"Relationship Between Seamless Use Experience, Customer Satisfaction and Recommendation"

AUTHORS	Anssi Mattila
ARTICLE INFO	Anssi Mattila (2005). Relationship Between Seamless Use Experience, Customer Satisfaction and Recommendation. *Problems and Perspectives in Management*, *3*(1)
RELEASED ON	Thursday, 03 March 2005
JOURNAL	"Problems and Perspectives in Management"
FOUNDER	LLC "Consulting Publishing Company "Business Perspectives"

NUMBER OF REFERENCES

0

NUMBER OF FIGURES

0

NUMBER OF TABLES

0

BUSINESS PERSPECTIVES

Relationship Between Seamless Use Experience, Customer Satisfaction and Recommendation

Anssi Mattila

Abstract

Relying on SERVQUAL service quality dimensions by Parasuraman et al. (1985, 1988) and usability attributes by Nielsen (1993), this study identifies the service quality dimensions pertaining seamless use experience and investigates the relationship between customer satisfaction and intention to recommend mobile Internet services. According to our analysis, which is based on data comprising 778 survey responses collected from the users of mobile and fixed-line services in Summer 2003, the level of satisfaction after using mobile Internet services, intention to encourage the use of mobile Internet services and willingness to recommend the use of mobile services are strongly interrelated.

Key words: customer, satisfaction, mobile services.

1. Introduction

Internet has been said to increase the importance of customer satisfaction. To achieve good financial performance in e-services, the use experience must prove to be satisfactory (Cox et al., 2002). Although the Internet has traditionally been viewed and managed as technical innovation, the acid test of e-commerce lies in the incorporation of consumers' needs and preferences into the Web site design and the business concept (Yang et al., 2003). This ethnographic approach places the user in the forefront of the Web site design process, taking into account the way business is conducted and the way people communicate in the target society when developing the interface design (Shneiderman, 1996). Many scenarios about to how many people a dissatisfied customer on the Internet can tell about her bad experiences, have been presented. According to Rotondaro (2002), a dissatisfied customer talks about an unpleasant event to 5000 people online. Mattila et al. (2003) have found the word-of-mouth effect to be especially powerful the more elderly the mobile service users are.

The service interface is interlinking service processes, which manage the activation points for different customer scripts. The service interface also has to maintain links to the backstage operations supporting both the service setting and the service encounters (Broderick et al., 2002). It is essential that the service providers acknowledge more self-determinism by clients and create more clarity and transparency in the service interface (Broderick et al., 2002). The information efficiency of an interface is defined as the minimum amount of information necessary to do a task, divided by the amount of information that has to be supplied by the user (Raskin 2000, p. 84). An information overload may lead to a customer frustration.

2. From satisfaction to service quality

Bowen and Chen (2001) found that the relationship between customer loyalty and satisfaction is non-linear. According to Coyne (1989) there are two critical thresholds affecting the link between satisfaction and customer loyalty. On the other side, when customer satisfaction reaches a certain level, the loyalty increases very strongly, and at the low end, when satisfaction decreases to a certain point, the loyalty drops very strongly (Oliva et al., 1992). Satisfaction with the user interface has not found to have direct effect on perceived value (van Riel et al., 2001). Van Riel et al. (2001) found that supplementary services are the value-adding component. Service quality is an important antecedent of consumer assessments of value (Imrie et al., 2002) and as e-CRM increases on Web site, the greater the customer satisfaction will be (Feinberg et al., 2002). Further, Ranaweera et al. (2003) postulate that there is a significant correlation between service quality and customer retention.

There is a debate stemming from the differences in service quality and customer satisfaction and the causal relationship between them (Lewis 1989; Babakus et al., 1992, Gilmore et al., 1992). Satisfaction studies have attempted to measure expectations at the same time as perceptions. Philip et al. (1997) argue that the perceptions automatically make an adjustment for the gap that exists between the expectations and the actual experience of a service. The literature is riddled with confusion and discontent as to whether customer satisfaction and service quality are two separate constructs. However, some agreement has been reached that *"customer satisfaction is a transitory judgement made on the bases of a specific service encounter whereas service quality is a global assessment based on a long-term attitude"* (Parasuraman et al., 1988; Bolton et al., 1991; Bitner 1990; Taylor et al., 1994; Brown et al., 1995). It has been suggested that customer satisfaction leads to a service quality indicating that the causal relationship would be from customer satisfaction to service quality. Some critics have argued that in fact the causal relationship would be from service quality to customer satisfaction (Johnston et al., 1990; Cronin et al., 1992; Cronin et al., 1994; Teas 1993; Parasuraman et al., 1994; Teas 1994).

