

Mediation of E-learner's Achievement: A Structural Model on Enablers of Motivation for Skill Transfer in Job-Holder E-Learners of Pakistan

Irram Shahzadi¹

Umair Ali²

Abstract

E-learning is an emerging form of organizational learning to train and educate employees in knowledge-based organizations. Whereas, the motivation to transfer those learned skills is of colossal prominence in training and operative knowledge management. This study is, therefore, intended to discover the structural connotation of operative aspects (internal value, sense of psychological happiness, learning environment, e-learner achievement) and skill transfer of e-learner. The online survey was performed for a collection of 213 employed e-learners of Virtual University, who were registered in three different courses of management sciences. Data was evaluated by using AMOS and SPSS. SEM results established that the structural connotation among e-learner's sense of psychological happiness & motivation for skill transfer, internal value & e-learner's achievement, is considerably confirmative. Nevertheless, the study instituted a feeble structural association between the learning environment and the e-learner's motivation for skill transfer. Moreover, the mediation of the e-learner's achievement was also investigated. Some schemes were prepared to amplify the e-learner's learning outcomes by taking into account a few other propositions. In the end, the study endowed with some practical implications for the integrated interpretation of an e-learner's operative aspects of motivation for skill transfer in knowledge-based organizations.

Keywords: Motivation for Skill Transfer, Sense of Psychological Happiness, Internal Value, Learning Environment, E-learner's Achievement

¹ *Corresponding Author, Virtual University of Pakistan. Email: irram.shahzadi@vu.edu.pk

² Virtual University of Pakistan. Email: umair.ali@vu.edu.pk

Introduction

With the rapid upsurge of Massive Open Online Courses (MOOCs), many employees from diverse industries are more interested in *online learning* as it saves their time in professional development or degree acquisition (Im & Kang, 2019). Distance learning as the future educational system for the developing countries is not yet completely thought out. However, the emerging prominence is on learning (Zhang & Nunamaker, 2003; Urdan & Weggen, 2000) Especially, during COVID pandemic, the traditional learning system is being switched to the online mode of education (Bao, 2020; Paudel: 2021; UNESCO, 2020). It is once in a generation opportunity to perk up the education system along with other type of survival to cope up pandemic crisis. Extensive research has been conducted to investigate the paybacks of e-learning in knowledge-intensive organizations. E-learning is rapidly growing in organizational and educational areas e.g. government, online and traditional universities, school level, and organizations. Generally; IT, business, and other soft skills related courses are being taught in e-schools (Urdan & Weggen, 2000) which is very beneficial for employees of the organizations if they want to improve/learn contemporary skills. The employed students have a high scope in distance learning educational institutes as they can do jobs and studies side by side without going to the campus. Even though numerous previous studies have inspected the impact of job holding student on his/her academic achievements, the results are still conflicting. Few researchers originate that simultaneously studying at a university and having a job is destructive for learners. In Pakistan, the e-learning structure is developing in both conventional and Cyber Universities. Virtual University is the pioneer of e-learning in Pakistan and its teachers are the mentors and career counselors of future generations (Shahzadi, 2017). It is relevant to consider that students from rural areas and employed students prefer cyber universities for their ease. Enrolment is getting higher in Cyber Universities; consequently, it is of significant importance to work-on the ways by which the motivation of e-learner can be enhanced by their skill transfer on the job.

