DIGITAL PHOTO STUDIO, BARDOLI – MEASUREMENT OF SERVICE QUALITY USING SERVQUAL SCALE

Mulchandji Shambhulalji Sen*

ABSTRACT:

For last two decades in India, we have witnessed a revolutionary change – in every phase of our life. Product market and gradually service market both are affected by this change - irrespective of nature of service organization-from a large corporate group to a small local business venture. This article deals with a study of service quality of a small local photo studio in Bardoli city – Digital Photo Studio. The photo studio service is one in which greater part of the service dominates intangible creation over a small tangible part. Rightly said, "Change is the only permanent thing in life". The same is applicable for the business. Business today is no more business tomorrow. In such fast changing business scenario it is important to measure service quality of the service provided by the business organization. Limited research is done in measuring service quality of a photo studio. Measuring the service quality is always a difficult question for marketers. To overcome this difficulty research undertaken here has adopted SERVQUAL scale to measure the expectations and perceptions towards various attributes of photography service provided by Digital Photo Studio, Bardoli.

Key Words: Product, Service, Service Quality, Photography service and SERVQUAL.

* Assistant Professor, Shrimad Rajchandra Institute of Management & Computer Application.

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INTRODUCTION:

1.1: INTRODUCTION TO PHOTOGRAPHY SECTOR:

"Photography" word is derived from the Greek words photos ("light") and graphein ("to draw"). The history of photography can be traced back in the 16th century when mechanical camera like obscura was used to project the image than to capture. But today we have transited from mechanical camera to digital one like Nikon D5 and Canon EOS Mark IV. The word "Photography" was first used by the scientist Sir John F.W. Herschel in 1839. It is a method of recording images by the action of light, or related radiation, on a sensitive material.[1] We have witnessed the change around us from a mechanical camera to latest digital camera. Photography industry in India is one of the highly growing industries whereby photographers are coming out with new applications with the help of latest technology. According to business live photo India 2011 report the digital camera market is growing more than 100% every year. Total estimated value of photography market in India is about Rs.5, 000/- crore with a strong economic growth and more than 100 crore population. [2]

About history of modern photography, Louis Daguerre was the inventor of the first practical process of photography. In 1829, he formed a partnership with Joseph Nicephore Niepce to improve the process Niepce had developed. In 1839 after several years of experimentation and Niepce's death, Daguerre developed a more convenient and effective method of photography, naming it after himself - the daguerreotype. In the early 1940s, commercially viable color films (except Kodachrome, introduced in 1935) were brought to the market. These films used the modern technology of dye-coupled colors in which a chemical process connects the three dye layers together to create an apparent color image.

Limited research has done to measure service quality of a photo studio which covers primarily photography service. Photography service is high on experience attribute or credence attribute whereby customers cannot be able to evaluate prior to purchase, customer must be use the service to know what they are getting. Photography service is also challenging because of

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[1] http://inventors.about.com/od/pstartinventions/a/stilphotography.htm , March 6, 2012, 2.00 pm
[2] http://www.businesslive.in/html/photoindia2011.html - March 6,2012, 1.30 pm

intangibility and customized nature. Photography service often termed as an art which utilizes skill of the photographer. Many a time customer dissatisfied from one studio may get satisfied at other studio or other instance. Good Photography requires capturing right moment at right time from right angle at right place. The photography service can be categorized into two category; indoor photography and outdoor photography. The study undertaken here focuses on indoor or studio photography. Indoor photography can be defined as, "Photography inside the studio while the photography outside the studio can be termed as outdoor photography."

1.2: ABOUT DIGITAL PHOTO STUDIO:

Mr. Chetan Patel is a visionary professional photographer and videographer from Nizar, Bardoli having a vast experience of photography & Video recording at various places and at various occasions. He has been in this field for more than a decade. A person having a wide social network, utilizing latest technology in the field, understanding needs of valuable customers and providing value added services to them. Digital Photo Studio established in year 2002 with an initial investment of Rs. 5, 51,000/-. at prime location of Bardoli i.e. Surati Jakatnaka (Entrance of Bardoli). Prior to that Mr. Chetan Patel worked for 2 years & 8 months with Jenil Colour Lab and Gaurav Studio in Bardoli. This initial start up includes staff of 3 persons. In year 2001 Digital Photo Studio had one movie camera, one photography camera, 1 computer and one studio set within limited space of 10 ft * 33 ft dimension. The business also included framing and lamination work. The point of radical change came into existence in Aril 2011 when the location of Digital Photo Studio was changed. Now that old studio at inner place was shifted to new front place. The size of new studio is 16 ft * 80 ft with 7 staff members and all new and modern facilities. Within very short span of time Mr. Chetan Patel has established its brand identity among the local as well as international community. There are various memorable moments in our life. Many times in our life we miss those invaluable / prestigious moments. Digital Photo Studio believes in "Reflecting Moments" by capturing memorable memories. One will find the true reflection of memories in the digital content like images, videos etc. Customer Satisfaction is the prime objective of Digital Photo Studio. Employees at Digital Photo Studio are committed to deliver better value to the customers.[3]

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[3] http://www.dpsbardoli.com/aboutus.php

Digital Photo Studio provides various photography related services;

- Passport Photography
- Portfolio Photography
- Children Photography
- Couple Photography
- Family photography
- Wedding Photography
- Photo print on Gift articles
- Photo enlargement
- Photo Framing etc.