3. SERVQUAL at your service

Relying on SERVQUAL service quality dimensions (Parasuraman et al., 1985, 1988), this study identifies the service quality dimensions pertaining seamless use experience and investigates the relationship between customer satisfaction and intention to recommend mobile Internet services. The SERVQUAL dimensions are (Parasuraman et al., 1985, 1988):

- Tangibles: physical facilities, equipment and appearance of personnel
- Reliability: ability to perform the promised service dependably and accurately
- Responsiveness: willingness to help customers and to provide prompt service
- Assurance: knowledge and courtesy of employees and their ability to inspire trust and confidence
- Empathy: caring, individualized attention, the service provider gives its customers

van Dyke et al. (1999) have examined the suitability of SERVQUAL to assess the quality of information systems services. They found it to be good starting point and a diagnosis tool for cross-organizational benchmarking. However, they continue that service quality says nothing about the efficiency or effectiveness. Schacherer (2002) argues that SERVQUAL instrument should be used for overall quality assessment instead of comparing cross-functional quality of service.

Heinzl (2002) has defined the SERVQUAL instruments for information system services as follows:

- Tangibles: IS has up-to-date hardware and software
- Reliability: When users have a problem, IS shows a sincere interest in solving it
- Responsiveness: IS tell users exactly when services will be performed
- Assurance: Users will feel safe in their transactions with IS's employees
- Empathy: IS give users individual attention.

Barnes et al. (2000) adapted SERVQUAL instrument to assess Web site service quality. The SERVQUAL characteristics are encompassed in WebQual developed by Barnes et al. (2000) but some dimensions are addressed to a smaller extent such as empathy. The WebQual subcategories include: navigation, ease of use, visual impact, individual impact, finding information, information content, external integration and communication. Also Cox et al. (2002) have developed their key quality factors particularly for creating successful Web sites. Their quality factors include clarity of purpose, design, accessibility and speed, content, customer service and customer relationship.

4. Methodology and data collection

The usability attributes by Nielsen (Nielsen, 1993, p. 26-37) were chosen as the starting point for our seamless use experience investigation as they constitute a generic model and fit in the

service context too. The relation between usability and seamless use experience has been described in detail in Mattila (2003a). Before the actual data collection, focus group interviews among expert users were conducted. The meaning of these interviews was to map the possible options for survey questions. The questionnaire was pre-tested on a group of 60 students and modified accordingly. A postal survey was conducted in May 2003. The sample was drawn from TeliaSonera[1] Finland's customer database. The sample was stratified in three active user segments of mobile users, fixed-line users and combined users equal in size depending on the main electronic service delivery channel in their use. The questionnaires were tailored *respectively*.

We call the customers, who did not own according to the database a private fixed-line connection at home, *the Mobile users.* The customers collected under this sample had the highest volume of mobile data transfers (GPRS, high-speed data) during the last six months in comparison with other customers in the database. They represented in every way the most active mobile Internet users the database had. *The Combined users* had a private fixed-line Internet connection in use at home. Further, their customer record showed active usage of mobile Internet (GPRS, high-speed data) connection and WAP-services during the last six months. The Fixed-line users owned a mobile phone and they were using regular mobile phone services such as SMS. There was no sign of Internet related activities during the last six months in their customer record. They had a private fixed-line Internet connection (mainly ADSL) in use at home.
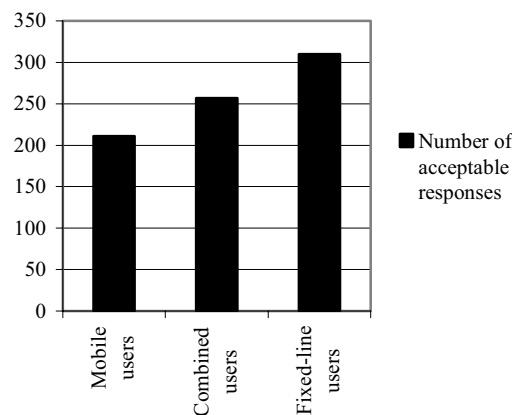

Fig. 1. The division of response rate among the different user segments of customers

After a second follow-up, 778 responses were accepted under further analyses. The final response rate was 25.9%, which is acceptable according to economic science standards. The distribution of the responses in different user segments is presented in Figure 1. A small minority of respondents reported using mobile phone (GRPS or high-speed data connection) as a modem in connection with a laptop as their primary electronic delivery channel. Among the Mobile users there were 16 such a customers and among both the Fixed-line users and the Combined users two in each segment.

The respondents were asked to fill out a structured questionnaire on a 7-point Likert scale concerning their preferences, experiences and beliefs towards usage of mobile and Internet services. Literature (Cooper et al., 1995; Järvenpää et al., 1997; Crisp et al., 1997) as well as prior conducted surveys guided us in defining the scales to measure the customers' perceived seamless use experience. There were up to 27 questions in each tailored questionnaire. The Mobile users were answering mobile Internet specific questions whereas the Fixed-line users were answering

---

[1] Based on the number of customers, TeliaSonera is the largest mobile operator in Sweden and Finland, the second largest operator in Norway, and the fourth largest operator in Denmark. TeliaSonera is also the largest fixed voice and data provider in the region with leading positions in Sweden and Finland and a significant position in Denmark. TeliaSonera International Carrier is the leading IP wholesaler in Europe with a 10% market share. TeliaSonera is listed on the Stockholm Exchange, the Helsinki Exchange and Nasdaq Stock Market in the USA.

fixed-line Internet specific questions. As the Combined users segment had knowledge on both types of electronic services and delivery channels, half of them received a questionnaire regarding the mobile Internet seamless use experience and the other half was answering the questions concerning the fixed-line services.