Irrespective of varied contemplations on the design and program of the educational system to fabricate educational upshots, there is still a need for learning transfer on the job. *Training transfer* is sometimes taken in an educational context. It is not always easy to transfer the skills of e-learners for implementation on the job. It is always tricky to appraise the learning outcomes of employed students of Cyber Universities. The reason behind is that Cyber Universities usually have the ultimate purpose to facilitate the individuals having economic and subjective concerns (Lim, 2009). Today's knowledge economy is characterized by increased competition, globalization, knowledge dissemination and knowledge/skill transfer. The motivation for skill transfer is the projecting factor for the behavior change (transfer) of learners (Burke and Hutchins, 2007). In concurrence with learning motivation, transfer motivation is the leading factor to transfer learning. Consequently, the educational outcomes of virtual/cyber universities are defined through the motivation of transfer that provides evocative insights. The influencing factors of motivation to transfer are classified into three chief classes: learner characteristics, design of training, and external environment (Shin & Oh, 2004). Gegenfurtner et al., (2009) calls for reflection to the researchers on *motivation for transfer* by finding that failures of training may result due to learners' fewer motivation for skill transfer. Likewise, Lim (2009) established that research is insufficient on the transmission of learning to the respective career fields. They recommended investigating the factors which affect e-learners' transfer motivation.

Though, there are several studies conducted on the association of predictors and learning outcomes in the online setting, however, there is a lack of studies which comprehensively investigate the adopted model of this study in the context of Pakistan. Further research is required on how the characteristics of a learner (internal value/confidence/efficacy) may complement employed students' learning and their ability to transfer skill & knowledge (Elsawy & Ahmed, 2019). Joo, Joung & Son (2014) recommended to work on the other factors (These variables include internal value, sense of psychological happiness, learning environment, e-learner's achievement, and transfer motivation.)

accompanying with e-learners' transfer motivation also needs to be studied in the context of Pakistan. This research is, therefore, aims to examine the influence of internal value (which are the personal characteristics of the learners), sense of psychological happiness, learning environment, and e-learner's achievement on the Motivation for Skill Transfer (MST).

Literature Review

E-learning is emerging in Pakistani Cyber Universities (CIIT-Virtual campus, AIOU and Virtual University). This area of education is farming yet. A big number of students are enrolled in these Cyber Universities and by the passage of time, they are growing rapidly. E-learners do not need to attend classes like conventional learning system but they learn electronically. The motivational factors for e-learners have huge importance to transfer their skills to the workplace (Gegenfurtner et al., 2009). The realism of the learned skills is significant. Therefore, the study of effective factors of achievement of e-learners and transfer motivation from the overall learning situation is very relatable. These variables clinch learning environment, sense of psychological happiness internal value, e-learners' motivation, and achievement for skill transfer.

Self-efficacy is the *internal value* or the trainee characteristics which augments skill transfer (Anton et al., 2019) that needs to be explored (Baldwin et al., 2017) because there is a dearth of literature on it which is recommended to explore (Jackson, 2016). Burke & Hutchins (2007) noted that there are certain characteristics of learners which are pertinent in skill transfer i.e. motivation for learning, cognitive ability, self-confidence, and student's susceptibility for risk. The notion of internal value is the impression that is obtained from the expectancy-value model, at every stage of an individual life (Eccles, 1983). The individuals having high internal values hold superior ability to promote their learning curve and better manage defies of life are reported by many researchers (Meece et al., 1988). Moreover, Jackson (2016) found that all these characteristics make the learner intellectual, self-assured, inquisitive who takes initiatives and is result-oriented. Such an individual who has self-efficacy and is motivated to transfer his learned skills/knowledge will impact the rate of behavior change in the transfer context (Huang et al., 2017).

Furthermore, Arasanmi & Ojo (2019) investigated and found the positive impact of self-efficacy (internal value), supervisor support, transfer motivation on training transfer. Furthermore, Lan & Skoog (2003) used data from Trends in International Maths and Science Study (TIMSS) and found out that they hold great values of motivation, internal value, and self-efficacy between science and math students. This may comprise the logical trust concerning classroom learning and knowledge which offers a sense of achievement to students. Elsayy & Ahmed (2019) recommended to investigate how the learner characteristics (internal value/confidence/efficacy) complement the employed student's learning and skill transfer.

