

## **Motivation for Skill Transfer: Mediating Role of E-Learner's Satisfaction**

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### **Abstract**

Transfer motivation is of huge importance in training and effective management of knowledge. This study aims to explore the structural association of operative factors (internal value, learning usefulness, learning environment, learner satisfaction) and motivation of e-learner, for effective skill transfer. Online survey was conducted to collect data from 200 students of Virtual University, who were enrolled in two subjects: Knowledge Management and Organizational Behavior. Data was analyzed using SPSS and AMOS. Results of Structural Equation Modeling (SEM) found that the structural association among e-learners' internal value, learning usefulness, learning environment, satisfaction, and motivation for skill transfer is significantly positive. Nonetheless, the study found a weak association among learning environment, and motivation for skill transfer. Some propositions were made to augment e-learners' learning outcomes e.g. enhance sample size, take data from students of other courses as well, some other variables (social belongingness, achievements of e-learner) must be taken into account. This study endows with an integrated view of e-learner's effective factors of motivation for skill transfer in e-learning environment.

**Keywords:** motivation for skill transfer, e-learner's satisfaction, learning usefulness, internal value, learning environment

### **1. Introduction**

Distance learning in Virtual University is acknowledged as an educational system of future and this system is not yet been completely deliberated. Predominantly, regardless of diverse considerations on the educational system design aspects and programs for fabricating constructive educational outcomes, research is inadequate on the transfer of e learning to the career fields (Lim, 2009). In the recent years, training transfer was used for educational assessment in the educational context. In the cyber Universities, it is not easy for the e-learners to implement their skills and knowledge directly to their job settings. Therefore, it is tricky to evaluate the outcomes of learning, as the only purpose of virtual universities is to accommodate the individuals due to their economic or personal issues (Lim, 2009).

Motivation to skill transfer is proven to be prominent factor for the prediction of e-learner's behavior change (transfer) in the previous studies (e.g., Baldwin and Ford, 1988; Burke and Hutchins, 2007). It was established that the transfer motivation occurred earlier to training transfer (Chiaburu & Lindsay, 2008; Axtell *et al.*, 1997). Furthermore, Gegenfurtner *et al.*, (2009) calls attention to the research significance on the transfer motivation by pointing out that most important interests of HRD (Human Resource Development) theory and practices consist of training failure, low return on investment due to learners' and less transfer motivation.

In conjunction with motivation to learn, transfer motivation is the foremost factor to determine the motivation to transfer the learning. Shin & Oh, (2004), measured educational upshots of cyber universities via transfer motivation, which endows with the meaningful insights. The factors affecting the transfer motivation is classified into three main categories: characteristics of learner, training design, and the external environment. Baldwin and Ford (1988) projected the process of transfer model, in which they recognized that personal aspects, factors related to training, and organizational factors have an effect on learning transfer directly and indirectly as well.

The optimistic perception of environment of organization influences the motivation to transfer skills (Noe, 1986). Besides, Holton (1996) investigated that expected training usefulness, learner satisfaction, learning, job attitude, and the environment of transfer directly influence the transfer motivation. It is done by offering the evaluation research and measurement model of HRD. Likewise, transfer motivation is divided into sub factors i.e. personal factors, training related factors, and organizational factors (Gegenfurtner *et al.*, 2009). They have also widened the transfer process model (Baldwin & Ford, 1988) into following: factors before training, middle and after training factors.

Tannenbaum and Yukl (1992) and Campbell (1988) put forward that training effects should be broadened to the trainee's variables and research should take account of self-efficacy and motivation of the trainee. Meanwhile, the response of learners to the learning usefulness can be successful on three principles of learning design (stimulus variation, same element, general principles) Warr and Bunce (1995). They also demonstrated that measuring only learner enjoyment is difficult because the instructor and work-related value of training content must also be examined as key response measure estimate (Warr and Bunce, 1995; Alliger and Janak, 1989). Up till now, learner satisfaction has been repeatedly employed to appraise results of training owing to measuring ease. Khodabandeh, *et al.*, (2010) explored the critical success factors of e-learners' satisfaction and they found that e-learners' satisfaction with e-learning system is the primary factor in his/her decision to stay or dropout from that e-learning courses.

Furthermore, since the effect of external atmosphere on motivation to transmit were examined with a focus on the place of work environment (colleague support, seniors, and business atmosphere) in prior work (Huczynski & Lewis, 1980; Seyler, *et al.*, 1998; Kirwan & Birchall, 2006). It is notion that other studies had focused on the learning atmosphere (instructor, learning atmosphere, and colleague support) must be conducted in order to give a whole picture.

Research study under consideration aims to investigate impact of internal value (personal characteristics of the learners) on MST (Motivation for Skill Transfer). Here internal value acts as a motivational variable and usefulness of learning as the learning content

variable whereas learning environment as an external variable which likely to effect the learner satisfaction, and motivation to transfer. For this purpose, we adopted an integrative model in order to confirm the structural relationship among variables under discussion. Additionally, we also discovered the consequences of employment status on learning and it was done through considering the discrepancies in the structural relationships, as per learners' job status.

Distance learning universities usually have high scope of learners who are employed than do traditional universities. Although many earlier studies have investigated the effects of having a job on university students' academic achievement, the results are conflicting. It is to conclude that, some of researchers found that concurrently having a job and studying at a university is harmful for learners (Lammers *et al.*, 2001). Other researchers articulated good opinions (Lucas & Lammont, 1998; Dallam & Hoyt, 1981). In addition, some researchers said that not only the employment status but because of the difference in allocation of the learner's time (Gleason, 1993; Dundes & Marx, 2006; Orszag *et al.*, 2001).

This study is been carrying out to find out the effects of internal value, learning usefulness and the learning environment, satisfaction and motivation to transfer of their learning to their workplace. Moreover, we will check and interrogate the structural relationship among e-learners internal value, learning environment, learners' usefulness and motivation for transfer which laying upon their employment status. Here independent variables are learning environment, learning usefulness and internal value and the dependent variable is motivation to transfer of learning. The mediating variable is satisfaction.

