 or can be 0.8[16] while other researches consider 0.5 value satisfactory [20]. From the view of George and Mallery [21], value 0.9 can be regarded as excellent in terms of reliability.

In this work, six dimensions were identified and they are: Convenience, Amenities, Drivers behavior, Controllers behavior, Price and Technology. Table 3 illustrates the used scale in the dimension called Drivers behavior in which the Cronbach-alpha coefficient value is 0.82. Initially, there were 4 items but after the removal of Other travelers' behavior this coefficient reached to 0.85. The level of satisfaction is 3.36. Driving style is considered as a one of factors which cause dissatisfaction.

**Table 3.** Drivers behavior

Item	Loading	Average
Driving style	0.837	3.28
Driver respect for passengers	0.766	3.80
Driver language	0.711	3.83

Source: Made by the author according to results obtained and to carry out research

Scale for the Controllers behavior can be seen in table 4 Initially, the scale had 3 items and internal consistency scale was 0.79. After the removal of Driver clothing in scale, Cronbach-alpha coefficient reached 0.9 and satisfaction level was 2.59. Students expressed their dissatisfaction about how controllers communicate with them and also they expressed disrespect of controllers.

**Table 4.** Controller behavior

Item	Loading	Average
Controller respect	.896	2.614
Controller manner	.859	2.5728

Source: Made by the author according to results obtained and to carry out research Amenities dimension is represented in table 5 which includes three items and scale consistency is 0.79. This scale has level of satisfaction with 3.05. People felt dissatisfied about the number of

buses in the same line as well as the way the windows and chairs are organized in the bus.

**Table 5.** Amenities

Item	Loading	Average
Chairs	0.824	2.95
Windows	0.775	3.00
Number of buses	0.529	3.21

Source: Made by the author according to results obtained and to carry out research

Convenience dimension is clearly illustrated in the table 6 which includes four items and consistency in this scale is 0.83 and level of satisfaction is 2.21. Passengers expressed their dissatisfaction about the conditions and comfort level.

Table 6. Convenience

Item	Loading	Average
Temperature	0.727	2.21
Garbage bins	0.730	1.80
Smell	0.785	1.69
Convenience	0.718	2.34

Source: Made by the author according to results obtained and to carry out research

The technology dimension is given in table 7 with 4 items included in the scale initially and scale consistency is 0.58. Once the removal of uninformed deviation from scale occurred, the coefficient reached 0.65 and level of satisfaction was 4.01. They felt no satisfaction or dissatisfaction regarding technology.

Table 7. Technology

Items	Loading	Average
Displays	0.582	3.87
SMS buying system	0.750	4.27
Connection among transportation lines	0.574	3.91

Source: Made by the author according to results obtained and to carry out research

Table 8 illustrates price dimension which has two items and consistency was 0.73, with satisfaction level being equal to 3.4. The factors that make students dissatisfied are subscriptions and prices of tickets. Even though they are offered special subscriptions, they do not seem to be enough.

Table 8. Price

Item	Loading	Average
Ticket price	0.81	2.99
Subscription	0.78	3.81

Source: Made by the author according to results obtained and to carry out research

In the table 9, each factor describing satisfaction level is illustrated, with average satisfaction level being 3.31. People felt dissatisfied about the different aspects of the public transportation in the city and the technology is the first and convenience is the last when it comes to appreciating them. In the table 10, what is shown is coefficients which are used for regression analysis.

**Table 9.** Overall satisfaction

Factor	Average
Technology	4.01
Driver behavior	3.63
Price	3.40
Amenities	3.05
Controller behavior	2.59
Convenience	2.01

Source: Made by the author according to results obtained and to carry out research

Table 10. Coefficients

20010 200 000111010110									
	В	Std. Error	Beta	t	Sig.				
(Constant)	3.311	0.59		55.750	0				
Convenience_F	0.55	0.60	0.262	5.967	0				
Drivers_F	0.781	0.60	0.577	13.125	0				
Controllers_F	0.225	0.60	0.166	3.783	0				
Amenities F	0.457	0.60	0.337	7.669	0				

Technology_F	0.364	0.60	0.269	6.122	0
Price_F	0.030	0.60	0.022	0.510	0.611

Source: Made by the author according to results obtained and to carry out research

Regression analysis was used to determine how important each factor is. With the help of the regression model, 60 percent of variables can be explained which are dependent variables. To carry out Anova analysis, sig value should be less than 0.05. According to null hypothesis, some regression coefficients which are close to zero were rejected. Variables which are independent, can explain the variation of variables which are dependent.