There are several players in Photography market of Bardoli which includes major players/ competitors like Sonu Digital Studio, Photo fine Studio, Krishna Studio, Mitu Photo Studio, Ashok Studio, Patel Studio etc.

1.3: REVIEW OF LITERATURE

There are different views given by different researchers about the concept of service. Services are activities, deeds, processes and interactions by one party to another (Solomon et al., 1985; Lovelock, 1991; Zeithaml and Bitner, 2003; Vargo and Lusch, 2004). Lovelock (1991) defines services as "An act or performance offered by one party to another. Although the process may be tied to a physical product, the performance is transitory, often intangible in nature and does not normally result in ownership of any of the factors of production. "

In today's cut throat competition, service firms make every effort to stay in the front position of today's marketplace by offering quality service. Most definitions, as in product also focus on the customer, and on the fact that services are customers' problems' solution (Gro¨nroos, 2001). We can conclude that service quality is associated to provide solutions to customer problems, activities associated & interactions with them. Edvardsson et al. (2005) has given the most common service characteristics – intangibility, heterogeneity, inseparability and Perishability. Due to intangible nature service the task to measure service quality is a challenging and it makes it difficult to define it (Kandampully, 1997).

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Research suggests that service quality is a crucial strategy for winning and retaining customers (Ghobadian et al., 1994; Buzzell and Gale, 1987, Zeithaml, 2000). Service quality has become a significant differentiator and the most powerful competitive weapon for the leading organizations (Berry, 1988)

SERVQUAL:

The SERVQUAL scale (Parasuraman et al., 1985, 1988, 1991) has been widely utilized by both managers (Parasuraman et al., 1991) and academicians (Babakus and Boller, 1992; Carman, 1990; Crompton and Mackay, 1989; Cronin and Taylor, 1992; Webster, 1989; Woodside et al., 1989). Services tend to be inherently low on search quality dimensions (Lovelock, 1996; Stafford 1996). The SERVQUAL is widely used due to a number of benefits that it has been recognized for (Buttle, 1994)

Of all services marketing topics, service quality has gained much research prominence in recent years (Schneider and White, 2004). Existing research indicates that consumers satisfied with service quality are most likely to remain loyal (Wong and Sohal, 2003). SERVQUAL (Parasuraman et al., 1988, 1991) consists of the five dimensions explained below:

(1) Reliability:

It refers to the ability to perform the service dependably and accurately.

(2) Responsiveness:

It refers to the willingness to help customers and provide prompt service.

(3) Tangibles:

It refers to the physical facilities, equipment and appearance of personnel.

(4) Assurance:

It refers to employees' knowledge, courtesy and ability to convey trust, confidence and security.

(5) Empathy:

It refers to the ease of access, good communication, level of caring, understanding customer and individual attention provided to them.

The present study reports on the construct validity of one of the main instruments used to measure this construct, the SERVQUAL scale developed by Parasuraman, Zeithaml, and Berry

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(1988). The psychometric properties of the SERVQUAL scale have been the subject of considerable research in recent times. The scale was developed from an initial pool of 97 items generated through a series of focus group sessions conducted with consumers (Parasuraman et al., 1988). The initial pool of 97 items was reduced to 22 to form the SERVQUAL scale with a reported reliability above .90 (Parasuraman et al., 1988). The scale used to tap five different underlying dimensions of customer service termed Tangibles, Reliability, Responsiveness, Assurance, and Empathy. Other researchers have questioned the validity of the five-factor structure. Partial support was reported by Gagliono and Hathcote (1994) who obtained four factors corresponding to Personal Attention, Reliability, Tangibles, and Convenience. Babakus and Mangold (cited in Brown et al., 1989) found a single factor when SERVQUAL was used in a hospital setting. The five-factor structure was also rejected factor by Cronin and Taylor (1992) who conducted studies across five retail settings. Finn and Lamb (1991) tested the five-factor structure in a retail context. They reported that while the reliabilities for each of the five factors were acceptable with estimates ranging from .59 to .83, confirmatory factor analysis indicated that the data did not fit the model. SERVQUAL consists of 22 pairs of items: one member of each pair assessing the customer's expectations, the other assessing perceptions of service quality. Service quality is determined by calculating the difference between expectations and perceptions for each item. This aspect of the administration of SERVQUAL has been criticized on the grounds that there is a lack of evidence supporting the expectation-performance gap as a predictive measure of service quality (Cronin, Steven & Taylor, 1992). SERVQUAL consists of two sections. A 22-item section measuring the service quality expectation within a specific sector and a corresponding twenty-one item section measuring the perception of service quality of a particular company in that sector (Parasuraman et al., 1988, 1991). SERVQUAL scores were defined as the differences between the expected service quality and the perceived one. The confirmations derived from various studies provide general support for the validity and reliability of the instrument (Kettinger and Lee, 1995; Finn and Lamb, 1991; Lam, 1997). Defining SERVQUAL scores as the differences between expectations and perceptions were also challenged in a number of studies Carman (1990). Natarajan et al. (1999) examined the continuous improvement of service operations in which the actual service experience is assessed through a customer survey.

RESEARCH OBJECTIVES:

Primary Objectives:

- ➢ To measure customers' expectations towards various dimensions (tangibility, Reliability, Responsiveness, Assurance and Empathy)of photo studio's services.
- ➢ To measure customers' perception towards various dimensions (tangibility, Reliability, Responsiveness, Assurance and Empathy) of Digital Photo Studio's services?
- ➢ To identify the GAP (if any) in the Photo Studio services provided by Digital Photo Studio, Bardoli.