The survey questionnaire included questions concerning the respondent's basic demographic variables, psychological determinants such as level of innovativeness and mobile Internet usage, which was further categorized under for main themes: usage context, service content, seamless interface dimensions and use experience. To get a more accurate and objective results, the mean value of the respondents' subjective responses was calculated and used as the basis of our evaluation. Statistical methods such as ANOVA, crosstabulation, correlation coefficients, rotated factor analyses, Chi squares and finally structural modeling (AMOS) were applied to our data. Cronbach's alpha was used to measure the reliability of the results. Only results relevant to this paper are presented in here.

5. Results

One third (33.9%) of the respondents were women and two thirds (64.8%) were men (Table 1). The majority (59.8%) of the respondents were 25-49 years old and their annual household income (28.1%) before taxes fell within the range of 20 000-30 000 euros, which matches with the average annual income of two adults family in Finland (Statistics Finland, 2003). Only every fifth (18.2%) of the respondents had two or more children living at home. The majority of all the respondents were workers (40.6%). This result is compatible with the result of the educational background of the respondents, which was in most cases (29.0%) vocational school.

Over half of the Mobile users (54.6%) thought that it is likely that they will recommend the use of mobile Internet services and majority of the Mobile users (58.8%) went even further by saying that it is likely that they will encourage their friends and relatives to start using mobile Internet services. Two thirds (61.6%) of the Mobile users reported of telling positive things about using mobile Internet services to their friends and 47.3% thought that it is likely that they will complain about problems in mobile Internet service usage to their friends. Every fifth (20.8%) said that they would change the service provider (operator) if they encounter problems in the mobile Internet usage.

Table 1

Profile of respondents

Demographic characteristics	Mobile users		Combined users		Fixed-line users		Total	
	No	%	No	%	No	%	No	%
1	2	3	4	5	6	7	8	9
Total	211	100.0	257	100.0	310	100.0	778	100.0
Gender								
Male	157	74.4	192	74.7	155	50.0	504	64.8
Female	54	25.6	55	21.4	155	50.0	263	33.9
Missing	0	0	10	3.9	0	0	10	1.3
s.d.	0.437		0.417		0.501			
Age								
Under 24 years of age	64	30.3	33	12.9	43	13.9	140	18.0
25-34 years	81	38.4	96	37.4	62	20.0	239	30.7
35-49 years	43	20.4	83	32.3	100	32.3	226	29.1
Over 50 years of age	20	9.5	41	15.9	104	24.5	129	16.6
Missing	3	1.4	4	1.6	1	0.3	8	1.0
s.d.	0.998		0.974		1.196			

Table 1 (continuous)

1	2	3	4	5	6	7	8	9
Annual household income								
Less than 10 000 euros	33	15.6	21	8.2	43	13.9	97	12.3
10 001 – 20 000 euros	54	25.6	48	18.7	82	26.5	184	23.7
20 001 – 30 000 euros	59	28.0	87	33.9	73	23.5	219	28.1
30 001 – 40 000 euros	25	11.8	37	14.4	40	12.9	102	13.1
More than 40 001 euros	29	13.8	53	20.5	60	19.3	142	18.3
Missing	11	5.2	11	4.3	12	3.9	34	4.5
s.d.	1.650		1.875		1.741			
Marital status								
Married	27	12.8	101	39.3	128	41.3	256	33.0
Cohabitation	60	28.4	69	26.8	58	18.7	187	24.0
Single (incl. widow, divorced)	115	54.5	80	31.1	116	37.5	311	39.9
Missing	9	4.3	7	2.7	8	2.6	24	3.1
s.d.	0.940		1.154		1.397			
Number of children living at home								
0	165	78.2	152	59.1	176	57.0	493	63.4
1	21	10.0	45	17.5	71	23.0	137	17.6
2	14	6.6	29	11.3	42	13.6	85	11.0
3 or more	8	3.8	28	10.9	20	6.5	56	7.2
Missing	3	1.4	3	1.2	1	0.3	7	0.8
s.d.	0.791		1.074		1.019			
Education								
Elementary school	24	11.4	31	12.1	48	15.5	103	13.2
Secondary education	34	16.1	63	24.5	64	20.7	161	20.7
Vocational school	69	32.7	85	33.1	72	23.2	226	29.0
University degree	48	22.8	39	15.2	82	26.4	169	21.7
Other	33	15.6	36	14.1	41	13.2	110	14.2
Missing	3	1.4	3	1.2	3	1.0	9	1.2
s.d.	1.952		1.916		2.063			
Profession								
Leading position	10	4.7	20	7.8	20	6.5	50	6.4
Worker	96	45.5	116	45.1	104	33.5	316	40.6
Public servant	28	13.3	31	12.1	40	12.9	99	12.7
Other	71	33.6	85	33.0	144	46.3	300	38.5
Missing	6	2.8	5	1.9	2	0.6	13	1.8
s.d.	2.367		2.526		2.547			

Over half of the respondents (59.5%) were customers only to one operator. Every third of the respondents (33.8%) had customer relationship with two operators and 5.2% of the respondents were customers to three operators. Minority of the respondents (1.4%) had four or more customer relationships with different operators. There was a significant correlation between the number of customer relationships with operators and frequency of particular electronic service delivery channel usage. The heavy users of Mobile Internet are more likely to be customers to several operators (r=.217, p<.01). Also, the more often one uses mobile phone as a modem in connection with PC to

access Internet services (r=.354, p<0.1) and the more often one uses PDA to access mobile Internet services (r=.253, p<.01), the more customer relationships with different operators one will have.