General satisfaction level = 3.3+ 0.78\*driver's behavior +0.45\*Amenities +0.36\*Technology +0.35\*Convenience +0.22\*Controller behavior.

General degree of satisfaction is explained by the equation:

Almost all coefficients corresponding to connections, which are significant, are available for following five different dimensions: Controllers behavior (t=3.7, sig.=0.00), Amenities (t=7.66, sig.=0.00), Drivers behavior (t=13.12, sig.=0.00), Technology (t=6.1, sig=0.00) and Convenience (t=5.9, sig.=0.00).

Following equations helps to find the general satisfaction level.

Drivers behavior is considered as the import factor when it comes to general satisfaction. Another important factor mentioned by the young people are driving style and driver respect towards passengers because of which, passengers feel dissatisfied. Other remaining factors are as equally important as the ones mentioned above in terms of making passengers feel satisfied with public transportation quality.

Conclusion. There are some factors which can directly affect satisfaction level among public transport users and they are: amenities - the organization of windows and seats and functionality of them, driver behavior - how they talk with passengers, how they communicate and how polite they are, technology - availability of displays and possibility of buying the ticket by SMS system using mobile phones, controller behavior - how they respect passengers or how they communicate with students while checking the ticket and finally convenience - available conditions in the bus like air conditioner. Compared to other factors, only technology was found satisfactory while other remaining factors were found dissatisfactory. These obtained results can be used to improve the quality of public transportation service since it clearly indicates some of the aspects which are not appreciated much by the students who are majority part of public transport users. Findings obtained in this research can be of benefit for some administrations who are striving to improve the quality of transportation system to meet the passenger expectation.

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## ЗИЁРАТ ТУРИСТИК КЛАСТЕРИНИ ШАКЛЛАНТИРИШНИНГ ЎЗИГА ХОС ХУСУСИЯТЛАРИ

**Аннотация**: Мақолада хизмат кўрсатиш соҳасини ҳудудий жиҳатдан самарали ташкил этишга қодир бўлган кластер механизмларини зиёрат туризмини ривожлантиришда қўллаш, кластер атамасини илмий жиҳатдан ёритиш ва кластер ёндашувида зиёрат туризмини ривожлантириш учун муҳаддас жойларни кластерлаштириш шарт-шароитлари ўрганилган.

**Калит сўзлар:** зиёрат туризми, туристик кластер, муқаддас жой, зиёрат кластери, туристик худуд, зиёрат дестинация, кластернинг органик тузилиши, кластер модели.

**Кириш.** Жаҳонда туристик кластерларни ташкил қилиш ва уларни инновацион ривожлантиришга йўналтирилган кенг қамровли илмий тадқиқотлар олиб борилмокда. Амалга оширилаётган илмий изланишлар таркибида туризм соҳасида кластерларнинг ўзига хос хусусиятлари ва шакллантириш босқичлари, аломатлари, амал қилиш самарадорлиги, худудларнинг рақобатбардошлигини ошириш, инновацион туристик маҳсулот ва хизматларни яратиш каби йўналишлардаги тадқиқотларга алоҳида эътибор берилмокда.

Ўзбекистонда туризмнинг салохиятли ва истикболли турларидан бири зиёрат туризми хисобланади. Унинг ўзига хос хусусияти комил инсонни хам жисмоний, хам маънавий жихатдан шакллантиришга ижобий таъсир кўрсатиши билан боғлик. Бугунги кунда жахондаги туристик объектларнинг 90 фоизидан дан ортиғи бевосита ёки билвосита