Secondary Objectives:

- ➢ To know which type of photography service is frequently used by customers
- ➢ To know how frequently customers visit Digital Photo Studio
- ➢ To know how much customer expenses on photography services at Digital Photo Studio

Research Design:

In this study, Descriptive and cross-sectional research design was used because it described the phenomena under study and recommendations / findings were specific under this study.

Sampling Method:

In this study, non-probability Sampling design had been used and the Sampling method employed was convenience Sampling. This had been done instead of pure random sampling method (probability Sampling) because of time and money constraints.

Defining the target population

Element: Potential customers of Digital Photo Studio, Bardoli.

Sampling unit: Photo Studio Service users of Digital Photo Studio, Bardoli.

Extent: Bardoli city.

Survey Time: 20th March to 10th April, 2012.

Execution of sampling process:

Data from Photo Studio Service users of Digital Photo Studio, Bardoli.

DATA ANALYSIS

MULTIPLE RESPONSE ANALYSIS

TABLE – 1: **Case Summary**

$Photo Studio Service(a)	Cases		Total	
	N	Percent	N	Percent
	70	100.0%	70	100.0%

Dichotomy group tabulated at value 1.

TABLE – 2: **$Photo Studio Service Frequencies**

Photo Studio Service availed(a)	Responses		Percent of Cases
	N	Percent	N
Passport	46	32.6%	65.7%
Family	19	13.5%	27.1%
Portfolio	7	5.0%	10.0%
Couple	10	7.1%	14.3%
Children	10	7.1%	14.3%
Enlargement	14	9.9%	20.0%
Framing	16	11.3%	22.9%
Gift	13	9.2%	18.6%
Marriage	6	4.3%	8.6%
Total	**141**	**100.0%**	**201.4%**

Dichotomy group tabulated at value 1.

Multiple Response Analysis command is used to analyze multiple responses given by the respondents. Here in this case it is used to have multiple responses for the photography service that they have availed from Digital Photo Studio. This is because one customer may use more than one type of photography service at a time. From table 1 of Multiple Response Analysis,

Total N shows the number of total respondents. Table 2 shows the multiple frequency distributions of various products being used by the respondents.

The highest number of responses (32.6 %) was given to Passport Photography service while the least number of responses (4.3 %) were given to marriage photography.

Managerial Implication:

Passport photography is frequently used service from the photo studio because customers have frequent requirements for the same while marriage photography is least chosen option because generally marriage occasion take places as outdoor photography or at the venue of customer.

FREQUENCY OF STUDIO VISIT

Frequency	Frequency	Percent	Cumulative Percent
Once in a week	9	12.9	12.9
Once in a fortnight	3	4.3	17.1
Once in a month	12	17.1	34.3
Once in a year	7	10.0	44.3
Occasionally	21	30.0	74.3
Rarely	17	24.3	98.6
Only when needed	1	1.4	100.0
Total	**70**	**100.0**	

The above table indicates that 30 % respondents visit Digital Photo Studio occasionally, 24.3 % respondents visit rarely, 17.1 % respondents visit once in a month, 12.9 % respondents visit once in week, 4.3 % respondents visit once in a fortnight and 1.4 % visit only when needed.

AVERAGE EXPENDITURE:

AVERAGE EXPENSES ON PHOTOGRAPHY

Expenses in Rupees	Frequency	Percent	Cumulative Percent
Up to Rs.100	10	14.3	14.3
Rs.101 - 300	19	27.1	41.4

Rs.301 - 500	22	31.4	72.9
Rs.501 - 700	6	8.6	81.4
Rs.701 - 900	8	11.4	92.9
Rs. 901 and above	5	7.1	100.0
Total	**70**	**100.0**	

We can observe from the above table that 31.4 % respondents spend Rs.301- 500, 27.1 % respondents spend Rs.101 – 300, 14.3 % respondents spend Up to Rs.100, 8.6 % respondents spend Rs.501 – 700 & 7.1 % respondents spend Rs. 901 and above as average expenditure on photography services.

DEMOGRAPHIC PROFILES:

GENDER

CHART - 1
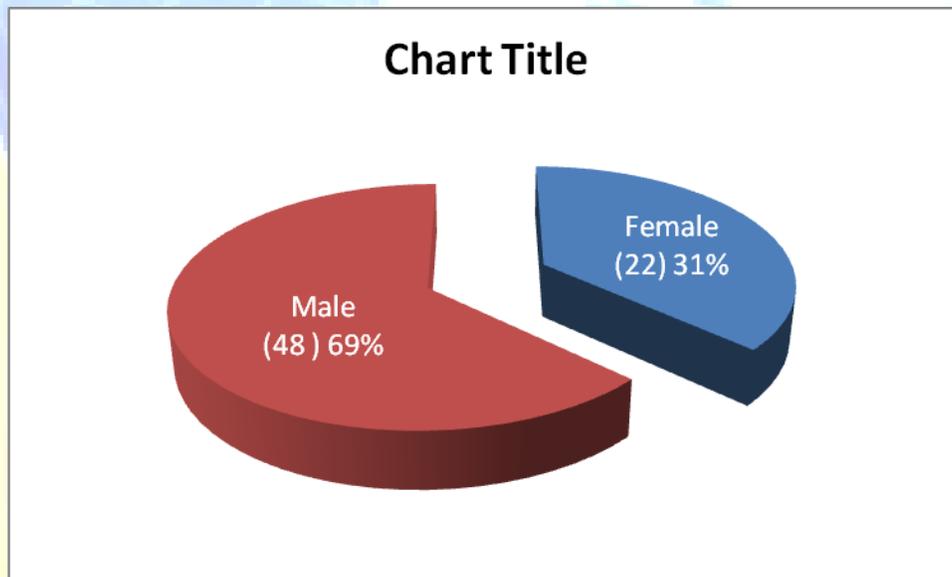

Chart 1, shows that 69% customers are male while 31% customers are female.

