

Study on Satisfaction According to Result of Participants in DIY Woodworking Program

Tong Whan Chun¹ and Kwang Roul Kim^{†2}

ABSTRACT

This study was the research of the satisfaction of participation in short DIY Woodworking program organized by university as productive leisure activity. It is the study of what satisfactions-factors of the participants are and how the satisfaction is continued with activities of the participants later on, and finally how the satisfaction influences the choice of leisure activity further.

Questionnaire is consist of total 41 survey standards like the article for facility, education, service and cost & the demographic contents of the participants. It was executed by the participants in program at sight from Aug. 1st and 2nd 2008, and the valid samples 156 copies were definitely analyzed.

The result of analysis shows first that the majority of the participants in the short leisure program are the beginner who took part in such program for the first time. What them interests are the convenient facility & use of tools. Second, the reasonable fees in terms of material cost & preparation of personal tools influenced positively on satisfaction of participation. Third, the dissatisfaction of participants regarding educational method and service could be solved by that the trainer who makes practical lesson had been informed of the course in advance.

Keyword: DIY woodworking, productive leisure activity.

INTRODUCTION

Background

Korean industry nowadays is generally declining in most spheres and the labor in 3D sectors of business is getting aged and even it is going down. The production system had been changing from mass production to customized production system with small quantity & lots items according to diverse needs & tastes of customer, and in family the housewife's daily work is has new phase to be recognized thanks to improvement of position of women and like this production & consumption, work & play and combination between daily life & art as social diversification is available and possible more and more through IT industry. Such change of society has brought also changes in life styles and it could be a ground on that DIY was settled as a culture (Byun 2003).

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1) Prof. Division of Tourism Administration, Kangwon National University, Chuncheon, Korea.

2) Prof. Department of Furniture Design, Hyupsung University, Hwasung, Korea.

† Corresponding author: Kwang Roul Kim (Email: kimkr@uhs.ac.kr).

Also in leisure activity such changes are felt and population who takes part in productive leisure activity by working is constantly increasing. The economical growth and improvement of cultural standard and shortening of working hour and five day working week etc play hereupon a meaningful role to extend the leisure time, but the not different leisure programs to be able to advance life standard have been pointed out. Furthermore consumers want leisure program to reflect many diverse situation like economical difficulty, highly calculated labor cost, economy sprit, interest in high life standard and change of life style etc.

Recently the leisure activity has the tendency like that the peoples who have similar mind and thought and same hobby make a gathering together. According to this tendency the productive leisure activity is more beloved than the negative and spending type of activity. Hereupon DIY woodworking program as what is helpful for environmental change in family and as whatever all family members can make and enjoy together are gaining the meaning. DIY woodworking program is an activity requiring voluntary labor of participants. There are many people who already worked physically psychologically as well as physically in family and company, but did not take a rest and instead that choose again working time in DIY woodworking program during leisure. DIY woodworking program therefore can't be classified clearly in an aspect, because it has characteristic as leisure and also as working, too.

In the domestic woodworking school there are approx. 500 registered companies as of 2007, and the total turnover is 80,000,000,000 KRW (80,000,000 USD) showing a rapid growth and constant extension of the companies and participants. The companies that do not keep pace with these different need and request from the market have logically a big problem for marketing. The participants in short program who are interested in DIY woodworking school need to be recognized as potential customer for woodworking company and there has to be a study to analyze which factor can guide and interest them in constant leisure activity.

Raise a question and purpose of Study

According to "social statistic in culture, leisure and education" released by the National Statistical Office in 2007, it is showed that the income wad increased, but the satisfaction index to use leisure time went down. This result was analyzed by the reason that the expectation level regarding cultural, social and personal leisure was raised and the needs of participants became diverse and more detailed. In this study it has to be known how demographic factors of participants in DIY woodworking program like occupation, sex, age, form & size of house etc. influence the satisfaction index of the obtained result, on the basis of empirical method. From this study the diverse needs and requests for short DIY woodworking program as productive leisure activity should be found and the practical DIY program should be developed accordingly.