The positive perception of the *learning environment* impacts the motivation of learners for their skill transfer (Noe, 1986). In addition, Holton (1996) explored that job attitude, learning, transfer environment, learner satisfaction, and expected usefulness of training directly impacts the motivation to transfer. Similarly, motivation for transfer is distributed into sub-factors which are related to training, personal and organizational factors (Gegenfurtner et al., 2009). The response of e-learner to the usefulness of training can be efficacious on three learning design principles i.e. same element, stimulus variation, and general principles) (Warr & Bunce, 1995). They validated that values related to training content must be surveyed side by side by measuring the learner's enjoyment. Moreover, the *external environment* has an impact on transfer motivation with a specific emphasis on the work environment which includes support from the business environment, seniors, and colleagues (Kirwan & Birchall, 2006). Reinhold et al., (2018) conceptualized social support (learning environment) in four dimensions: supervisor support, peer support, supervisor sanctions, and feedback.

To develop a vigorous learning environment in training, colleagues' and trainers' support; and effective delivery of information are very operative, regardless of the training usefulness (Warr &

Bunce, 1995). The learning environment recognizes the educators about the effectiveness of virtual worlds for education (Jacka & Booth, 2019). Support and cooperation of the co-workers can lead to the healthier application of training knowledge in the work; this can cultivate a valuable learning environment (Holton, 1996). Moreover, Ullah et al., (2016) demonstrated that an innovative climate/environment motivates the employees to share knowledge in an organization. Moreover, Pintrich & DeGroot (1990) explored that the learning environment is highly correlated to the learner's internal value. After examining 173 participants of 7th grade of classes' science and English, they concluded that only self-motivated and satisfied learners adopt self-reporting practices. Based on performance-centered outcomes of the class assignments, it settles the positive connection among these variables. Self-efficacy positions as a motivational factor and internal value illustrates the optimistic relationship between rational flow and performance which is based on class activities.

Online learning can be boosted when a favorable environment is provided, and this environment can be divided into the support of teaching/mentoring staff, appropriate content of training/teaching and active learning (Sahin, 2007). He also summed up the correlation of Distance Education Learning Environments Survey (DELES) and its implications of online learning. The highest levels of satisfaction regarding this online learning can be achieved if training contents are aligned with the overall learning, and this alignment can be triggered with the learning environment. On the basis of this argument, it can be said that types of responses are directly proportional to the learning environment, i.e. if the favorable learning environment is provided for the complete training process, training responses will be positive (Roszkowski & Soven, 2010). This favorable environment can best be provided by appropriate use of technology; many institutes use Learning Management Systems (LMS) and provide a favorable learning environment to their students. Molebatsi et al., (2012) concluded that a sufficient level of satisfaction and its fruitful effects on achievement can trigger the accomplishment of training objectives.

Psychological happiness/wellbeing/health is a person's response to positive emotions (Fredrickson, 2001). These positive emotions and happiness empowers an individual and communities to flourish (Ansari, 2010). The psychological factors may be happiness, anger, depression, worry, guilt, anxiety or any other psychological disorders. These entire variables have a huge impact on job loss and satisfaction. Weiss & Cropanzano (1996) in affective event theory explained that human emotions have several personal and work-related outcomes. They defined psychological happiness/wellbeing is usually taken in terms of the overall psychological functioning of an individual. If humans will recognize themselves to be satisfied, they will be happy. Moreover, psychological happiness/wellbeing is almost non-existence for negative emotions. It has a vast array of pertinent measures of subjective wellbeing which includes happiness, job satisfaction, life satisfaction, etc. As per the latest report of Happy Planet Index (2019), Pakistan is ranked at 36/140. Hence, in this study, the sense of psychological happiness is taken in the mental health context.

Psychological health can be measured by variables like; absence of depression, anxiety, frustration, hostility, and neurological disorders (Patel et al., 2016). These variables affect the psychological health which ultimately results in loss of job of an individual. Psychological well-being covers four major components, the first one is pleasant effects like excitement, pleasure, happiness, the second one is unpleasant effects like depression, anger, sadness, guilt, and shame, etc.; the third component is life satisfaction evaluation and the fourth and last one is short term situational satisfaction like work, family, good health and sound financial status, etc. Studies have found that the life of individual swings between these pleasant and unpleasant well beings, there is no clear discern between these two. Sometimes individuals subside between positive and negative well-being in order to depict the sentimental aspect of well-being; this aspect can be categorized as mental health. McKee-Ryan, Song, Wanberg, & Kinicki, (2005) concluded that factors like unemployment, work-

family balance, stress coping abilities, reemployment if tackled properly they can bring the psychological well-being of a person.