AGE GROUP:

Age Group	Frequency	Percent	Cumulative Percent
Up to 20 years	21	30.0	30.0
21 - 30 years	36	51.4	81.4

31 - 40 years	11	15.7	97.1
Above 40 years	2	2.9	100.0
Total	**70**	**100.0**	

Interpretation:

Above table indicates that the highest number of customer falls under 21-30 years age i.e. 51.4 %, then up to 20 years i.e. 30%, 31 – 40 years i.e. 15.7 % and above 40 years age 2.9 %.

INCOME GROUP:

Income Group	Frequency	Percent	Cumulative Percent
Dependent	26	37.1	37.1
Up to Rs.15000	22	31.4	68.6
Rs. 15001 - 25000	13	18.6	87.1
Rs. 25001 - 50000	9	12.9	100.0
Total	**70**	**100.0**	

Interpretation:

Above table signifies that most of the respondents (37.1%) fall under the dependent category, 31.4% respondents having monthly family income up to Rs. 15000 per month, 18.6 % respondents have monthly family income between Rs.15001 to Rs. 25000 & 12.9% respondents have monthly family income between Rs.25001 to Rs.50000.

EDUCATION:

| Education	Frequency	Percent	Cumulative Percent
Primary (Below S.S.C)	3	4.3	4.3
S.S.C	12	17.1	21.4
H.S.C	17	24.3	45.7
Diploma	2	2.9	48.6
Graduate	23	32.9	81.4
Post Graduate	13	18.6	100.0
Total	**70**	**100.0**	

Above table indicates that highest 32.9 % respondents are graduate, 24.3 % respondents are H.S.C pass, 18.6 % respondents are Post Graduate, 17.1 % respondents are S.S.C pass, 4.3 % respondents have primary education and rest 2.9 % respondents are diploma holders.

OCCUPATION:

Occupation	Frequency	Percent	Cumulative Percent
Student	24	34.3	34.3
Farmer	14	20.0	54.3
Employee	21	30.0	84.3
Businessman	9	12.9	97.1
Housewife	2	2.9	100.0
Total	**70**	**100.0**	

From above table we can interpret that 34.3 % respondents are students, 30 % respondents are employees, 20 % are farmers, 12.9 % are businessman & rest 2.9 % are housewives.

MARITAL STATUS:
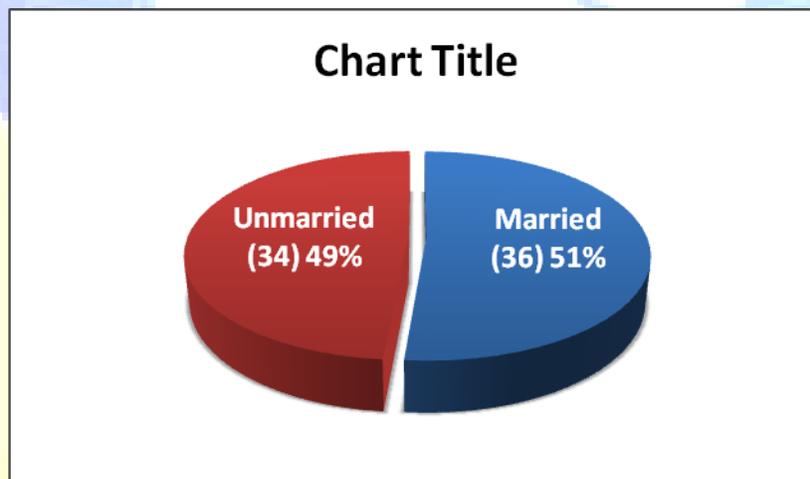
Above chart indicates that 51 % respondents are married while other 49 % are unmarried.

Paired Sample t- test:

Null Hypothesis (H0): There is no significant difference between the mean of customer expectation and customer perception of SERVICE Quality of Digital Photo Studio.

Alternative Hypothesis (H1): There is significant difference between the mean of customer expectation and customer perception of SERVICE Quality of Digital Photo Studio..

Significance level: Here test of hypothesis is at 95% confidence level i.e. the chance of occurring type 1 error is 5%.