In Pakistan, e-learning system is emerging in the Universities e.g Virtual University (Pioneer in e-learning in Pakistan), and COMSAT Virtual University. It is pertinent to note that today employed students prefer virtual/cyber Universities and the students from rural areas also prefer cyber Universities. There is a huge number of e-learners in these Universities, therefore it is important to work on the ways through which their motivation for their skill transfer on workplace can be boost up. Gegenfurtner *et al.*, (2009) calls thoughtfulness to the research implications on the transfer motivation by pointing out training failure due to learners' less transfer motivation. Moreover, Lim (2009) found that research is inadequate on learning transfer to the career fields and he recommends to work on the factors affecting e-learners' motivation for skill transfer. Moreover, other factors associated with e-learners' motivation for skill transfer on the workplace also needs to be studies in the Pakistani context. These variables include internal value, learning usefulness, learning environment, e-learners' satisfaction and motivation for skill transfer.

The following research questions are designed:

- i. Is there any impact of e-learner's internal value, learning usefulness, and learning environment on his/her satisfaction?
- ii. Is there any impact of e-learner's internal value, learning usefulness, learning environment, learner satisfaction on his/her motivation for skill transfer?

## 2. Theoretical Background

E-learning is a developing system in Cyber Universities (Virtual University and COMSAT University) of Pakistan. It is an unindustrialized educational area yet. There is a massive number of enrolled students in Cyber Universities and is growing by time passage. E-learners learn electronically and do not attend the class as in conventional system. There is huge importance of e-learners' motivational factors for effective transfer of their learnt skills to the job place (Gegenfurtner *et al.*, 2009). The practicality of the learnt skills is very important. Therefore, In Pakistani context, it is pertinent to study the effective factors of transfer motivation and especially the satisfaction level of e-learners from the overall learning environment. These variables embrace internal value, learning usefulness, learning environment, e-learners' satisfaction and motivation for skill transfer.

The impression that we obtain from expectancy value model is that notion of *internal value* effects the motivational level of an individual in his learning at every stage of his life (Eccles, 1983). Many researchers have argued that individuals with high internal value possess greater ability to elevate their learning curve and can better cope up with various challenges of life (Eccles, 1983; Meece *et al.*, 1988). Lan and Skoog (2003) investigated the relationships between twelve grade students by using data from the TIMSS (Trends in International Math and Science Study) and found out that they possess high values of self-efficacy, internal value, and motivation among math and science students. This may include the cognitive belief toward classroom learning and knowledge based that provides the students a sense of achievement.

Elevation in learning curve solely cannot make an individual efficient, *learning usefulness* also have great importance in learning, and it can be achieved by involving the trainees by building their interest, providing them clear idea of the value of the training session along with the challenges attached to it (Warr and Bunce, 1995). In professional environment, the usefulness of the training can be insured by including the contents of the job in the training material (Shin & Oh, 2004).

Despite of the usefulness of the training; support of trainer and colleagues along with effective transfer of information are also vital in order to develop a healthy *learning environment* during the training (Butler & Winne, 1995). Better application of knowledge of training into the job can be achieved by the support and cooperation of the coworkers; this can develop an overall learning environment in the organization (Holton, 1996). Learning environment is closely related to the internal value of the learner. Pintrich and DeGroot (1990) explore same concept; he examined 173 seventh grade participants of science and English classes and found out that learning is the affiliation of motivational point of reference of the learners. In most of the cases, learning is self-regulated and if the learner is self-motivated, satisfied then, and only then they adopts self-reporting practices. This confirms the positive relationship between these variables based on the performance based results of the class assignments. Self-efficacy stands as the motivational factor for the students and internal value depicts the positive relation between cognitive flow and the performance based on class activities.

Sahin (2007) described that online learning environment is further divided into variables like support and collaboration of the teaching/training staff, practicality of contents, active learning etc. He also elaborated the correlational analysis based on results obtained

from Distance Education Learning Environments Survey (DELES). Despite of this learning higher levels of satisfaction that with the usefulness of the training contents and the overall learning of the trainees, this whole process can be boosted up by the catalyst named as learning environment. Therefore, we can say that relationships between the types of responses are positively affected by the learning environment of the completely training process (Roszkowski and Soven, 2010). With advent of technology, higher education institutions have developed their LMS (Learning Management System) to augment the learning operations. LMS is useless if it is not utilized completely. Molebatsi *et al.*, (2012) explored the impact of student involvement tools, content development and the teaching modules relevancy on e-learners' satisfaction. They also explored the impact of e-learners' satisfaction on full system utilization. They found that LMS system should be flexible to all students to augment their satisfaction with e-learning. Like, classroom environment and learning usefulness are equally important for the corporate culture as well. In corporate sector the differences in perceived learning usefulness of the training sessions are measured before and after the session, this will reflect whether the objectives of the training have achieved or not (Alliger *et al.*, 1997). If objectives of training have been accomplished then we can say that there is a strong relationship between usefulness and transfer of learning.

Hong (2002) reported that in order to establish a healthy trainees and trainer interaction, group discussions can have positive effect on learning for this purpose web based learning process could enhance the *satisfaction level* of both the parties. Pike (1991) argued that accomplished goals of the training program come with the sufficient level of satisfaction and the positive effect of satisfaction on achievement is much stronger than the positive effect of achievement on satisfaction. Eom *et al.*, (2006) conducted a study in which he analyzed 397 individuals who have registered themselves in more than one online course. They confirmed that the feedback of their teacher, their own style of learning and their satisfaction level affected their results and boost up their learning. Kim and Kim (2014) investigated the structural association of e-learners' factors, e-learners' circumstances and e-learners' satisfaction in higher education. They found that e-learning satisfaction was more effective than e-learners factors. They also explored that the service quality significantly enhances the e-learner satisfaction.