No significant correlation was found between the willingness to recommend the mobile Internet services, telling positive things about using mobile Internet services, intention to encourage somebody's use of mobile Internet services, level of satisfaction and how many operators the user is customer to. The customers seem to share the equal level of satisfaction after using mobile Internet services regardless of how many operators they are customers to (Figure 2). Proportionally the Mobile users appear to be more satisfied with the mobile Internet services than the Fixed-line users with fixed-line Internet services (Table 2). Only half of the Fixed-line users using fixed-line Internet services daily felt themselves as satisfied after usage (64.7% vs. 33.7%) compared to the Mobile users, of which almost everybody with 93.0 % felt satisfied after daily use (11.4% vs. 10.6%). Customers felt that even though their expectations were not fully fulfilled, they still were satisfied with the service.
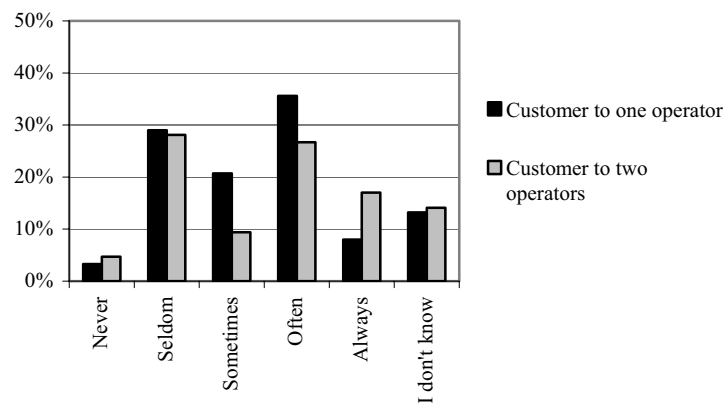

Fig. 2. Number of customer relationships with different operators and feel of satisfaction after using mobile Internet service

Table 2

Frequency of use in relation to level of satisfaction

		Daily	3-5 x a week	1-2 x a week
Mobile Internet users	Mobile Internet usage frequency	11.4 %	9.0 %	16.9 %
	Feels satisfied after using mobile Internet service	10.6 %	16.2 %	10.2 %
	Mobile service quality fulfills the expectations	6.6 %	14.6 %	11.6 %
Fixed-line Internet users	Fixed-line Internet usage frequency	64.7 %	10.3 %	8.8 %
	Feels satisfied after using fixed-line Internet service	33.7 %	21.1 %	12.6 %
	Fixed-line service quality fulfills the expectations	30.7 %	16.9 %	18.3 %

An exploratory factor analysis was used in order to identify underlying constructs and investigate relationships among key survey interval-scaled questions regarding customer satisfaction as part of seamless mobile service use experience (Table 3). Principal Axis Factoring was carried out, followed by Varimax Rotation with Kaiser Normalization. The Kaiser-Meyer-Olkin (KMO) measures of sampling adequacy (0.92) were well above the 0.5 recommendation level, and Bartlett's test of sphericity (p=0.0 and p=0.0) provided as well support for the validity of the factor

analysis of the data set (Malhorta 1999). Varimax Rotation facilitated interpretability. In addition, Gronbach's alphas were counted for each factor scoring above the level of acceptance set by Nunnally (1978). Hence, the data set can be defined as reliable.

Only respondents reporting actually using mobile Internet services were included in the analyses. Initial runs based on a screen plot and eigenvalues showed support for five factors. Only factors with eigenvalues above 1 were expected. In our analyses the eigenvalues varied between 8.5221 and 1.7652. The criterion for assignment of reasons to a certain factor was a minimum factor loading of 0.5. The factors were labelled as tangibles, reliability, responsiveness, assurance and empathy *respectively*. All the five factors account for more than 10% of the total variance and they are defined by two variables each. It is common for all the factors that they seem to be very much operator related. Apparently, customers tend to relate their feel of satisfaction primarily to the service provider instead of device used to operate the service or service content or context. It is an acknowledged phenomenon in marketing, that customers are rarely straightforward in how their satisfaction constitutes.