Paired Samples Statistics- *Table 1*

	Pair	Mean	N	Std. Deviation	Std. Error Mean
Pair 1	ExpModern	4.26	70	.716	.086
	DPSModern	4.04	70	.690	.082
Pair 2	ExpVisually	3.90	70	.903	.108
	DPSVisually	3.91	70	.737	.088
Pair 3	ExpAppearance	4.07	70	.937	.112
	DPSAppearan	3.99	70	.732	.088
Pair 4	ExpMaterial	3.97	70	.680	.081
	DPSMaterial	4.01	70	.970	.116
Pair 5	ExpKeepPromise	4.03	70	.978	.117
	DPSKeepPromise	3.97	70	1.007	.120
Pair 6	ExpSincereInt	4.26	70	.829	.099
	DPSSincereInt	4.13	70	.679	.081
Pair 7	ExpRight1time	4.36	70	.743	.089
	DPSRight1time	4.16	70	.605	.072
Pair 8	ExpPerform	4.13	69	.765	.092
	DPSPerform	4.07	69	.846	.102
Pair 9	ExpErrorFree	4.16	70	.673	.080
	DPSErrorFree	3.93	70	.729	.087
Pair 10	ExpTellExact	4.19	70	.767	.092
	DPSTellExact	4.03	70	.868	.104
Pair 11	ExpPrompt	3.74	70	.958	.115
	DPSPrompt	3.99	70	.825	.099
Pair 12	ExpWilling	3.97	70	.900	.108
	DPSWilling	4.01	70	.825	.099
Pair 13	ExpNeverbusy	4.19	70	.767	.092
	DPSNeverbusy	3.63	70	1.052	.126
Pair 14	ExpConfidence	4.11	70	.733	.088
	DPSConfidence	3.93	70	.822	.098
Pair 15	ExpFeelSafe	4.24	70	.711	.085
	DPSFeelSafe	3.99	70	.752	.090
Pair 16	ExpCorurteous	4.30	70	.598	.072
	DPSCorurteous	3.93	70	.786	.094
Pair 17	ExpKnowledge	4.21	70	.797	.095
	DPSKnowledge	3.90	70	.965	.115
Pair 18	ExpIndiAtten	3.81	70	.937	.112
	DPSIndiAtten	4.07	70	.666	.080

Pair 19	ExpConvenient	3.69	70	1.057	.126
	DPSConvenient	4.06	70	.814	.097
Pair 20	ExpPersServ	3.76	70	.999	.119
	DPSPersServ	3.69	70	1.029	.123
Pair 21	ExpAtheart	4.03	70	.868	.104
	DPSAtheart	4.13	70	.815	.097
Pair 22	ExpUndNeed	4.09	70	.794	.095
	DPSUndNeed	4.19	70	.889	.106

Paired Samples Correlations – *Table 2*

		N	Correlation	Sig.
Pair 1	ExpModern & DPSModern	70	.271	.023
Pair 2	ExpVisually & DPSVisually	70	-.078	.519
Pair 3	ExpAppearance & DPSAppearan	70	.276	.021
Pair 4	ExpMaterial & DPSMaterial	70	.396	.001
Pair 5	ExpKeepPromise & DPSKeepPromise	70	.516	.000
Pair 6	ExpSincereInt & DPSSincereInt	70	-.085	.482
Pair 7	ExpRight1time & DPSRight1time	70	.131	.279
Pair 8	ExpPerform & DPSPerform	69	-.128	.293
Pair 9	ExpErrorFree & DPSErrorFree	70	.171	.157
Pair 10	ExpTellExact & DPSTellExact	70	.275	.021
Pair 11	ExpPrompt & DPSPrompt	70	.234	.052
Pair 12	ExpWilling & DPSWilling	70	.001	.996
Pair 13	ExpNeverbusy & DPSNeverbusy	70	.123	.312
Pair 14	ExpConfidence & DPSConfidence	70	-.010	.933
Pair 15	ExpFeelSafe & DPSFeelSafe	70	.169	.161
Pair 16	ExpCorurteous & DPSCorurteous	70	-.046	.704
Pair 17	ExpKnowledge & DPSKnowledge	70	.330	.005
Pair 18	ExpIndiAtten & DPSIndiAtten	70	.022	.859
Pair 19	ExpConvenient & DPSConvenient	70	.240	.045
Pair 20	ExpPersServ & DPSPersServ	70	.545	.000
Pair 21	ExpAtheart & DPSAtheart	70	.220	.067
Pair 22	ExpUndNeed & DPSUndNeed	70	.141	.243

Paired Samples test : table - 3

		Paired Differences						
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference	t	df	Sig. (2-tailed)

					Upper	Lower			
Pair 1	ExpModern - DPSModern	0.214	0.849	0.102	0.012	0.417	2.111	69	0.038
Pair 2	ExpVisually - DPSVisually	-0.01	1.21	0.145	-0.3	0.274	-0.1	69	0.922
Pair 3	ExpAppearance - DPSAppearan	0.086	1.018	0.122	-0.16	0.328	0.705	69	0.483
Pair 4	ExpMaterial - DPSMaterial	-0.04	0.939	0.112	-0.27	0.181	-0.38	69	0.704
Pair 5	ExpKeepPromise - DPSKeepPromise	0.057	0.976	0.117	-0.18	0.29	0.49	69	0.626
Pair 6	ExpSincereInt - DPSSincereInt	0.129	1.115	0.133	-0.14	0.395	0.964	69	0.338
Pair 7	ExpRight1time - DPSRight1time	0.2	0.894	0.107	-0.01	0.413	1.871	69	0.066
Pair 8	ExpPerform - DPSPerform	0.058	1.211	0.146	-0.23	0.349	0.398	68	0.692
Pair 9	ExpErrorFree - DPSErrorFree	0.229	0.904	0.108	0.013	0.444	2.116	69	0.038
Pair 10	ExpTellExact - DPSTellExact	0.157	0.987	0.118	-0.08	0.393	1.332	69	0.187
Pair 11	ExpPrompt - DPSPrompt	-0.24	1.109	0.133	-0.51	0.022	-1.83	69	0.071
Pair 12	ExpWilling - DPSWilling	-0.04	1.221	0.146	-0.33	0.248	-0.29	69	0.77
Pair 13	ExpNeverbusy - DPSNeverbusy	0.557	1.223	0.146	0.265	0.849	3.81	69	0.00
Pair 14	ExpConfidence - DPSConfidence	0.186	1.107	0.132	-0.08	0.45	1.403	69	0.165
Pair 15	ExpFeelSafe - DPSFeelSafe	0.257	0.943	0.113	0.032	0.482	2.281	69	0.026
Pair 16	ExpCorurteous - DPSCorurteous	0.371	1.01	0.121	0.131	0.612	3.078	69	0.003
Pair 17	ExpKnowledge - DPSKnowledge	0.314	1.029	0.123	0.069	0.56	2.555	69	0.013
Pair 18	ExpIndiAtten - DPSIndiAtten	-0.26	1.138	0.136	-0.53	0.014	-1.89	69	0.063
Pair 19	ExpConvenient - DPSConvenient	-0.37	1.169	0.14	-0.65	-0.09	-2.66	69	0.01
Pair 20	ExpPersServ - DPSPersServ	0.071	0.968	0.116	-0.16	0.302	0.617	69	0.539
Pair 21	ExpAtheart - DPSAtheart	-0.1	1.052	0.126	-0.35	0.151	-0.8	69	0.429