Involvement of a person to his work, his commitment, the value that he gives to his work and dedication to develop his career clearly indicates that a person is serious to his own self, this phenomenon is also termed as work role centrality. A person with high work role centrality is more likely to be having a job and organizational commitment; this also indicates a person's orientation towards his job and loyalty to his organization rather than regular work (Browne et al., 1993). These individuals find their satisfaction, enthusiasm, and fulfillment in their work, and when they are having absence of work, it mostly results in their lower physical as well as psychological well-being (Kim & Knesebeck (2016).

Achievement of an e-learner is considerably pertinent in transfer motivation. In order to look at the broader picture, the learning environment must also be studied (Joo et al., 2014). E-courses augment learner's achievement as compare to the traditional way (Elsawy & Ahmed, 2019). The learning achievement and problem-solving skills improve by authentic learning activities (Chen & Lin, 2016). It means that the devised learning activities are unerringly supportive to encourage e-learner's achievement. They further found that the Augmented Reality (AR) technology system allows real interactions which ultimately enhance the learner's achievement and learning styles (Huang, Chen, & Hsu, 2019). Research on internal value and achievement has been conducted in relation to the learning environment. For instance, Pintrich & DeGroot (1990) investigated relationships among motivation orientation, self-regulated learning, and educational accomplishment in the classroom using self-reporting methods targeting 173 seventh graders participating in science and English classes. They confirmed positive relationships among these variables by collecting performance data based on the performance results on class projects. They found self-efficacy as a motivational factor whereas; the internal value has a positive relationship with cognitive flow and performance (average of exam and quiz scores, essay marks, and report marks). However, Rehman & Shahzadi (2014) recommended to study the relationship of e-learner's achievement on his/her motivation to skill transfer.

The *motivation for transfer* can be evaluated by considering trainee's post training behavior. After the training, if trainees are passionate to relate the learned skills and knowledge, then their motivation for transfer will be extraordinary. This behavior is correspondingly associated with an e-learner's achievement which results in the higher internal value. Therefore, researchers conclude that the higher the achievement of the trainees, the elevated will be their internal value and vice versa. Research on achievement and transferring motivation reports a positive relationship between the variables (Vansteenkiste et al., 2007). Shahzadi, Hameed, & Kashif (2015) investigated in their study that intrinsic motivation is essential for knowledge sharing. Moreover, Shin & Oh (2004) performed a study confirming relationships among prior training motivation, job-related usage, instructor quality, learning achievement, and transfer motivation. Specifically, it was confirmed that prior training motivation affects job-related benefits. While instructor quality and prior training motivation affect learning achievement, and learning achievement affects transfer motivation. The upshots of the learning environment are the achievement of e-learner and transfer motivation. If the employee's attitude and his/her emotional response are optimistic, then he/she is well-thought-out as highly satisfied. To measure the training session achievements, pre and post-training sessions are conducted to examine the skills and knowledge transferred to the trainees or not. It is pertinent to have the necessary content validity of pre/post-training evaluation (Lim, 2009).

Despite the diverse considerations, research is not enough for the transfer of learned skills learned through educational systems to the workplace (Lim, 2009). It is tough for the learners of cyber universities to apply their well-educated skills rightly to the workplace. For that reason, Gegenfurtner et al., (2009) endorsed to study motivation for skill transfer and its enabling factors. Lim (2009) also

proposed to study the factors that supplement e-learners' motivation for skill transfer. Shahzadi et al., (2015) recommended to work on the enablers of e-learners' achievement and its impact on motivation for skill transfer. Joo et al., (2014) recommended working on the sense of psychological happiness and its impact on e-learner's achievement and MST.