Table 3

Satisfaction attributes for the seamless use of mobile Internet services

Mobile Internet service users' perceptions about satisfaction attributes	Factors				
	1 15.3% α=.69	2 18.7% α=.72	3 13.6% α=.71	4 12.2% α=.63	5 10.5% α=.62
FACTOR 1: TANGIBLES Operator provides updated software needed to use mobile Internet services on their Web site	.633				
Operator's Web site satisfies my needs	.543				
FACTOR 2: RELIABILITY Speed of data transfer equals what operator promised		.701			
Operator installs the new Internet connection as agreed		.642			
FACTOR 3: RESPONSIVENESS Operator solves my problems in a timely manner			.675		
Operator is never too busy to answer my questions			.512		
FACTOR 4: ASSURANCE Operator treats my problems with discretion and onfidentiality				.673	
Operator provides secure data transfers				.523	
FACTOR 5: EMPATHY Operator offers after-sales services suitable for my needs					.685
Operator remembers me with personal gifts					.598

Extraction Method: Principal Axis Factoring.
Rotation Method: Varimax with Kaiser Normalization.

The customers' level of innovativeness was mapped with a set of ethnographically oriented arguments. The division of innovator categories was modified from Thorton (2001) to the framework of our study (Table 4). The significant correlations are presented in Table 4. Surprisingly, there was no significant correlation between customer's innovativeness and satisfaction related to reliability. Empathy seems to be the most important satisfaction factor to all the innovator categories. Assurance correlated with change driven and personal service driven types of innova-

tiveness. Responsiveness was the most controversial with significant correlations with computer positive and personal service driven types of innovators.

Table 4

Correlation matrix on innovator categories and satisfaction attributes

CORRELATION MATRIX Type and level of innovativeness ⇒ Satisfaction variables ⇓	Change driven	Personal service driven	Technology positive	Knowledgeable	Computer positive
Operator is never too busy to answer my questions (RES)					.176*
Operator offers after-sales services suitable for my needs (EMP)	.148*	.144*	.305**	.191**	.147*
Operator provides secure data transfers (ASS)		.175*			
Operator offers unique customized offers and benefits only for me (EMP)	.141*	.253**			.177*
Operator solves my problems in a timely manner (RES)	.191**	.183**			
Operator provides updated software needed to use mobile Internet services on their Web site (TAN)	.170*	.163*	.160*		.157*
Operator's Web site satisfies my needs (TAN)	.164*	.216**		.152*	
Operator treats and solves my problems with discretion and confidentiality (ASS)	.164*	.233**			

** Correlation is significant at the 0.01 level.
* Correlation is significant at the 0.05 level.
RES=Responsiveness EMP=Empathy ASS=Assurance TAN=Tangibles.

We found two different types of efficiency of use. Efficiency is related in the utilization factor – how well the customer achieves the aims, which she has set on the use of service. Effectiveness is related in the capacity ratio – how fast is the data transfer and does the customer get her money worth. Previously, we have defined two types of errors and their relation in purpose of use (content) and use context (see Mattila, 2003b). The results of a crosstabulation between willingness to recommend mobile Internet services and experienced level of seamless use experience are presented in Figure 3. Logically, it appears that customers, who have not had a seamless use experience, will not recommend the use of mobile Internet services. Surprisingly, almost 20% of the customers with a seamless use experience are also reluctant to recommend the use of mobile Internet services. For example, every fifth (20.7%) of the customers, who report high satisfaction figures are not going to recommend the use of mobile Internet services. This finding is in line with previous studies conducted in Finland, which also found that Finnish customers are hesitant to recommend the use of electronic service channels (Mattila et al., 2002; Suoranta et al., 2003) despite the high national levels in electronic channel usage.
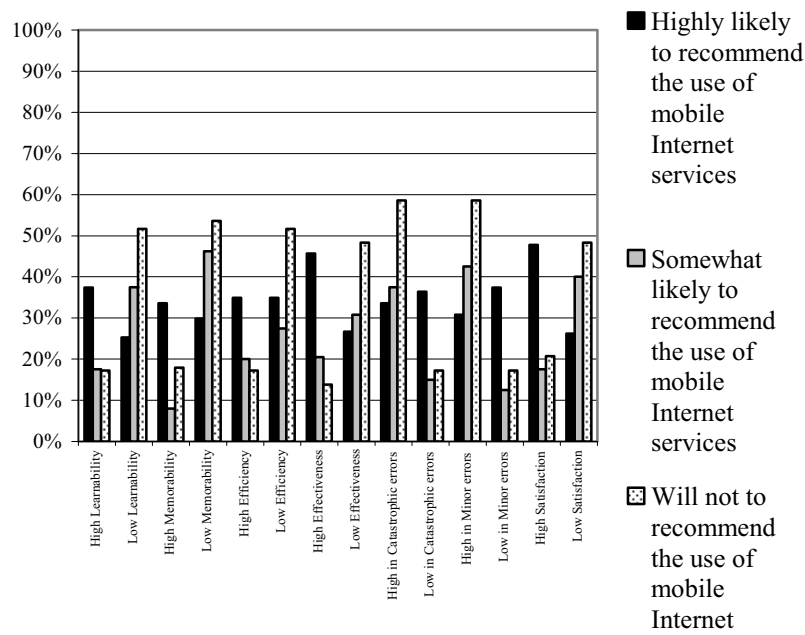
Fig. 3. Crosstabulation: Recommendation * Dimensions of seamless mobile service use experience