This study is a necessary analysis process be carried out as marketing strategy in the situation 'DIY woodworking' market is earnestly growing and the importance of this study is valuable. As a researcher of this study, I expect that demographic material of participants in short DIY woodworking program and their satisfaction connect with the constant participation in the future furthermore, and it could be a data of marketing strategy for the 'DIY woodworking industry'.

The biggest obstacle for the potential customer to choose DIY woodworking program is as well known the economical burden at purchasing expensive personal tool and material. To solve such difficulty the short DIY program is offering a comfortable and safe facility and tool, appropriate material and the trained assistant for the beginner and female participants. Furthermore the price-wise participation fee cutting any economical burden works as the great advantage. Like this the interesting the participants in short DIY woodworking program organized university constantly after program DIY as a productive leisure activity and the analyzing the connection between satisfaction index and the activity after satisfaction is the purpose of this study. This would

be a important data to systemize the marketing plan indicating DIY program development and satisfaction from the participation in that.

Furthermore this study was tried form the point of view that DIY woodworking program is offered by university as productive leisure activity and the practical approach into participation in such programs is necessary.

THEORETICAL CONSIDERATION

Definition of DIY

The origin of DIY started from reconstruction of the capital city London in UK after the 2nd World War. In London at that time the movement to repair and reconstruct the street & house infrastructure destroyed by German attack was raised by the peoples themselves. Such movements were raised during same period in Europe and America and extended into France, West Germany and USA. After that in London the magazine named “Do it yourself” was founded 1957 and this proves that the origin of DIY is UK (Lee 1992).

DIY in Korean is called ‘Sonsuzzagi’ (The National Institute of the Korean Language 2006). In the beginning phase when DIY had started the aspects of economical saving was pointed out, but in the course of time when material property came repair and maintain done in family was depended on expert occupation. But now the consumer’s personal tastes and characteristic are getting more different and clear and leisure related in creation and hobby are extended, while the labor cost is getting higher and the manpower is becoming insufficient. The 5 working week hereupon contribute to participation of the peoples in purchasing the tools and making producing by themselves thanks to increased free time, and this makes the tendency more clear that people want to achieve self-fulfillment by doing themselves and furthermore to spend time with their family together and finally to harmonize all family members.

In USA the idea HI (Home Improvement) was usually used and ‘HI’ is recognized almost same to ‘DIY’, and in Japan ‘DIY’ is replaced by ‘HC’ (Home Center) where the household articles overall are sold. This DIY is being spread into construction, interior, cosmetics, clothes, cars etc. in overall daily life and furthermore into the area of an association, continuing education institute and short leisure program in university etc. the characteristics of DIY are as follows: first DIY brings people achievement and possessiveness of the product, because they can make their environment with their own hands according to their tastes. Second, it could be a healthy hobby due to investing regularly working time. Third, the unique product at lower price is possible. Forth, it request large free time for expressing the personality and taste. Fifth, there is an economical burden to purchase the tools for production and installation.

Current Status of DIY woodworking shop

DIY woodworking school is the place where has different equipment for woodwork from hand tools to accurate machine, safety facility and convenient facility for customer and where the function and knowledge of woodwork are learned. It is offered as comfortable environment like the well-trained management, good designed unique items and program in order that customer can enjoy whole time during staying. Customers can visit any time they want and participate in the wanted program and can also receive the well-organized service and produce any furniture and articles by woodwork with their own hands in woodworking school. For the woodworking school is equipped with different material and tools, consumption goods and working clothes and customer can choose here furniture, color and wood, function according to their taste and then they can be helped regarding production way, finishing treatment and work procedure etc.

Furthermore customer can express their personality and potential creation by taking part in directly designing and producing, unlike in the past woodworking's shop where the good was made simply according to the ordered.

And this plays a real role as prosumer (Jung 2004) from the meaning that the unique item is made by the invested labor.

In the franchised woodworking shop recently receiving a spotlight, rather the accurate machinery than hand tools are serviced and it help even the beginner make more delicate formation and finishing in safe way. But due to insufficient education period it is not possible for customer to learn wide knowledge like furniture production, design, distribution and sales etc. And the items are limited due to lack of design variables as well as reserve power to be able to make new item customer wants. If the woodworking shop would be managed like this differently to customer's needs, it can't interest any customer in the future and can shorten the lifespan of the program.