### 3.1 Transfer Motivation

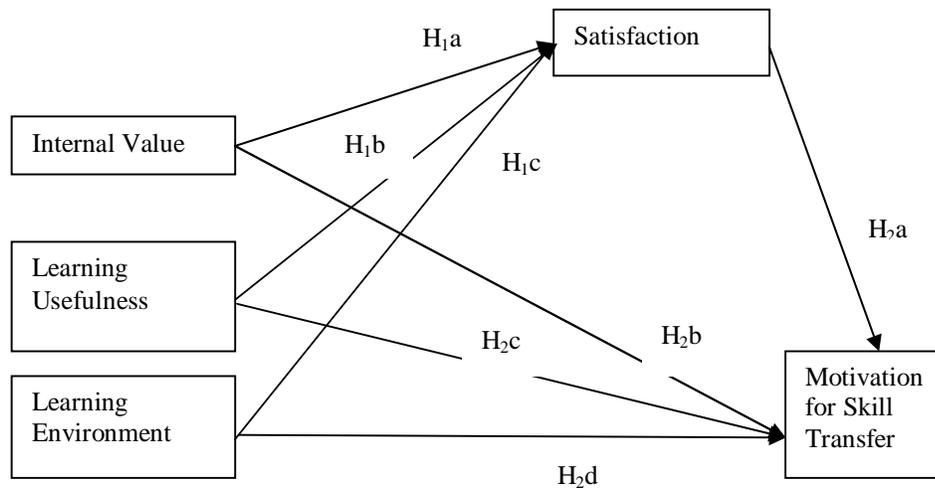
Transfer motivation can be assessed by looking at the post training behavior of the trainees, if trainees are motivated and enthusiastic to apply the knowledge and skills that they have learned from training then transfer motivation is said to be high. This behavior is also related to the satisfaction level and satisfaction level comes with the high internal value, so we can say that higher the satisfaction level of the trainee higher will be his internal value and vice versa. Along with many positive results like long term satisfaction, low absenteeism and loyalty towards the job, internal value also have some negative results like 'higher activities in the task' is normally comes with high satisfaction which can cause delays in the timely accomplishment of a task (Vansteenkiste *et al.*, 2007). Training is fruitful when the knowledge and skills are applied to it on job activities and this can be revealed by increased productivity and satisfaction along with improved behavior of teams, trainers, and coworkers (Kruger *et al.*, 1995).

Outcomes that we can get from this learning environment are satisfaction, and motivational transfer of knowledge. If the emotional response and attitude of the employee towards training program is positive then he is considered as highly satisfied person. This satisfaction depicts completely learning experience and usefulness of the training program (Lim, 2009). In order to calculate the achievements from the training session usually an exam is conducted which tends to measure the knowledge and skill level before and after the training session, one thing must be kept in mind that the material of this exam must ensure that curriculum resources have the necessary content validity. Along with satisfaction, transfer motivation also judges the usefulness of training program.

Regardless of the varied considerations, research is insufficient on the learning transfer to the job field from the skill learnt through educational system (Lim, 2009). It is difficult for the e-learners of Virtual Universities to implement their learnt skills directly to the work settings. Therefore, Gegenfurtner *et al.*, (2009) recommends to work on the transfer motivation and the factors behind. Lim (2009) also suggest to work on the factors that augment e-learners' motivation for transfer of skills. These factors include internal value, learning usefulness, learning environment, satisfaction and motivation for skill transfer.

Based on the above literature, following hypotheses are induced by the researcher.

- **H<sub>1a</sub>**: E-learners' internal value affects satisfaction.
- **H<sub>1b</sub>**: E-learners' learning usefulness affects satisfaction.
- **H<sub>1c</sub>**: E-learners' learning environment affects satisfaction.
- **H<sub>2a</sub>**: E-learners' satisfaction affects the motivation to skill transfer.
- **H<sub>2b</sub>**: E-learners' internal value affects the motivation to skill transfer.
- **H<sub>2c</sub>**: E-learners' learning usefulness affects the motivation to skill transfer.
- **H<sub>2d</sub>**: E-learners' learning environment affects the motivation to skill transfer.



(Source: Joee et al., 2014)

**Figure 1: Hypothetical Research Model**

In the current study, internal values, learning usefulness, and establishment of a learning environment are independent variables, and satisfaction are moderating variable, and motivation to transfer of learning to their workplace is the dependent variable.

### **4. Methodology**

#### *4.1 Population and Sampling*

Population embodies all the prospective dimensions and outcomes, which are chunk of researchers' interest in this study. The population of research encompassed of e-learners (students) of Virtual University of Pakistan. Cluster sampling was used as the whole population was divided into groups of two subjects only i.e. Organizational Behavior and Knowledge Management. Moreover, stratified sampling was also used as the sample population was divided into strata. In stratified sampling, simple random sampling was used so that every respondent can get equal chance to get participate in the present study. In this way, the researchers used multi-stage sampling technique.

#### *4.2 Subject and Procedure*

Online survey was conducted over a period of three months, to the enrolled students of two courses Organizational Behavior, and Knowledge Management, at Virtual University. Virtual University was selected because it is the first 'Cyber' University established by Government of Pakistan and there are a huge number of enrollments per semester in this University. It also represents a systematic education system and offers a venue for reliable research. The students use online learning management system, learning services via MDBs (Moderated Discussion Boards) and Emails, grade evaluation methods and systems, online exam system and online quiz system. Out of 300 online questionnaires, 219 were returned and 200 were valid for analysis. Hence, the response rate was 66.7%.

#### *4.3 Data Collection Method*

For the purpose of data collection and online questionnaire was made and distributed among the Virtual University Students who were enrolled in two courses i.e. Organizational Behavior and Knowledge Management. The respondents were selected by using simple random sampling technique because every respondent can get an equal chance to participate in the survey questionnaire.

#### *4.4 Data Analysis Techniques*

Analysis was conducted through least square method by SEM (Structural Equation Modeling) using AMOS-22. For analysis of data, SPSS (Statistical Package for Social Sciences)-21 was also used. First of all, we examined mean, standard deviation, to confirm that the collected data is normal. After the data normalization tests, Pearson correlation test was performed to investigate the significance among the stated variable relationships. Exploratory factor analysis was also performed in order to evaluate the measurement model validity.