Objectives of the study

The research Objectives (ROs) of the study are given below:

RO1a: To investigate the effect of e-learners' internal value on the e-learner's achievement.

RO1b: To investigate the effect of e-learners' learning environment on the e-learner's achievement.

RO1c: To investigate the effect of e-learners' sense of psychological happiness on e-learner's achievement.

RO2a: To investigate the effect of e-learners' achievement on the MST.

RO2b: To investigate the effect of e-learners' internal value on the MST.

RO2c: To investigate the effect of e-learners' learning environment on MST.

RO2d: To investigate the effect of e-learners' sense of psychological happiness on MST.

RO3a: To investigate the mediation effect of e-learner's achievement on the relationship between e-learner's internal value and MST.

RO3b: To investigate the mediation effect of e-learner's achievement on the relationship between learning environment and MST.

RO3c: To investigate the mediation effect of e-learner's achievement on the relationship between sense of psychological happiness and MST.

Hypotheses of the study

The hypotheses of the study are given below.

H1a: E-learners' internal value effects the e-learner's achievement.

H1b: E-learners' learning environment effects the e-learner's achievement.

H1c: E-learners' sense of psychological happiness effects e-learner's achievement.

H2a: E-learners' achievement significantly effects MST.

H2b: E-learners' internal value significantly effects the MST.

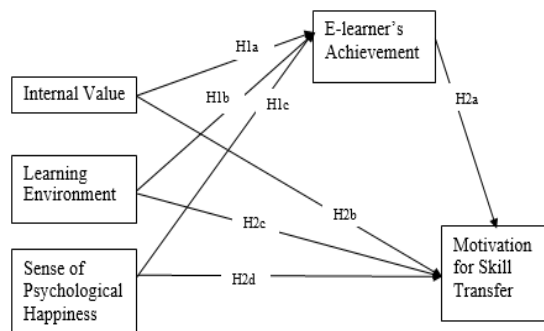
H2c: E-learners' learning environment significantly effects the MST.

H2d: E-learners' sense of psychological happiness effects the MST.

H3a: E-learner's achievement mediates the relationship between e-learner's internal value and MST.

H3b: E-learner's achievement mediates the relationship between the learning environment and MST.

H3c: E-learner's achievement mediates the relationship between the sense of psychological happiness and MST.



(Source: Joo et al., 2014)

Figure 1: Hypothetical Research Model

In this study, internal values, sense of psychological happiness, and formation of a learning environment are independent variables. Whereas, e-learner's achievement is mediating and motivation for skill is dependent variable.

Methodology

VU was nominated for data collection since it is the leading 'Cyber' University recognized by GOP (Government of Pakistan). Moreover, there is high enrollment per semester. It also characterizes an organized educational system and deals with a spot for steadfast research. The students use electronic LMS (Learning Management System), learning facilities by emails and Moderated Discussion Boards (MDBs), online system for exams and quizzes and graded evaluation systems. Out of 213 questionnaires, 142 were reverted and 137 were effective for data analysis. Henceforth, 66.7 percent was the response rate.

Population and Sampling: The population of the study comprehended the employed e-learners of Virtual University (VU) of Pakistan. The whole population was alienated into three courses of management sciences. Moreover, simple random sampling was performed so that all respondents can get an equal opportunity to get participated in the current study. The online analysis has accompanied by the retro of two and a half months. Data was collected from the employed students of three subjects of management sciences.

Data Collection Method: For the collection of data, online questionnaires were distributed among respondent employed students of VU who were enrolled in three management subjects. The respondents were nominated by the technique of simple random sampling since respondents can have an equal opportunity to be a part of this survey questionnaire.

Measurement instrument and reliability analysis: The items were embraced from the preceding research studies and were then adapted for this research requirement. Some demographic questions were incorporated which were regarding the respondent's age, gender, job status, department, and the study program enrolled. Besides, the demographic variables, 29 measuring items were adopted. It was assured that the data obtained via questionnaires will only be used for research purpose and confidentiality will be maintained.