Typology of DIY woodworking shop

The typology of DIY woodworking shop is classified in the personal type (studio), the type of enterprises, franchised shop, the type of association members and veranda type (garage). Personal type is again into the studio for an artist only and the DIY shop for customer's leisure. Both of them are small scaled shops, but managed by expert and therefore offer accurate technique & plan and even design. The enterprise type of shop is operated like the franchised form and maintained and supported constantly by the enterprise and machine & hardware & finishing method are trained till each shop is self-supporting.

The shop of association is based on the members who have same hobby and managed by them, and the friendship among members and cooperative study and exchange of information and display of the works are here done.

Veranda type (garage) is for everyone who is interested in DIY and it is made in veranda and/or multifunctional area of apartment house, or in garage of general house.

SURVEY PLAN

Plan of study model

In thin section the study model like Fig. 1 is introduced to achieve the following purposes based on the aforementioned study and the factors influencing satisfaction index.

Creation of Study Hypothesis

In this study it is researched that the result of the participant in short DIY woodworking program influences not only the satisfaction from participation itself, also the activity after satisfaction positively, based on the preceding study (Sung Hoon Choi, Jae Woon Kim; Wilson & Rodgers, 2004, Pelletier et al.)

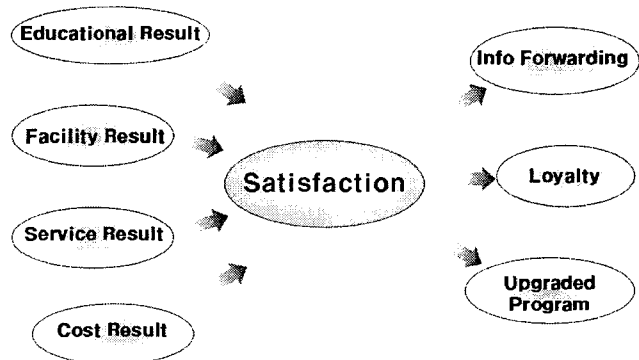


Fig.1. Study Model.

Study Hypothesis

Hypothesis 1. The result of participation in short DIY woodworking school will influence the satisfaction.

Sub Hypothesis 1-1 The educational result of short DIY program will influence the satisfaction.

Sub Hypothesis 1-2 The facility result of short DIY program will influence the satisfaction.

Sub Hypothesis 1-3 The service result of short DIY program will influence the satisfaction.

Sub Hypothesis 1-4 The cost result of short DIY program will influence the satisfaction.

Hypothesis 2. Satisfaction of participation will influence the activity after satisfaction.

Sub Hypothesis 2-1. Satisfaction of Participation will influence information-forward after satisfaction.

Sub Hypothesis 2-2. Satisfaction of participation will influence further participation.

Sub Hypothesis 2-3. Satisfaction of participation will influence the purchase of upgraded program.

Survey point and construction of questionnaire

Table 1. Questionnaire

No. of item	Item	Survey
General (4)	Participation hours, frequency, information, cost	nominal
Pre-Cep-tion	Education(4)	Skill, level, support, diversity
	Facility(4)	Space, rest, safety, information guide
	Service(4)	Kindness, necessity, caring personality, easy presentation
	Cost (3)	Participation, product, production
Real Result(3)	Education, activity, satisfaction with members	
Experienced result(5)	Program, practical apply, choice, experience, overall	
Activity(3)	Suggestion, continual participation and further participation in upgraded program	
Demographic (11)	Sex, age, marriage, education, occupation, size & type of residence, possession of house, residence city, income. 5 working week.	nominal

As like table 1 this Study is consist of general contents (4 items), perception result (15 items), experienced result (3 items) valuation of experienced result (5 items), activity after satisfaction (3 items) and demographic (11 items) total 41 items, based on the preceding study (Shim 2002).