Thirdly, we examined the fitness of measurement model in order to illuminate the structural relationships among Internal Value (IV), Learning Usefulness (LU), learning environment (LE), Satisfaction (S) and e-learner's Motivation for Skill Transfer (MST). At last, we also performed multi-level analysis in order to inspect the differences among Internal Value (IV), Learning Usefulness (LU), learning environment (LE), Satisfaction (S) and e-learner's Motivation for Skill Transfer (MST) as per their employment status.

4.5 Measurement Instrument, Reliability and Factor Analysis

All the items were adopted from the previous research and adapted for this study as per these research requirements for the students of Virtual University. There were some demographic questions and 20 measuring items for all variables. Demographic questions were asked regarding respondent’s gender, age, study program enrolled, department and job status.

In order to measure e-learner’s “Internal Value”, three items were adopted from Pintrich and DeGroot’s (1990). Internal consistency of the measuring items was 0.68. Average extracted variance was 0.71 and concept reliability was 0.80. Therefore, the authors confirmed the convergent and discriminant validity of the instruments. Moreover, three items regarding “Learning Usefulness” were adopted from the study of Saade and Bahli (2005). Internal consistency for the measuring items of learning usefulness was 0.84. Average extracted variance was 0.89 and concept reliability was 0.80. Therefore, the authors confirmed the convergent and discriminant validity of the instruments. Furthermore, six measuring items for “Learning Environment” were embraced from Arbaugh, (2000). Its internal consistency was above 0.87 Cronbach’s Alpha. Concept reliability was 0.80 and average extracted variance was 0.87. Therefore, the authors confirmed the convergent and discriminant validity of the instruments.

Four measuring items regarding “satisfaction” were adopted from the study of Shin (2003). The Cronbach’s Alpha value was 0.83. Concept reliability was 0.80 and average extracted variance was 0.85. Therefore, the authors confirmed the convergent and discriminant validity of the instruments. Additionally, four items regarding “Motivation for Skill Transfer” were adopted from Holton *et al.*, (2003). The Cronbach’s Alpha value for “motivation for skill transfer” was 0.73. Average extracted variance was 0.79 and concept reliability was 0.80. Therefore, the authors confirmed the convergent and discriminant validity of the instruments.

Inter item reliability analysis is given in below mentioned table 1, whereas the questionnaire reliability was 0.801 and number of variables were 5. 80% reliability is significant value ( $\alpha > 0.60$ ). It demonstrates that the model is reliable and illustrates internal consistency at standard level (Nunnally, 1978). All the items were measured on the 5-point Likert Scale that comprise 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree. Some ethical contemplations were also a part of study. It was guaranteed that the data concealment obtained via questionnaires, will be sustained and the data will only be used for the exploration of present study. The questionnaire is provided at Annex-A.

**Table 1: Reliability Analysis**

Sr. No.	Variable Name	Cronbach’s Alpha	No. of Items
1	IV	0.68	3
2	LU	0.84	3
3	LE	0.87	6
4	S	0.83	4
5	MST	0.73	4

## Motivation for Skill Transfer

### *4.6 Factor Analysis*

Factor analysis was performed to check the validity of the constructs. The factor analysis of all variables and their corresponding items were tested by using SPSS-21. Communality values should be  $> 0.4$ . It was testified that the communality value of all items was greater than 0.4. Consequently, no item was dropped down at  $< 0.4$  communality value and all items were well-thought-out for further analysis. % of variance values must be greater than 50 which is also given in table 2, along with component values.

**Table 2: Factor Analysis**

Variable	% of Variance		Items	Extraction	Component
Internal Value	62.0	IV1	I like what I am learning in this class.	.632	.795
		IV2	I often choose paper topics I will learn something from even if they require more work.	.611	.782
		IV3	I think that what we are learning in this class is interesting.	.619	.786
Learning Usefulness	77.5	LU1	It is important for me to learn what is being taught in this class.	.933	.966
		LU2	I think that an internet based learning system such as this one should be part of each and every course in the university	.459	.678
		LU3	It is important for me to learn what is being taught in this class.	.933	.966
Learning Environment	62.2	LE1	I learned more from my fellow students in this class than in other courses	.661	.813
		LE2	The instructor frequently attempted to elicit student interaction	.408	.639
		LE3	Interacting with other students and the instructor using a web-based learning system became more natural as the course progressed	.731	.855
		LE4	I felt that the quality of class discussions was high throughout the course	.751	.866
		LE5	It was easy to follow class discussions	.596	.772
		LE6	Classroom dynamics were not much different than in other courses	.586	.766
Satisfaction	66.5	S1	I feel that I am continuously growing due to a variety of activities in which I've been engaged at VU.	.716	.846
		S2	I feel that I am accomplishing something while studying at VU.	.639	.799
		S3	I like the fact that I am studying at VU.	.777	.882
		S4	It is worthwhile to keep studying at VU.	.531	.729
Motivation for Skill Transfer	56.8	MST 1	E-learning will increase personal productivity.	.487	.698
		MST 2	I believe the e-learning will help me do my current job better.	.572	.756
		MST 3	Trying to use this e-learning will take too much energy away from my other work.	.469	.684
		MST 4	The expected outcomes of this e-learning were clear at the beginning.	.746	.864

## Motivation for Skill Transfer

Sample adequacy test was also applied. KMO (Kaiser-Meyer-Olkin) value was 0.742. The value of KMO should be greater than 0.60 and closed to 1, and if it is close to 0.90 it is indicated to be perfect (Hutcheson & Sofroniou, 1999). Bartlett's test of sphericity includes  $P=0.000$ ,  $df=10$ , and Approx. Chi-Square=298.634.

**Table 3: KMO and Bartlett's Test of sample adequacy**

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.742
Bartlett's Test of Sphericity	Approx. Chi-Square	298.634
	df	10
	Sig.	.000

### 4.7 Demographic Analysis

The respondent's demographics were investigated that encompasses gender, age, program, department and job status. The particulars of each demographic variable are provided in table 4. Moreover the respective histograms are provided in the Annex-B.