Table 5

Chi square on demographics and willingness to recommend use of mobile Internet services

	Chi-square value	df	Sig. (2-sided) p value
Regular users			
Gender	9.701	3	.034
Age	11.253	9	.489
Marital status	3.674	4	.285
Education	17.497	15	.503
Income	11.953	12	.341
Profession	6.157	9	.614
Line of business	30.243	21	.129
Occasional users			
Gender	22.223	3	.000
Age	24.377	9	.013
Marital status	9.149	4	.018
Education	21.255	15	.312
Income	7.210	12	.923
Profession	13.140	9	.069
Line of business	26.057	21	.320

To investigate further the relationship between demographic variables and willingness to recommend the use of mobile Internet services, we used Chi square to test the variables (Table 5). The respondents were divided into two segments of regular users of mobile Internet services and occasional users of mobile Internet services to perform this test. It can be seen from Table 5 that the only significant demographic variable in the segment of regular users is gender. Although tra-ditionally women are often perceived as the more talkative sex, in this case men proved to be the

ones more actively recommending the use of mobile Internet services. This can be explained at least partially with the high percentage of male users in the segment of regular users. In the segment of occasional mobile service users the significant demographic variables in relation to willingness to recommend the use of mobile Internet services are gender, age and marital status. The most likely occasional mobile service user to make a recommendation is a 25-34 years old male, who is married.

The construct of seamless use experience is described in detail in Mattila (2003a). Based on the research findings we are able to present a cognitive model of seamless use experience dimensions affecting the overall satisfaction, willingness to recommend and intention to encourage the use of mobile Internet services in Figure 4.
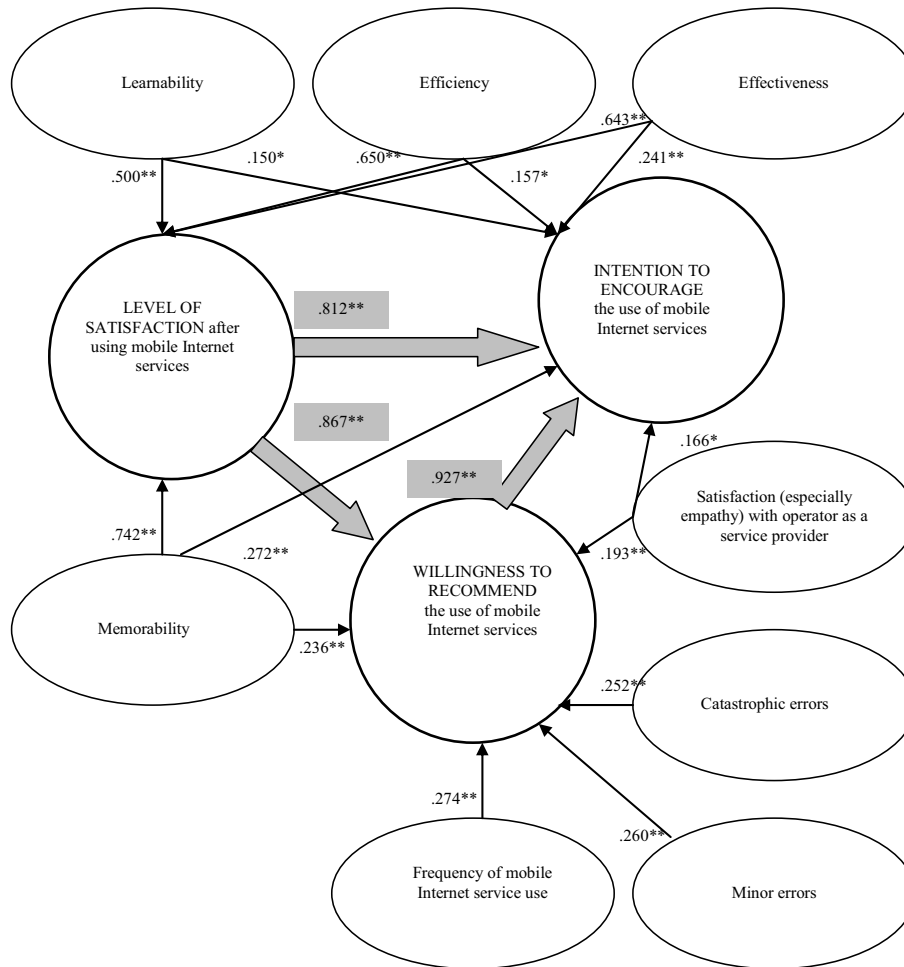

Fig. 4. A cognitive model of seamless use experience dimensions affecting the overall satisfaction, willingness to recommend and intention to encourage the use of mobile Internet services

Level of satisfaction, willingness to recommend the use of mobile Internet services and intention to encourage the use of mobile Internet services among friends and relatives are all highly interrelated with correlation coefficients of .812, .867 and .927. The level of satisfaction affects positively both the willingness to recommend and intention to encourage the use of mobile Internet services. Moreover, willingness to recommend has a positive effect on intention to encourage. Level of satisfaction and intention to encourage are both characterized by two dimensions of seamless use experience: learnability and efficiency of use, which consists of efficiency and effectiveness. Memorability is a common factor to all main determinants. Errors and frequency of

use affect the willingness to recommend. Thus, less experienced errors (minor or catastrophic) are likely to lead into a recommendation. Willingness to recommend and intention to encourage are both dependent on the level of satisfaction and to be more precise, the experience empathy from the service provider side.