Pair 22	ExpUndNeed - DPSUndNeed	-0.1	1.105	0.132	-0.36	0.164	-0.76	69	0.452

Paired sample t-test is used here to examine the difference in means of the dependent sample.

As per Table 1 the Paired Sample statistics indicates the summary measures (Mean, Standard Deviation, Standard Error of Mean and N – Sample size) of selected variables. For example the mean value for expectation that modern studio have modern looking equipment is 4.26 and mean value for perception that Digital Photo Studio have modern looking equipment is 4.04.

Table 2 – Paired Samples Correlations provides the information related to correlation between the expectation of photo studio service and perception of digital photo studio.

Table 4 indicates difference between mean of expectation and perception for various dimensions of service quality of a Digital Photo Studio product attributes. As highlighted for pair 1 the mean difference between expectations of modern looking equipment and satisfaction regarding modern looking equipment is 0.214. The table generated the value of t statistics of 2.111 with associated significance value 0.038 which is less than 0.05. Therefore we reject the null hypothesis and say that there is significant difference between expectations of modern looking equipment and perception regarding digital Photo studio have modern looking equipment. Positive t-value 2.111 indicates that expectation is higher than the perception.

As highlighted for pair 2 the mean difference between expectations of visually appealing facility and satisfaction regarding visually appealing facility is - 0.01. The table generated the value of t statistics of -0.1 with associated significance value 0.922 which is greater than 0.05. Therefore we fail to reject the null hypothesis and say that there is no significant difference between expectations of visually appealing facility and perception regarding digital Photo studio's facilities is visually appealing. Negative t-value -0.1 indicates that perception is higher than the expectation.

RELIABILITY TEST

Case Processing Summary

		N	%
Cases	Valid	69	98.6
	Excluded(a)	1	1.4
	Total	70	100.0

a Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.868	61

Interpretation:

Reliability Analysis address the issues of whether this instrument will produce the same result each time, it is administered to the person in the same setting. Here Alpha is **0.868,** almost **0.9**. According to thumb rule of Alpha, here instrument reliability is *Excellent.*

Measuring Service Quality Using SERVQUAL

Measuring the quality of a service can be a very difficult exercise. Unlike product where there are specific specifications such as length, depth, width, weight, colour etc. a service can have numerous intangible or qualitative specifications. In addition there is there expectation of the customer with regards the service, which can vary considerably based on a range of factors such as prior experience, personal needs and what other people may have told them.

SERVQUAL – a methodology for measuring service quality

As a way of trying to measure service quality, researchers have developed a methodology known as SERVQUAL – a perceived service quality questionnaire survey methodology. SERVQUAL examines five dimensions of service quality:

- Reliability
- Responsiveness
- Assurance;
- Empathy, and
- Tangible (e.g. appearance of physical facilities, equipment, etc.)

For each dimension of service quality above, SERVQUAL measures both the expectation and perception of the service on a scale of 1 to 5, 22 questions in total. Then, each of the five dimensions are weighted according to customer importance, and the score for each dimension multiplied by the weighting. Following this, the Gap Score for each dimension is calculated by subtracting the Expectation score from the Perception score. **A negative Gap score indicates that the actual service (the Perceived score) was less than what was expected (the Expectation score).**

The Gap score is a reliable indication of each of the five dimensions of service quality. Using SERVQUAL, service providers can obtain an indication of the level of quality of their service provision, and highlight areas requiring improvement.