**Table 4: Demographic Analysis**

Variables		Frequency (f)	Percent (%)
Gender	Male	21	42
	Female	19	38
Age	Less than 25	5	10
	25-34	25	50
	35-44	11	22
Program	Bachelors	9	18
	Masters	11	22
	M.Phil./MS	19	38
Department	Management Sciences	24	48
	Computer Sciences	14	28
	Social Sciences	2	4
Job Status	Yes	29	58
	No	11	22

It was observed that there were almost equal numbers of respondents based on their gender. Moreover, it was also observed that most of the respondents were in age range of 25-34. Additionally, most of them were M.Phil./MS students of management sciences department. Furthermore, most of the respondents were holding a job side by side their studies.

### 4.8 Correlation

The strength and direction of linear association is measured by applying Pearson correlation test. It is worth mentioning that most of the values of Pearson correlation were at double asterisks. The assortment of coefficient of correlation should be between -1 to

+1, where +1 designates a perfect positive correlation while -1 demonstrates the perfect negative correlation. Besides, 0 portrays no correlation between variables. A correlation of a variable with itself is continually 1.

**Table 5: Mean, Standard Deviation and Correlation**

	Mean	SD	Correlation				
			IV	LU	LE	S	MST
<b>IV</b>	4.4	0.35	1				
<b>LU</b>	4.2	0.38	.627**	1			
<b>LE</b>	3.8	0.57	.410**	.410**	1		
<b>S</b>	4.5	0.45	.287*	.267	.570**	1	
<b>MST</b>	4.4	0.38	.331*	.309*	.572**	.680**	1

\*\*Correlation is significant at the 0.01 level (2-tailed)

\*Correlation is significant at the 0.05 level (2-tailed)

Where IV is Internal Value, LU is Learning Usefulness, LE is learning Environment, S is satisfaction and MST is Motivation for Skill Transfer.

4.8.1 Structural Equation Modeling (SEM)

Based on 52 samples, SEM was executed with AMOS-22. Numerous indices were used to estimate the overall measurement model fit. There were 5 variables which were used in the model.

**Table 6: Fitness Examination Results**

	$\chi^2$	DF	TLI	CFI	RMSEA
Measurement Model	157	3	-0.46	0.56	0.508
Structural Model	361	10	0.00	0.00	0.420

Before exploratory the structural model, we calculated the measurement model fit by maximum likelihood. All the factor loading values varies from 0.00 to 0.7. As per condition that standard factor loading must be greater than 0.30 (Hair *et al.*, 1995), therefore almost every measurement variable appears to appropriately measure the latent variables.

As the fitness index of measurement model was satisfied with the index criteria of fitness, therefore the authors estimated the fitness of structural model. For structural model, the value of CMIN was 37.3 and degree of freedom value was 3, CMIN/DF is 12.4. Therefore the current model is not a very good fit as Wheaton *et al.*, (1977) suggests that good model fit must have CMIN/DF equal or less than 5. NFI value is 0.60, CFI= 0.56, and RMSEA value is 0.508. For a good fit, NFI, and CFI must be close to 1 (Hair *et al.*, 2006). However, RMSEA value must be less than 1 (Browne *et al.*, 1993) which indicates mediocre fit (MacCallum *et al.*, 1996). Henceforth, all the values of structural model are a mediocre fit and hence can be used for data analysis.

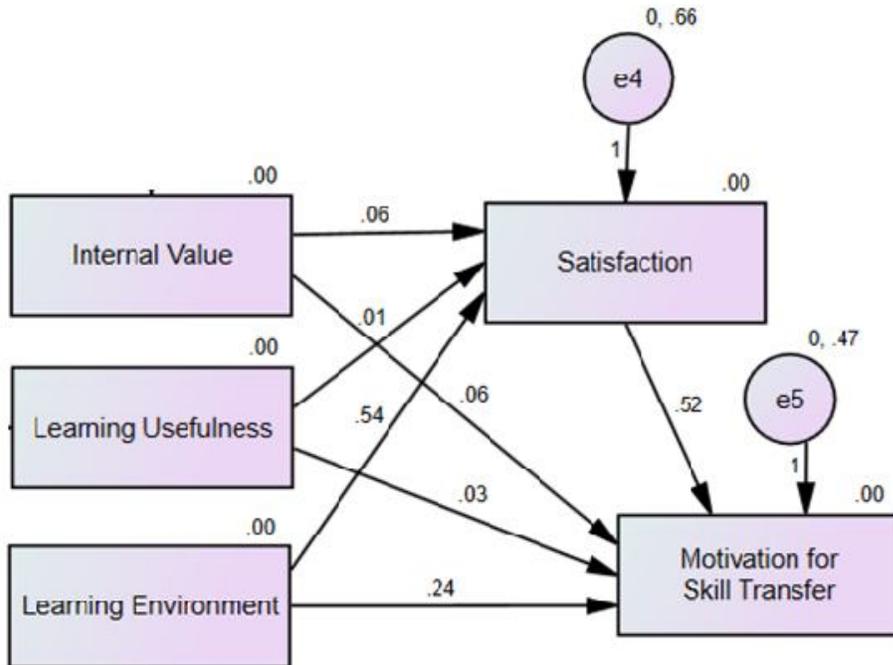
In order to test the mediation, path coefficients were analyzed in the structural model. The below figure 2 illustrates the path coefficients and their prominence in the structural model. Every hypothesized relationship's path significance was elucidated by investigating each path. It is found that the p value for all the hypothesized relationships were not significant except H<sub>1c</sub> and H<sub>2a</sub>. P value must be 0.05 and here in this study, p

value for all the hypotheses is greater than 0.05 except for two hypotheses i.e. H<sub>1c</sub> and H<sub>2a</sub>.