Collection of data and way of analysis

To verify the hypothesis the participants in ‘DIY woodworking furniture making project’ opened during Aug. 1st and 2nd with support of the Office of Forestry and Forum of Wood Culture and organized by Furniture design department, Art College. Hyupsung University, have been selected as survey object. The total 245 of questionnaires were distributed and 189 effective responses with exception of children’s questionnaire were collected. The not effective data among those was eliminated and 156 questionnaires were taken for analysis material. The age-group of participants are 51 persons in 30s (32.7%), 60 in 40s (38.%) and they made a main current.

The result of education (4 items), of facility (4 items), of service (4 items) (beside Valarie and more 2006), of cost (2 items) and of satisfaction (5 items) etc were corrected somewhat on the basis

of those of used by Oliver (1997). And the information-forward intension was added in the questionnaire based on the definition of Price and Arnold (1999), loyalty index based on Neese and Taylor (1994) and the purchasing of upgraded program based on Homburg, Koschate and Hoyer (2005). Intension of information-forwarding, loyalty and purchasing of upgraded program were surveyed according to single measurement. The contents of questionnaire were developed by total 41 items like education, service, facility and cost plus demographic items to analyze the participants.

Verification of Hypothesis

In order to verify the hypothesis in this study structural equation was applied and analyzed by using SPSS 15.0 and AMOS 7.0. Each analysis was executed by the process and standard presented by Hair et al. (2006).

General Characteristic of respondents

Table 2 Result of demographic analysis of specimen

Div.	Variable	Frequency (Number)	Percentage (%)	Div.	Variable	Frequency (Number)	Percentage
Sex	Male	73	46.8	House	Possession	134	85.9
	Female	83	53.2		Non	22	14.1
	Total	156	100		Total	156	100
Age	under 19	19	12.2	Re di den ce	Metropolitan	44	28.2
	20~29	14	9.0		Middle city	75	48.1
	30~30	51	32.7		Small city	7	4.5
	49~49	60	38.4		New town	20	12.8
	50~59	11	7.1		Village	10	6.4
	Over 60	1	0.6		Total	156	100
	Total	156	100		An nu al In co me	Under 10. mil	28
Ex pe ri en ce	1	118	75.7	10 ~20 Mil		18	11.5
	2	20	12.8	20 ~30 Mil		22	14.2
	3	5	3.2	30~40 Mil		22	14.2
	4	0	0	40~50 Mil		30	19.2
	Over 4	13	8.3	Over 50 Mil		36	23
	Total	156	100	Total		156	100
	Ex pen di tu re	Under 100,000	123	78.8	Ty Pe Of Re Si En Ce	Apartment	136
100,000 ~200,000		31	19.9	House		7	4.5
200,000 ~300,000		0	0	Village in country		6	3.8
300,000~ 400,000		2	1.3	One room		1	0.6
Over 400,000		0	0	Tenement house		4	2.6
Total		156	100	No response		2	1.3
Edu ca tion		Under high school	19	12.1		Si ze of	Under 18
	High school	27	17.3	18~24	22		14.2

Oc cu pa ti on	degree			Re si den ce				
	College	11	7.1		25~30	33	21.3	
	University	87	55.8		31~40	81	51.6	
	Over	12	7.7		41~50	14	9.0	
	Graduated school							
	Total	156	100		Over 50	2	103	
	Business	9	5.8		Total	156	100	
	Office employee	20	12.8		Ad ver ti se ment	Internet	14	9
	Service	6	3.9			TV	1	0.6
	Production	8	5.1			Magazine	4	2.6
Professional	20	12.8	Relative or Neighbor	24		15.4		
Student	26	16.7	Related association	3		1.9		
Housewife	47	30.1	Related Pro.	4		2.5		
Teaching occupation	11	7.1	Advertisement	94		60.3		
Unemployment Retirement	1	0.6	No response	12		7.7		
No response	5	5.1	Total	156		100		
Total	156	100	5 work	Yes		119	76.3	
Par tici pati on ho ur	Less 1 hr	2	1.3	wk	No	37	23.7	
	1~3 hr	38	24.3	Ma rri age	Total	156	100	
	3~5 hr	56	35.9		Marriage	120	76.9	
	5~7 hr	50	32.1		Single	30	19.3	
	More 7 ht	10	6.4		No response	6	3.8	
	Total	156	100		Total	156	100	