Three items were embraced from Pintrich & DeGroot's (1990) to measure internal value. Moreover, the scale on "Sense of Psychological Happiness" was adopted from GHQ-12 (12-item General Health Questionnaire) (Goldberg & Williams, 1988). It was measured on a 4-point Likert type scale, ranging from 0-3. GHQ-12 comprises 12 items, each one measuring the rigorousness of a mental problem using a 4-point Likert scale (which ranges from 0 to 3). High scores designate poorer health. Additionally, for "Learning Environment" six items were encompassed from Arbaugh, (2000). Four items concerning "e-learner's achievement" were adopted from Shin & Oh (2004). Furthermore, for MST, four items were adopted from Holton et al., (2003).

Data analysis Techniques: Data analysis was accompanied by using AMOS-21 and by using the least square method of Structural Equation Modeling. In lieu of data analysis, Statistical Package for Social Sciences (SPSS)-21 was also used. After performing data cleaning (missing value analysis, and outliers removal), data normality (mean, and standard deviation) was performed to approve that the collected data is normally distributed. Afterward the data distribution tests, Pearson correlation was performed to examine the consequence among the relationship of variables. EFA (Exploratory Factor Analysis) and CFA (Confirmatory Factor Analysis) were also tested to appraise the validity of the measurement model.

Thirdly, the researchers scrutinized measurement model's fitness to illumine the structural associations among Internal Value (IV), Sense of Psychological Happiness (SPH), learning environment (LE), E-learner's Achievement (EA) and e-learner's MST. At last, the researchers also

executed multi-level analysis to scrutinize dissimilarities among IV, SPH, LE, EA and e-learner's MST as per their 'employed' employment status.

Results and Discussion

The reliability of IV was 0.68. Moreover, the reliability of SPH was 0.87. Additionally, for "Learning Environment", reliability was 0.87. For "E-learner's achievement", the Cronbach's Alpha value was 0.75. Furthermore, for MST, the Cronbach's Alpha value was 0.73. The reliability of the whole questionnaire was 0.801. It depicts that it is a substantial value ($\alpha > 0.60$). It establishes that the model is a trustworthy and standard level of internal consistency is explained (Nunnally, 1978).

To ensure the validity of constructs, exploratory factor analysis was accomplished. It was tested by using SPSS-21. The communalities values must be greater than 0.4. It was found that all items have a communality value greater than 0.4. Subsequently, no item was dropped for further analysis. The value of percent of variance necessity be >50 which is also provided in table 4.1, their component values are also given.

Table 1
Exploratory Factor Analysis

Variable	% of Variance	Items	Extraction	Component	Variable	% of Variance	Items	Extraction	Component		
IV	65.0	IV1	0.632	0.795	LE	74.2	LE1	0.661	0.813		
		IV2	0.611	0.782			LE2	0.408	0.639		
		IV3	0.619	0.786			LE3	0.731	0.855		
		SPH1	0.933	0.966			LE4	0.751	0.866		
		SPH2	0.459	0.678			LE5	0.596	0.772		
		SPH3	0.933	0.966			LE6	0.586	0.766		
		SPH4	0.674	0.575			EA1	0.720	0.726		
		SPH5	0.765	0.695			EA	63.3	EA2	0.609	0.788
SPH	81.5	SPH6	0.864	0.666	EA3	0.672			0.854		
		SPH7	0.644	0.874	EA4	0.734			0.765		
		SPH8	0.879	0.983	MST1	0.487			0.698		
		SPH9	0.564	0.783	MST2	0.572			0.756		
		SPH10	0.658	0.589	MST	57.5			MST3	0.469	0.684
		SPH11	0.864	0.583					MST4	0.746	0.864
		SPH12	0.675	0.587							

Besides, the sample adequacy test was also performed. KMO (Kaiser-Meyer-Olkin) value was 0.751. KMO value ought to be >0.60 and close to 1. If KMO value is close to 0.9, it is perfect (Hutcheson & Sofroniou, 1999). Bartlett's test of sphericity comprises significant values i.e. $P=0.000$, Approx. Chi-Square=297.684, and $df=10$.