**Table 7: Decision of Hypotheses and path estimates**

	Hypotheses	Estimate	S.E.	C.R.	P	Decision
S <--- LU	H <sub>1b</sub>	.008	.151	.050	.960	Rejected
S <--- LE	H <sub>1c</sub>	.542	.129	4.205	***	Accepted
S <--- IV	H <sub>1a</sub>	.060	.151	.396	.692	Rejected
MST <--- S	H <sub>2a</sub>	.517	.118	4.363	***	Accepted
MST <--- IV	H <sub>2b</sub>	.065	.128	.506	.613	Rejected
MST <--- LU	H <sub>2c</sub>	.033	.128	.257	.797	Rejected
MST <--- LE	H <sub>2d</sub>	.238	.127	1.880	.060	Rejected

It is noteworthy that the estimate value for H<sub>1c</sub> (learning environment -- satisfaction) is 0.542 which is a significant positive value. Whereas, the estimate value for H<sub>2a</sub> (Satisfaction -- motivation for skill transfer) is also a significantly positive value. The direct relationship of learning environment with motivation for skill transfer (H<sub>2d</sub>) is not significant because of low estimate and p value. Therefore, H<sub>2d</sub> is rejected. The indirect relationship (through mediation of satisfaction) of learning environment with motivation for skill transfer is statistically sound to be significant and proved here. Therefore, the mediating effect of e-learners' satisfaction in the relationship of learning environment and motivation for skill transfer is confirmed statistically.



**Figure 2: Estimates of Statistical Model**

## 5. Discussion

Core concept behind this study is the structural relationship that exists among internal value, learning usefulness, learning environment, satisfaction, and motivation of e-learner for the sake of skill transferring. Two research questions were designed i.e. “is there any impact of e-learner’s internal value, learning usefulness, and learning environment on his/her satisfaction?” and “is there any impact of e-learner’s internal value, learning usefulness, learning environment, learner satisfaction on his/her motivation for skill transfer?”. To answer these two research questions, seven hypotheses were induced i.e. H<sub>1a</sub>, H<sub>1b</sub>, H<sub>1c</sub>, H<sub>2a</sub>, H<sub>2b</sub>, H<sub>2c</sub>, and H<sub>2d</sub>.

The results that researcher investigated were as follows; the effects of e-learners’ internal value, and learning usefulness on satisfaction level (H<sub>1a</sub> and H<sub>1b</sub> respectively) were illustrate to be statistically insignificant. These findings are inconsistent with previous research (Joo *et al.*, 2014; Hong, 2002; Kruger *et al.*, 1995; Roszkowski & Soven, 2010; Sahin, 2007; Vansteenkiste *et al.*, 2007). It may be for the reason that the students of only two subjects were taken for this study. Students from different courses might have different internal values and different perceived learning usefulness. While, H<sub>1c</sub> was a significant relationship i.e. learning environment has a positive and statistically significant relationship with e-learners’ satisfaction. This result is consistent with and validates the results of the previous researches (Hong, 2002; Joo *et al.*, 2014; Kruger *et al.*, 1995; Roszkowski & Soven, 2010; Sahin, 2007; Vansteenkiste *et al.*, 2007).

To answer the second research question, it was found that there is no impact of internal value, learning usefulness, and learning environment on e-learners’ motivation for skill transfer. While, a strong and positive impact of e-learners’ satisfaction on his/her transfer motivation was found. Hypothesis H<sub>2a</sub> is accepted which investigates the relationship of e-learners’ satisfaction with his/her motivation for skill transfer. This finding is consistent with (Burke, 1997; Joo *et al.*, 2014; Kuchinke, 2000; Liebermann & Hoffmann, 2008; Ruona *et al.*, 2002). The study results are noteworthy that there is no relationship of internal value, and learning environment with e-learners’ motivation for skill transfer. Hence, H<sub>2b</sub>, and H<sub>2c</sub> are rejected hypotheses. These findings validate the results of erstwhile authors (Burke, 1997; Joo *et al.*, 2014; Kuchinke, 2000; Liebermann & Hoffmann, 2008; Ruona *et al.*, 2002). The reason why there is no impact of e-learners’ internal value and learning usefulness on his/her transfer motivation may be that the students were only from two courses. Each course may have a different learning usefulness. For the moment if we ignore results of the previous studies, the relationships among internal value and transfer motivation was found insignificant. Previous researchers suggest that individuals, who desired to complete their study for self-participation and pleasure they experienced extreme intentionality toward practical application of the knowledge and skills that they have learned for the sake of completion of the job.

Another important significant effect that we found in this study was among the effects of the satisfaction on transfer motivation. These verdicts are consistent with the work of former authors (Joo *et al.*, 2014; Burke, 1997; Kuchinke, 2000; Liebermann & Hoffmann, 2008; Ruona *et al.*, 2002). Still, the effects of learning environment when tested against the variable of transfer motivation, very less statistical significance was found which is again in consistency with the results of the previous researchers (Joo *et al.*, 2014; Fecteau *et al.*, 1995; Huczynski & Lewis, 1980).

This study also contributes to the literature by finding the mediating role of e-learners' satisfaction in the relationship of learning environment and motivation for skill transfer. It is pertinent to mention that the relationship of learning environment and e-learners' satisfaction was statistically significant. Whereas, the relationship of e-learners' satisfaction and motivation for skill transfer was also found to be significant statistically. While, the direct relationship of learning environment and motivation for skill transfer was not found to be significant. Therefore, the authors conclude that satisfaction acts as a mediation between learning environment and motivation for skill transfer.

Learning environment includes support and collaboration of the teaching/training staff (Instructors), practicality of contents, active learning etc. Therefore, it is concluded that the students of Virtual University are happy with the support they get from Instructors and e-learning in this University. Their happiness with learning environment augments their overall satisfaction with e-learning in Virtual University. When their satisfaction will increase, they will be more motivated to transfer their learnt skills to the workplace. It is recommended to the University management to further strengthen learning environment to augment satisfaction and transfer motivation. Moreover, there is need to work on other factors too e.g. the ways via which internal value of e-learners' can be enhanced and awareness of learning usefulness can be augmented.

### **6. Conclusion and Recommendations**

Based on the current research results, several suggestions are made for e-learning system. First of all, the researcher suggests that the role of instructor is very important in e-learning environment, hence to consider the job and task focus of e-learner while planning classes. As, we envisage that e-learners were impotent to support learning environment. It shows that e-learners of Virtual University are happy with the role of instructor and their colleagues as the relationship of learning environment is significant with the satisfaction of the e-learners. And their satisfaction leads to the higher motivation for the skill transfer. The mediating role of e-learners' satisfaction is confirmed in the relationship of learning environment and motivation for skill transfer. University management should focus on more ways to enhance the satisfaction of e-learners so that they become more willing to transfer their learnt knowledge and skills.