6. Conclusions

In this study, our aim is to identify the service quality dimensions pertaining seamless use experience and investigate the relationship between customer satisfaction and intention to recommend mobile Internet services. According to our analysis the level of satisfaction after using mobile Internet services, intention to encourage the use of mobile Internet services and willingness to recommend the use of mobile services are strongly interrelated.

Over half of the Mobile users thought that it is likely that they will recommend the use of mobile Internet services and majority of the Mobile users went even further by saying that it is likely that they will encourage their friends and relatives to start using mobile Internet services. Two thirds of the Mobile users reported of telling positive things about using mobile Internet services to their friends and almost half of them thought that it is likely that they will complain about problems in mobile Internet service usage to their friends. Every fifth said that they would change the service provider (operator) if they encounter problems in the mobile Internet usage.

Customers felt that even though their expectations were not fully fulfilled, they still were satisfied with the service. Apparently, customers tend to relate their feel of satisfaction primarily to the service provider instead of device used to operate the service or service content or context. It is an acknowledged phenomenon in marketing, that customers are rarely straightforward in how their satisfaction constitutes.

From the results of a crosstabulation between willingness to recommend mobile Internet services and experienced level of seamless use experience it can be drawn that customers, who have not had a seamless use experience, will not recommend the use of mobile Internet services. Surprisingly, almost 20% of the customers with a seamless use experience are also reluctant to recommend the use of mobile Internet services. For example, every fifth (20.7%) of the customers, who report high satisfaction figures are not going to recommend the use of mobile Internet services. This finding is in line with previous studies conducted in Finland, which also found that Finnish customers are hesitant to recommend the use of electronic service channels (Mattila et al., 2002; Suoranta et al., 2003) despite the high national levels in electronic channel usage.

One service provider might think about the following: If customers feel that the services are functioning well, and they still will not encourage people to use them or even recommend the use of the services, why should we enhance the usability of services. It is very probable, that there are other dimensions for satisfaction than service provider related variables. Future research should consider this to reveal more of the secrets of customer satisfaction.

References

1. Babakus, E. & Boller, G. (1992). "An empirical assessment of the SERVQUAL scale", Journal of Business Research, Vol. 24.
2. Barnes, S. & Vidgen, R. (2000). "WebQual: an exploration of web-site quality", in Proceedings of the 8th European Conference on Information Systems, Vienna, Austria.
3. Bitner, M. (1990). "Evaluating service encounters: the effects of physical surroundings and employees responses", Journal of Marketing, Vol. 54, April.
4. Bolton, R. & Crew, J. (1991). "A multi-stage model of customer assessments of service quality and value", Journal of Consumer Research, Vol. 17, March.
5. Bowen, J. & Chen, S-L. (2001). "The relationship between customer loyalty and customer satisfaction", International Journal of Contemporary Hospitality Management, Vol. 13, No. 5.
6. Broderick, A. & Vachirapornpuk, S. (2002). "Service quality in Internet banking: the importance of customer role", Marketing Intelligence & Planning, Vol. 20, No. 6