Table 2

KMO and Bartlett's Test of sample adequacy

KMO Measure of Sampling Adequacy.		0.751
Bartlett's Test of Sphericity	Approx. Chi-Square	297.68
	df	4
		10
	Sig.	0.000

Moreover, Pearson correlation was also performed to measure the path and strength of linear relationships under study. The range of correlation coefficient should be between -1 to +1. Here, +1 labels a perfect +ive correlation while -1 validates the perfect -ive correlation. Further, 0 depicts no correlation. A variable's correlation with itself is always 1. Relationships of SPH with IV and MST are highly correlated whereas all other correlations are relatively weak.

Table 3

Mean, Standard Deviation and Correlation

	Mean	SD	Correlation				
			IV	SPH	LE	EA	MST
IV	4.4	0.35	1				
SPH	4.1	0.35	0.717**	1			
LE	3.8	0.57	0.410**	0.410**	1		
EA	4.6	0.65	0.387*	0.287	0.453**	1	
MST	4.4	0.38	0.431*	0.709*	0.572**	0.480**	1

On the basis of 137 samples, CFA (Confirmatory Factor Analysis) was performed by using AMOS-22 software. Many indices were used to estimate the measurement model fit. The measurement model fit was calculated by maximum likelihood. The standard value of factor loading must be greater than 0.50 (Schumacker & Lomax, 2010) consequently, every measurement variable seems to suitably measure the underlying variables.

Measurement model's fitness index was up to the mark; hence the researchers project the fitness of the structural model. Table 4.4 illustrates the values to determine whether the chosen model is an appropriate model fit or not. Kline (2010) suggested the range of chi-square (X2/DF) between 1.0-5.0. The values of chi-square (X2/DF), RMSEA (Root Mean Square Error of Approximation), GFI (Goodness of Fit Index) and CFI (Comparative Fit Index) are 1.268, 0.063, 0.848 and 0.921 respectively. The values of X2/DF, RMSEA, GFI, CFI are in the acceptable range. This model, therefore, gives the green signal to further data analysis.

Table 4

Model Fit Indices

Fit Index	Admissibility	Results	Fit (Yes/ No)
X ² / DF	1.0-5.0	1.268	Yes
RMSEA	<.08	0.063	Yes
GFI	0.80 -0.90	0.848	Yes
AGFI	>.80	0.795	No
NFI	>.80	0.746	No
TLI	>.90	0.910	Yes
CFI	>.90	0.921	Yes

Structural Equation Modeling (SEM): Path coefficients were investigated in the structural model, to inspect the role of mediation. The path coefficients and their distinctions are demonstrated in figure 4.1. Path significance of every hypothesized connection was explained by examining each path.

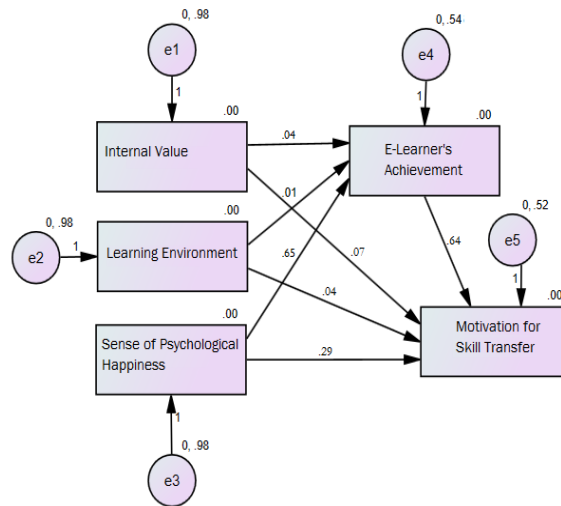


Figure 2: Estimates of Statistical Model

It is established that the p-value for every association was insignificant except H1a, H2d, H3a, and H3c. P-value must be less than 0.05. The p-value for all the hypotheses is >0.05 except for H1a, H2d, H3a, and H3c. It is noteworthy that the hypotheses named H1a, H2d, H3a, and H3c hypotheses are accepted because of their significant p-value. Whereas, all other hypotheses i.e. H1b, H1c, H2a, H2b, H2c, and H3b are rejected because their p-values are below the standard value.