Dimension	Statement	Expectation Score	Perception Score	Gap Score	Average for Dimension
TANGIBLITY	1	4.26	4.04	-0.22	- 0.0625
	2	3.9	3.91	0.01	
	3	4.07	3.99	-0.08	
	4	3.97	4.01	0.04	
RELIABILITY	5	4.03	3.97	-0.06	- 0.136
	6	4.26	4.13	-0.13	
	7	4.36	4.16	-0.2	
	8	4.13	4.07	-0.06	
	9	4.16	3.93	-0.23	
RESPONSIVENESS	10	4.19	4.03	-0.16	- 0.108
	11	3.74	3.99	0.25	
	12	3.97	4.01	0.04	
	13	4.19	3.63	-0.56	
ASSURANCE	14	4.11	3.93	-0.18	- 0.278
	15	4.24	3.99	-0.25	
	16	4.3	3.93	-0.37	
	17	4.21	3.9	-0.31	
EMPATHY	18	3.81	4.07	0.26	0.152

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19	3.69	4.06	0.37	
20	3.76	3.69	-0.07	
21	4.03	4.13	0.1	
22	4.09	4.19	0.1	
Unweighted Average SERVQUAL score:				**-0.865**

Table 1 - Calculation of SERVQUAL Scores

SERVQUAL Importance Weights

Listed below are the five sets of features pertaining to Photo Studio and the services they offer. We would like to know how much each of these sets of features is important to the customer. Allocate 100 points among the five sets of features according to its important. Make sure the points add up to 100.

Features	Points
1. The appearance of the Photo Studio physical facilities, equipment, personnel and communication materials.	25
2. The Photo Studio's ability to perform the promised service dependably and accurately	20
3. The Photo Studio willingness to help customers and provide prompt service.	20
4. The knowledge and courtesy of the Photo Studio's employees and their ability to convey trust and confidence.	15
5. The caring individual attention the Photo Studio provides its customers.	20
Total:	100

Table 2 - SERVQUAL Importance Weights

SERVQUAL Dimension	Score from Table 1	Weighting from Table 2	Weighted Score
Tangibility	- 0.0625	25	-1.563
Reliability	- 0.136	20	-2.72
Responsiveness	- 0.108	20	-2.16

Assurance	- 0.278	15	-4.17
Empathy	0.152	20	3.04
		Average Weighted score:	**-1.5145**

Table 3 - Calculation of Weighted SERVQUAL Scores

FINDINGS:

- From multiple response analysis, it is found that the highest responses (32.6 %) were given to Passport Photography service while the least number of responses (4.3 %) were given to marriage photography. 13.5 % responses were for family photography, 11.3 % for framing, 9.9 % for enlargement, 9.2 % for gift articles, 7.1 % for children and couple photography & 5 % responses for portfolio.

- From frequency of visit to studio it is found that highest 30 % respondents visit studio occasionally, 24.3 % visit rarely and rest 1.4 % visit when needed. This constitutes 55.7 %. It is also found that 12.9 % respondents visit studio once in a week, 4.3 % once in a fortnight, 17.1 % once in a month and 10 % respondents visit once in a year.

- From average expenditure on photography it is found that majority - 31.4 % respondents spend Rs.301- 500, 27.1 % respondents spend Rs.101 – 300, 14.3 % respondents spend Up to Rs.100, 8.6 % respondents spend Rs.501 – 700 & 7.1 % respondents spend Rs. 901 and above as average expenditure on photography services.

- From Reliability Analysis the value of Alpha derived is **0.868,** almost **0.9**. According to thumb rule of Alpha, instrument's reliability is *Excellent.*

- From paired sample t-test it is found that the Null Hypothesis is rejected i.e. there is significant difference between expectation and perception of the following variables; modern looking equipment, error free records, Employees never be too busy, feel safe in transactions, consistently courteous with customers, knowledge to answer customers' questions, convenient operating hours. While for other variable like Visually appealing, Employee appearance, Material, Keeping promise, sincere interest, right first time, Promise, Tell exactly, Prompt service, Willingness, Individual attention, create confidence, Personal service, customer interest at heart &understand customer needs we

failed to reject null hypothesis i.e. there is no significant difference between expectation and perception of these variables.

- From SERVQUAL GAP analysis it is found that the average GAP score for tangibility is – 0.0625, for Reliability it is -0.136, for responsiveness -0.108, for Assurance -0.278 and for empathy it is 0.152. Here the average negative score indicates that perception is less than the expectations. It means as per the expectations of customers they are not getting it in the Digital Photo Studio. The highest negative GAP was found in Assurance (-0.278), then Reliability (-0.136), Responsiveness (-.0108) and in tangibility score (-0.0625). Empathy dimension scored 0.152 score which means perception is higher than the expectations. It means Digital Photo Studio is delivering more than what its customers expect.

RECOMMENDATIONS:

- 32.6 % respondents visit the studio for passport photography as it is frequently needed. Being frequent visitor Digital Photo Studio needs focus more on them to maintain their consistency. Photo print on Gift article constitute only 9.2 %, so Digital Photo Studio can make it more visible and appealing so that it can attract customers for the same.

- 30 % respondents visit Digital Photo Studio occasionally, Digital Photo Studio can target them and even attract more customers by giving advertisement in local news paper on various occasions like Navratri, Diwali, New Year etc. 12.9 % respondents visit Digital Photo Studio once in a week, Digital Photo Studio should take a note of these loyal customer and enough care can be taken to maintain this loyalty.

- 31.4 % respondents spend Rs.301- 500, Digital Photo Studio can come out with scheme like "For 10 or more than 10 photographs DPS will create portfolio free" so that they can increase their revenue.

- From SERVQUAL GAP analysis it is found that there exist a wide GAP (-0.278) on Assurance dimension. It means customers' perception on ASSURANCE is lower than their expectations. To fill up this GAP Digital Photo Studio need to focus on improving the behaviour of employees so that it instill confidence in customers (GAP -0.18), taking steps so that customer can feel safe in transactions (GAP -0.25), training employees so

that they consistently be courteous with customers (GAP -0.37), ensuring that employee posses enough knowledge to answer customers' questions (GAP -0.31). Similarly Digital Photo Studio needs focus on criteria of RELIABILITY (GAP -0.136), RESPONSIVENESS (GAP -0.108) & TANGIBILITY (GAP -0.0625) to fill up the negative GAP.