7. Brown, S. & Bond, E. (1995). "The internal market/external market framework and service quality: toward theory in services marketing", Journal of Marketing Management, Vol. 11.
8. Coyne, K. (1989). "Beyond service fads – meaningful strategies for the real world", Sloan Management Review, Vol. 30, Summer.
9. Cox, J. & Dale, B. (2002). "Key quality factors in Web site design and use: an examination", International Journal of Quality & Reliability Management, Vol. 19, No. 7.
10. Cooper, D. & Emory, C. (1995). "Business Research Methods", 5th edition, Richard D. Irwin Inc., USA
11. Crisp, B. & Järvenpää, S. & Todd, P. (1997). "Individual differences and Internet shopping attitude and intentions", University of Texas, Austin, working paper.
12. Cronin, A. & Taylor, S. (1992). "Measuring service quality: a re-examination and extension", Journal of Marketing, Vol. 56, July.
13. Cronin, A. & Taylor, S. (1994). "SERVPERF versus SERVQUAL reconciling performance-based and perceptions-minus-expectations measurement of service quality", Journal of Marketing, Vol. 58, January.
14. Feinberg, R. & Kadam, R. (2002). "E-CRM Web service attributes as determinants of customer satisfaction with retail Web sites", International Journal of Service Industry Management, Vol. 13, No. 5.
15. Gilmore, A. & Crason, D. (1992). "European Journal of Marketing", Marketing Intelligence & Planning, Vol. 10, No. 7.
16. Heinzl, A. (2002). "Case Studies in Information Management", Information Management: IS/T Cotrolling, Universität Mannheim, Mannheim.
17. Imrie, B. & Cadogan, J. & Naughton, R. (2002). "The service quality construct on a global stage", Managing Service Quality, Vol. 12, No. 1.
18. Johnston, R. & Silvestro, R. & Fitzgerald, L. & Voss, C. (1990). "Developing the determinants of service quality" in Proceedings of 1st International Research Seminar on Services Management, Alx-en-Provence, France.
19. Järvenpää, S. & Todd, P. (1997). "Is There a Future for Retailing on the Internet?" in Electronic Marketing and the Consumer, ed. Peterson, R. A. (1997), SAGE Publications Inc., California.
20. Lewis, B. (1989). "Quality in the service sector: a review", International Journal of Bank Marketing, Vol. 7, No. 5.
21. Malhorta, N. (1999). "Marketing Research: An Applied Orientation, 3rd ed.", Prentice-Hall, Sydney.
22. Mattila, M. & Pento, T. (2002). "Development of Electronic Distribution Channels in Finland – M-Banking Usage and Customer Profiles", Banking and Information Technology BIT, seite 41, 2/2002.
23. Mattila, A. (2003a). "The different dimensions of seamless use experience in electronic environment", in Proceedings of European Applied Business Conference, Venice, Italy.
24. Mattila, A. (2003b). "Service content and context affecting the dimensions of seamless mobile service interface: Case errors", under review for Journal of Academy of Marketing Science.
25. Mattila, M. & Härkönen, A. (2003). "Cell Sailors – An educational program aimed at mature customers on how to use mobile services", Journal of Internet Banking and Commerce (in press).
26. Nielsen, J. (1993). Usability Engineering. New York: AP Professional.
27. Nunnally, J. (1978). "Psychometric Theory, 2nd ed.", McGraw-Hill, New York.
28. Oliva, T. & Oliver, R. & MacMillan, I. (1992). "A catastrophe model for developing service satisfaction strategies", Journal of Marketing, Vol. 56, July.
29. Parasuraman, A. & Zeithaml, V. & Berry, L. (1985). "A conceptual model of service quality and ist implications for future research", Journal of Marketing, Vol. 49, No. 4.
30. Parasuraman, A. & Zeithaml, V. & Berry, L. (1988). "SERVQUAL: A multiple-item scale for measuring consumer perception of quality", Journal of Retailing, Vol. 64, No. 1.

31. Parasuraman, A. & Zeithaml, V. & Berry, L. (1994). "Reassessment of expectations as a comparison standard in measuring service quality: implications for further research", Journal of Marketing, Vol. 58, January.

32. Philip, G. & Hazlett, S-A. (1997). "The measurement of service quality: a new P-C-P attributes model", International Journal of Quality & Reliability Management, Vol. 11, No. 8.

33. Ranaweera, C. & Neely, A. (2003). "Some moderating effects on the service quality – customer retention link", International Journal of Operations & Production Management, Vol. 23, No. 2

34. Raskin, J. (2000). "The Humane Interface", Addison-Wesley, New York.

35. Rotondaro, R. (2002). "Defining the customer's expectations in e-business", Industrial Management & Data Systems, Vol. 102, No. 9.

36. Scharecher, M. (2002). "A methodological approach to extending SERVQUAL to measure the internal service quality between employer and employee", Research Paper 3, DBA Anglia Business School, UK.

37. Shneiderman, B. (1996). "Designing information-abundant Web sites", available at www.cs.umd.edu/projects/hcil/Research/tech-report-list.html#1996 as on 11.12.2002.

38. Statistics Finland (2003), Nordic Information Society Statistics 2002. Available at www.stat.fi as on 17.6.2003.

39. Suoranta, M. & Mattila, M. & Munnukka, J. (2003). "Technology-based Service Product – A Study on the Drivers and Inhibitors of Mobile Banking", in Proceedings of the 2nd International Conference on Mobile Business, Vienna, Austria.

40. Taylor, S. & Baker, T. (1994). "An assessment of the relationship between service quality and customer satisfaction in the formation of consumer purchase intentions", Journal of Retailing, Vol. 70, No. 2.

41. Teas, R. (1993). "Expectations, performance evaluation and consumers perceptions of quality", Journal of Marketing, Vol. 57, October.

42. Teas, R. (1994). "Expectations as a comparison standard in measuring service quality: an assessment of a reassessment", Journal of Marketing, Vol. 58, January.

43. Thorton, S. (2001). "Customer orientations and usage of financial distribution channels", Journal of Services Marketing, Vol. 15, No. 3.

44. van Dyke, T. & Prybutok, V. (1999). "Cautions on the use of the SERVQUAL measure to assess the quality of information systems services", Decision Sciences, Vol. 30, No. 3.

45. van Riel, A. & Liljander, V. & Jurriens, P. (2001). "Exploring consumer evaluations of e-services: a portal site", International Journal of Service Industry Management, Vol. 12, No. 4.

46. Yang, X. & Ahmed, Z. & Ghingold, M. & Boon, G. & Mei. T. Hwa, L. (2003). "Consumer preferences for commercial Web site design: an Asia-Pasific perspective", Journal of Consumer Marketing, Vol. 20, No. 1.