The table 2 shows the demographic characteristic of specimens. The majority of participants are the beginners (75.5%) who take part in DIY program for the first time, and the types of residence apartment (87.2%) and the size of residence is mostly 31-40 PY (5.6%) (M2 변경요망). The educational grade is mainly the university degree (55.8%) and annual salary shows on contrary spread appearance from under 10 million KRW to over 50 million KRW. Regarding the participation fees the majority of 78.8% of participants expressed the will to pay under 100,000 KRW. The occupations were showed the housewives (30.1%) as the 1st ranked position and the participant having 5 days working week marked 76.3%.

Verification of reliability and feasibility

The official approval of internal consistency of each study is verified by Cronbach's α value and the items to be able to hinder reliability were eliminated. Like Table 3, each α value according to concept showed educational characteristic .936 (3 items eliminated), facility .912 (4 items eliminated) and service .839 and cost .936 (3 items eliminated). This already the usual reliability and the internal consistency are confirmed. The intension of information-forwarding, loyalty and purchasing of upgraded program were measured by single standard and therefore it is not necessary to check the internal consistency.

For the valuation of feasibility after analyzing the reliability the 1st confirmation factor

analysis was done with use of AMOS 7.0. Among them the educational- and facility aspect were consist of 3 items and appropriateness is not available due to just-identification. Also intension of information-forwarding, loyalty and purchasing of upgraded program were consisted of less 3 items and therefore appropriateness is not available either. So with exception of these variables the 1st conformation factor analysis was executed.

Table 3. Result of reliability analysis

Division	Items before elimination	Items after elimination	Reliability index
Education	4	3	.936
Facility	4	3	.912
Service	4	4	.839
Cost	2	2	.890
Satisfaction	5	5	.907

The result of 1st confirmation analysis is shown in Table 4. Each appropriateness consisting every survey standard appeared as exceedingly the standard presented by Hair et al. (2006) and Hak Sik Lee & Ji Hoon Lim (2008); (the less the desirable, p-value < .05, GFI > .90, RMSR < .05, NFI > .90, CFI > .90) Therefore the appropriateness of model versus each variable according to the 1st confirmation analysis is regarded as excellent.

Table 4. Result of 1st confirmation analysis

Division	x 2	p-value	GFI	RMSR	NFI	CFI
Service	27.418	.00	.975	.006	.989	.992
Satisfaction	31.805	.00	.974	.004	.987	

After reliability analysis and the 1st confirmation analysis the 2nd confirmation factor analysis was done. In consideration of factor loading standardization (residual) and correction index the items were classified, and in result the standard in case of factor loading the value is chunking and in case of factor loading more than .5 and in case of standardization residual modulus less than 4.0 and in case of correction index 10 was taken as standard (Waim Lee 2008).

Table 5. Result of 2nd confirmation factor analysis

Division	Definite items	Items	p-value	t	Standardized index	AVE	CR
Education	2	Item1	-	-	.922	.840	.894
		Item2	.00	18.747	.911		
Facility	2	Item2	-	-	.978	.932	.966
		Item3	.00	29.323	.953		
Service	3	Item2	-	-	.924	.829	.967
		Item3	.00	28.447	.912		
		Item4	.00	27.267	.869		
Cost	2	Item1	-	-	.981	.943	.966
		Item2	.00	33.968	.962		
Satisfaction	5	Item1	-	-	.838	.814	.980
		Item2	.00	23.487	.914		
		Item3	.00	24.317	.931		
		Item4	.00	23.394	.912		
		Item5	.00	23.367	.914		

In result of the 2nd confirmation factor analysis the appropriateness was shoes like $\chi^2=361.637$, $p\text{-value}=.00$, $GFI=.915$ $RMSR=.017$ $NFI=.957$, $CFI=.976$ and these generally exceeded the standard presented by Hair et la.(2006) and Hak Sik Lee and Ji Hoon Lim (2008). Also factor loading in each item was all chunking and standardization residual was over than .7.