- On EMPATHY dimension Digital Photo Studio scored (0.152), here it is good sign as it provides more than what customer expect. Need to maintain this and at the same time focus on improvement of other dimensions.

- As the reliability of the instrument is excellent, Digital Photo Studio can implement the suggestions and in future can carry out the same research under same setting to know the improvement in the Service quality of its studio.

HOW TO IMPROVE SERVICE QUALITY?

Following is the overall analysis and specific recommendations to improve service quality of each dimension.

Sr. No.	STATEMENT	Gap Score	Remark	Recommendation
1.	**The Digital Photo Studio has modern looking equipment.**	**-0.22**	**Negative Gap**	**Facility should be modern looking.**
2.	The Digital Photo Studio's physical features are visually appealing.	0.01	Positive Gap	Good. Continue with the same. Maintain it.
3.	**The Digital Photo Studio's reception desk employees are neat appearing.**	**-0.08**	**Negative Gap**	**Give employees direction about their appearance. Can go for Uniform for the employees.**
4.	Materials associated with the service (such as pamphlets or statements) are visually appealing at the Digital Photo	0.04	Positive Gap	Good. Continue with the same. Maintain it. See for betterment.
5.	**When the Digital Photo Studio promises to do something by a certain time, it does so.**	**-0.06**	**Negative Gap**	**A small GAP may create a vast difference. Try to fill up the GAP by ensuring promise are met. Put it on paper and**

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6.	When you have a problem, the Digital Photo Studio shows a sincere interest in solving it.	-0.13	Negative Gap	Customer may be feeling that employee do not show sincere interest. This may cause lost customer. Try to listen to customers and their
7.	The Digital Photo Studio performs the service right the first time.	-0.2	Negative Gap	Make your employee clear to understand customer requirements and give them best service at the first
8.	The Digital Photo Studio provides its service at the time it promises to do so.	-0.06	Negative Gap	Try to keep record of promise and ensure studio meet it.
9.	The Digital Photo Studio insists on error free records.	-0.23	Negative Gap	For error free record try to understand customer requirement, put it on paper, manage it properly and
10.	Employees in the Digital Photo Studio tell you exactly when the services will be performed.	-0.16	Negative Gap	Tell customer exact date and time for service delivery. You can make promise that you are able to fulfill. Consider contingent time/ situation if
11.	Employees in the Digital Photo Studio give you prompt service.	0.25	Positive Gap	Good. Employees need to maintain this.
12.	Employees in the Digital Photo Studio are always willing to help you.	0.04	Positive Gap	Good. Need to keep it up.
13.	Employees in the Digital Photo Studio are too busy to respond to your request.	-0.56	Negative Gap	Whenever customer approaches employee should give immediate response to
14.	The behaviour of employees in the Digital Photo Studio instills confidence in you.	-0.18	Negative Gap	Clarity about the service provided and need to build confidence by giving best
15.	You feel safe in your transactions with the Digital Photo Studio.	-0.25	Negative Gap	Need to imbibe transparency in the monetary and non monetary transactions.
16.	Employees in the Digital Photo Studio are consistently courteous with you.	-0.37	Negative Gap	Studio must train to their employees to be courteous with the customers
17.	Employees in the Digital Photo Studio have the knowledge to answer your questions.	-0.31	Negative Gap	Studio needs to provide necessary information to their employees so that they can deliver better to the
18.	The Digital Photo Studio gives you individual attention.	0.26	Positive Gap	Good on part of studio. Try to maintain the same.

19.	The Digital Photo Studio has operating hours convenient to all its customers.	0.37	Positive Gap	Current timing of Digital Photo Studio is from 8.00 am to 8.00 pm which is convenient to customers.
20.	**The Digital Photo Studio has employees who give you personal attention.**	**-0.07**	**Negative Gap**	**Employees need to be trained to provide personal attention to customers.**
21.	The Digital Photo Studio has your best interests at heart.	0.1	Positive Gap	On this criteria Digital Studio scores positive score, it needs to continue with the same.
22.	The employees of the Digital Photo Studio understand your specific needs.	0.1	Positive Gap	On this criteria also Digital Studio scores positive score, it needs to continue with the

CONCLUSION:

This study concludes that overall weighted GAP score is -1.5145; it means perception is lesser than expectations. To match customer expectations & to fill up this GAP, Digital Photo Studio need to focus on Tangibility, Reliability, Responsiveness and Assurance (as these dimensions posses negative GAP) while Digital Photo Studio rated as positive weighted score for Empathy so it needs to maintain the consistency. To fill up the GAP, all these five dimensions must be considered and studio needs to improve the score on each of these dimensions to improve its overall SERVICE QUALITY.

DIRECTION FOR FUTURE RESEARCH:

From this study expectation and perception regarding Photo Studio is measured. Service Quality regarding videography which is most of time outdoor type can be measured.

Here in this study a GAP has been identified, Digital Photo Studio can implement appropriate strategies and in future they can conduct the same study under the same setting can be carried out to know whether Digital Photo Studio has fill up the GAP or not. As research instrument's reliability is *Excellent* the same instrument can be used in future.

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