Secondly, in order to augment the influence of learning usefulness on e-learner's satisfaction, instructors must be well aware of the e-learner's career needs and development. It can be done by incorporating the practical study material such as case studies and other real life scenarios. For that reason, it would be very beneficial to build and enhance the efficient learning strategies, which will diminish the physical and time constraints.

Thirdly, there should be mentoring of the e-learners who are unemployed, by providing them systematic information about job and the usefulness associated with transfer motivation. In order to augment the satisfaction of e-learners, practical material should be added in the course. There should be online training programs available for the e-learners in order to augment the effectiveness of e-learning (Bukhari *et al.*, 2014).

There are some limitations of the study as well e.g. the population sample was only the students of two courses. There could be a difference of results in other courses, in terms of learning environment, learning usefulness, internal value, satisfaction and the e-learner's motivation for transfer of learned skills. Moreover, a comparative study should

be done which should compare the results of two different departments and to have more generalized findings. Furthermore, the effect of employment status as a control variable must be studied. Besides, the effect of e-learner's achievement on his motivation for transfer of skills must be studied in the e-learning context. Data should be taken from a greater sample to have generalized results. Above and beyond, some other variables associated in e-learners' motivation for skill transfer. Further strategies must be made to augment the learning outcomes of the each course contents.

## REFERENCES

- Alliger, G. M., & Janak, E. A. (1989). Kirkpatrick's levels of training criteria: Thirty years later. *Personnel psychology*, 42(2), 331-342.
- Alliger, G. M., Tannenbaum, S. I., Bennett, W., Traver, H., & Shotland, A. (1997). A meta-analysis of the relations among training criteria. *Personnel psychology*, 50(2), 341-358.
- Arbaugh, J. B. (2000). How classroom environment and student engagement affect learning in Internet-based MBA courses. *Business Communication Quarterly*, 63(4), 9-26.
- Axtell, C. M., Maitlis, S., & Yearta, S. K. (1997). Predicting immediate and longer-term transfer of training. *Personnel Review*, 26(3), 201-213.
- Baldwin, T. T., & Ford, J. K. (1988). Transfer of training: A review and directions for future research. *Personnel psychology*, 41(1), 63-105.
- Browne, M. W., and Cudeck, R. (1993). Alternative ways of assessing model fit. *Sage Focus Editions*, 154, 136-136.
- Bukhari, T. Z., Khan, J., Shahzadi, I., & Khalid, A. (2014). Mediating role of motivation to learn in determining e-learning outcomes: a conceptual study. *Business and Management*, 6(2), 179-189.
- Burke, L. A. (1997). Improving positive transfer: A test of relapse prevention training on transfer outcomes. *Human Resource Development Quarterly*, 8(2), 115-128.
- Burke, L. A., & Hutchins, H. M. (2007). Training transfer: An integrative literature review. *Human resource development review*, 6(3), 263-296.
- Butler, D. L., & Winne, P. H. (1995). Feedback and self-regulated learning: A theoretical synthesis. *Review of educational research*, 65(3), 245-281.
- Campbell, J. P. (1988). Training design for performance improvement. *Productivity in organizations*, 177, 215.
- Chiaburu, D. S., & Lindsay, D. R. (2008). Can do or will do? The importance of self-efficacy and instrumentality for training transfer. *Human Resource Development International*, 11(2), 199-206.
- Dallam, J. W., & Hoyt, D. P. (1981). Do college students have enough time to study? *College and University*, 57(1), 84-91.
- Dundes, L., & Marx, J. (2006). Balancing work and academics in college: why do students working 10 to 19 hours per week excel? *Journal of College Student Retention: Research, Theory and Practice*, 8(1), 107-120.

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- Eccles, J. (1983). Expectancies, values and academic behaviors. In J. T. Spence (Ed.), *Achievement and Achievement Motives*, 75–146. San Francisco: Freeman.
- Eom, S. B., Wen, H. J., & Ashill, N. (2006). The Determinants of Students' Perceived Learning Outcomes and Satisfaction in University Online Education: An Empirical Investigation. *Decision Sciences Journal of Innovative Education*, 4(2), 215-235.
- Facteau, J. D., Dobbins, G. H., Russell, J. E., Ladd, R. T., & Kudisch, J. D. (1995). The influence of general perceptions of the training environment on pretraining motivation and perceived training transfer. *Journal of Management*, 21(1), 1-25.
- Gegenfurtner, A., Veermans, K., Festner, D., & Gruber, H. (2009). Integrative literature review: Motivation to transfer training: An integrative literature review. *Human Resource Development Review*, 8(3), 403-423.
- Gleason, P. M. (1993). College Student Employment, Academic Progress, and Postcollege Labor Market Success. *Journal of Student Financial Aid*, 23(2), 5-14.
- Hair Jr, J. F., Anderson, R. E., Tatham, R. L., & William, C. (1995). *Black (1995), Multivariate data analysis with readings*. Prentice Hall. New Jersey, USA. 14, 130-133.
- Hair, J. F., Tatham, R. L., Anderson, R. E., & Black, W. (2006). *Multivariate data analysis* (Vol. 6). Upper Saddle River, NJ: Pearson Prentice Hall.
- Holton, E. F. (1996). The flawed four-level evaluation model. *Human resource development quarterly*, 7(1), 5-21.
- Holton, E. F., Chen, H. C., & Naquin, S. S. (2003). An examination of learning transfer system characteristics across organizational settings. *Human Resource Development Quarterly*, 14(4), 459-482.
- Hong, K. S. (2002). Relationships between students' and instructional variables with satisfaction and learning from a Web-based course. *The Internet and Higher Education*, 5(3), 267-281.
- Hutcheson, G., & Sofroniou, N. (1999). *The multivariate social scientist: Introductory statistics using generalized linear models*. Thousand Oaks, CA: Sage Publications.
- Huczynski, A. A., & Lewis, J. W. (1980). An empirical study into the learning transfer process in management training. *Journal of Management Studies*, 17(2), 227-240.
- Joo, Y. J., Joung, S., & Son, H. S. (2014). Structural relationships among effective factors on e-learners' motivation for skill transfer. *Computers in Human Behavior*, 32, 335-342.
- Khodabandeh, A., Afshari, H., & Manian, A. (2010). Critical factors affecting e-learner's satisfaction an empirical study. In *World Conference on Educational Multimedia, Hypermedia and Telecommunications*, Vol.1.
- Kim, H., & Kim, J. (2014). The structural relationship among e-leaners' circumstance, e-learners' factors, e-learners' satisfaction in higher education. *Advanced Science and Technology Letters*, 47, 407-411.
- Kirwan, C., & Birchall, D. (2006). Transfer of learning from management development programmes: testing the Holton model. *International journal of training and development*, 10(4), 252-268.