Table 6. Correlation of each variable

Division	Education	Facility	Service	Cost	Satisfaction
Education result					
Facility	.047				
	.223				
Service	.358	.380			
	.128	.144			
Cost	.514	.362	.356		
	.264	.131	.127		
Satisfaction	.373	.418	.538	.259	
	.139	.175	.289	.129	

And AVE (average variance extracted) and CR (construct reliability) were calculated and the results of both of them showed over than standard index and verified as follows: AVR > .5 as desirable / CR > .7 as desirable and hereby the convergent validity was verified. Each value and the result of the 2nd confirmation factor analysis is like Table 5.

Lastly to verify the discriminant validity, Fornell and Larcker (1981)’s method (if $AVE > Corr^2$, discriminant validity is realized) was used and confirmed. Table 6 shows 4 construct’s correlation and their square value. Like showed in Table 6, each square value of correlation was less than AVE value and hereby the discriminant validity of the standard in this study was verified.

The value written in bold type shows the correlation value and the under located value is the square value of correlation.

Result of Hypothesis Verification

After 2 steps analysis of confirmation factor, the hypothesis was verified through the refined item. For verification of hypothesis AMOS 7.0 was used, and as input data covariance matrix of the measured items was used. Prior to analyzing the items having high correction value with other variable were eliminated (result of education items 4, facility item 1, service item 1).

The analysis result of the study diagram showed= 186.855, $p\text{-value}=.00$, $GFI=.869$, $RMSR=.031$, $NFI=.875$, $CFI=.923$ and it is generally regarded as excellent. The verification results of each hypothesis are in detail as Fig. 2 and Table 7.

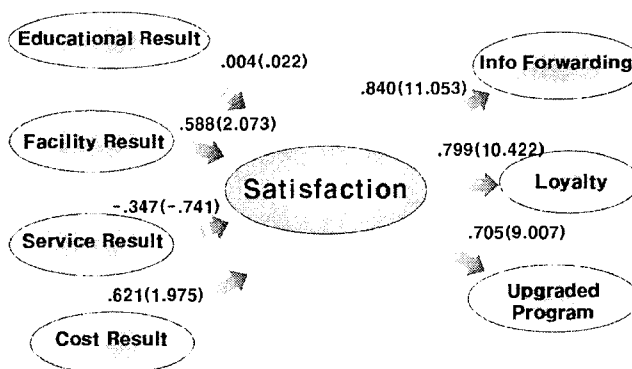


Fig. 2 Result of course diagram of participant’s satisfaction.

Table 7. Result of analysis of satisfaction course

Course	Course value	T value	P value	For & against
Education result => satisfaction	.004	.002	.982	X
Facility re. => satisfaction	.588	2.273	.023	O
Service => Satisfaction	-.347	-.741	.458	X
Cost => satisfaction	.621	1.975	0.48	O
Satisfaction => info forwarding	.840	11.053	***	O
Satisfaction => loyalty	.799	10.422	***	O
Satisfaction => upgraded program	.705	9.007	***	O

CONCLUSIONS

From the point that the short leisure program operated by university and social association are closely connected with leisure activity later on after satisfaction, it was studied how DIY woodworking program influence productive leisure activities. Due to lack of the preceding research regarding DIY woodworking shop, this study showed very realistic and meaningful result. Furthermore it could be expected that satisfaction in participation can make customer purchase the upgraded program again and DIY woodworking program can be regarded as main productive leisure accordingly. The results of the Study are summarized as follows: First, who achieved a satisfaction from a participation in DIY woodworking program have a tendency to suggest and forward their positive experience to other peoples and they also want to take part in constantly, and they furthermore have an will to invest the cost to make the upgraded program. Secondly, who took part in a short program feel a satisfaction in the points of facility and lower price of DIY woodworking program and the reliability for woodworking shop brings a set of loyalty. Thirdly, in education and service sectors there should be deep research and study, and the most of trainers who make any short DIY woodworking program in university are students majoring this subject and it tells us that a careful education- and service method is necessary.

This study is an attempt to settle DIY woodworking industry a productive leisure activity through the systemized research & analysis, and it is regarded as an essential study to make DIY woodworking market more stable and prosperous.

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