- Kruger, L. J., Struzziero, J., Watts, R., & Vacca, D. (1995). The relationship between organizational support and satisfaction with teacher assistance teams. *Remedial and Special Education, 16*(4), 203-211.
- Kuchinke, K. P. (2000). The role of feedback in management training settings. *Human Resource Development Quarterly, 11*(4), 381-401.
- Lammers, W. J., Onweugbuzie, A. J., & Slate, J. R. (2001). Academic success as a function of gender, class, age, study habits, and employment of college students. *Research in the Schools, 8*(2), 71-81.
- Lan, W., & Skoog, G. (2003). The relationship between high school students' motivational and metacognitive factors in science learning and their science achievement. *Unpublished manuscript. Texas Tech University.*
- Liebermann, S., & Hoffmann, S. (2008). The impact of practical relevance on training transfer: evidence from a service quality training program for German bank clerks. *International Journal of Training and Development, 12*(2), 74-86.
- Lim, H. C. (2009). The effects of emotional response and learning outcomes of E-learning on transfer: centered in control effects of job flow and achievement motivation. *Korean Management Research, 22* (3), 1469-1487.
- Lucas, R., & Lammont, N. (1998). Combing Work and Study: an empirical study of full-time students in school, college and university. *Journal of Education and Work, 11*(1), 41-56.
- MacCallum, R. M., Martin, A. C., & Thornton, J. M. (1996). Antibody-antigen interactions: contact analysis and binding site topography. *Journal of Molecular Biology, 262*(5), 732-745.
- Meece, J. L., Blumenfeld, P. C., & Hoyle, R. H. (1988). Students' goal orientations and cognitive engagement in classroom activities. *Journal of Educational Psychology, 80*(4), 514.
- Molebatsi, M., Morutwa, K., Kekwaletswe, R., & Maaka, L. (2012). Learning Management Systems' quality on E-Learners Satisfaction: Earners' perspective. *Readings Book, 658.*
- Noe, R. A. (1986). Trainees' attributes and attitudes: Neglected influences on training effectiveness. *Academy of Management Review, 11*(4), 736-749.
- Nunnally, J. C. (1978). *Psychometric Theory: 2d Ed.* McGraw-Hill.
- Orszag, J. M., Orszag, P. R., & Whitmore, D. M. (2001). Learning and earning: Working in college. *Commissioned by Upromise.* [Online available] <http://www.brockport.edu/career01/upromise.htm>.
- Pike, G. R. (1991). The effects of background, coursework, and involvement on students' grades and satisfaction. *Research in Higher Education, 32*(1), 15-30.
- Pintrich, P. R., & De Groot, E. V. (1990). Motivational and self-regulated learning components of classroom academic performance. *Journal of Educational Psychology, 82*(1), 33-40.

- Roszkowski, M. J., & Soven, M. (2010). Did you learn something useful today? An analysis of how perceived utility relates to perceived learning and their predictiveness of satisfaction with training. *Performance Improvement Quarterly*, 23(2), 71–91.
- Ruona, E. A., Leimbach, M., Holton, E. F., III, & Bates, R. A. (2002). The relationship between learner utility reactions and predicted learning transfer among trainees. *International Journal of Training and Development*, 6(4), 218–228.
- Saadé, R., & Bahli, B. (2005). The impact of cognitive absorption on perceived usefulness and perceived ease of use in on-line learning: an extension of the technology acceptance model. *Information & Management*, 42(2), 317-327.
- Sahin, I. (2007). Predicting student satisfaction in distance education and learning environment. *Turkish Online Journal of Distance-TOJDE*, 8(2), 113–119.
- Seyler, D. L., Holton, E. F., III, Bates, R. A., Burnett, M. F., & Carvalho, M. A. (1998). Factors affecting motivation to transfer training. *International Journal of Training and Development*, 2(1), 2–16.
- Shin, N. (2003). Transactional Presence as a Critical Predictor of Success in Distance Learning. *Distance Education*, 24(1), 69–86.
- Shin, K. H., & Oh, I. S. (2004). The role of pre- and post- training on learning and transfer motivation: Focusing on pre-training motivation, instructor qualification, and job related usage. *Korean Journal of Industrial and Organizational Psychology*, 17(2), 223–242 (In Korean).
- Tannenbaum, S. I., & Yukl, G. (1992). Training and development in work organizations. *Annual Review of Psychology*, 43(1), 399-441.
- Vansteenkiste, M., Neyrinck, B., Niemiec, C. P., Soenens, B., Witte, H., & Broeck, A. (2007). On the relations among work value orientations, psychological need satisfaction and job outcomes: A self-determination theory approach. *Journal of Occupational and Organizational Psychology*, 80(2), 251-277.
- Warr, P., & Bunce, D. (1995). Trainee characteristics and the outcomes of open learning. *Personnel Psychology*, 48(2), 347-375.
- Wheaton, B., Muthen, B., Alwin, D. F., & Summers, G. F. (1977). Assessing reliability and stability in panel models. In D. R. Heise (Ed.), *Sociological methodology*, 8(1) 84–136. San Francisco: Jossey–Bass.