Table 5

Decision Regarding Hypotheses

Relationships	H	Estimates	P-Value	Decision
EA ← IV	H1a	0.036	***	Accepted
EA ← LE	H1b	0.009	0.869	Rejected
EA ← SPH	H1c	0.645	0.721	Rejected
MST ← EA	H2a	0.641	0.600	Rejected
MST ← IV	H2b	0.072	0.620	Rejected
MST ← LE	H2c	0.041	0.698	Rejected
MST ← SPH	H2d	0.280	***	Accepted
MST←EA←IV	H3a	0.67	***	Accepted
MST←EA←LE	H3b	0.045	0.679	Rejected
MST←EA←SPH	H3c	0.270	***	Accepted

Discussion

The ultimate purpose of doing this research was to examine the structural association among selected variables i.e. the sense of psychological happiness, internal value, learning environment, achievement, and e-learner's MST. There were ten research objectives. To address these ROs, ten hypotheses were made i.e. H1a, H1b, H1c, H2a, H2b, H2c, H2d, H3a, H3b, and H3c. The results of all the hypotheses are discussed below.

H1a is accepted which is consistent with Sahin (2007); Roszkowski & Soven, (2010); Joo, et al., (2014); and Vansteenkiste et al., (2007). The results suggest that the effects of e-learners' learning environment and sense of psychological happiness on e-learner's achievement level (H1b and H1c) are statistically insignificant. These are the inconsistent findings when compared to previous studies (Roszkowski & Soven, 2010; Joo et al., 2014; Vansteenkiste et al., 2007). The reason is that job-holder students from different subjects might have a different sense of psychological happiness and internal value. These are the individual characteristics of an individual and hence may differ from one individual to another. While, H1a is a statistically significant relationship which validates the findings of previous studies and hence is consistent with Sahin (2007); Roszkowski & Soven, (2010); Joo, et al., (2014); and Vansteenkiste et al., (2007).

There is another contribution of this study that there is a statistically insignificant impact of e-learner's achievement and their MST (H2a). These verdicts are inconsistent with erstwhile researchers' work Joo et al., 2014; (Lammers et al., 2001; Burke, 1997; Roszkowski & Soven, 2010). There is no influence of e-learners' IV and LE, on their MTS. It is worth mentioning that there is no or weak association between IV and LE with e-learner's MST. Hence, H2b and H2c are rejected. These findings are inconsistent with preceding studies (Joo et al., 2014; Lammers et al., 2001; Roszkowski; Soven, 2010; & Shahzadi, 2017) while consistent with Nietfeld (2020). The reason for no relationship of said variables with MST is that employed students were selected from only three subjects. Previous studies put forward that the individuals who peruse higher education for self-participation and pleasure, have strong intentions toward the practicality of the learned skills and knowledge, for the sake of tasks completed on the job in a much better way. H2c is rejected. These findings are inconsistent with the findings of Anton et al., (2019); Reinhold et al., (2018) and Arasanmi & Ojo (2019). Moreover, H2d is accepted which is consistent with Sahin (2007); Roszkowski & Soven, (2010); Joo, et al., (2014); and Vansteenkiste et al., (2007).

This study also adds into literature by discovering the mediation of learner's achievement in the association between IV & MST, and SPH & MST. Hence, H3a, and H3c is accepted. It is worth mentioning that IV has a statistically significant impact on the e-learner's achievement. However, the mediating role of e-learner achievement in the relationship between LE & MST does not exist which leads to the conclusion that H3b is rejected.

Conclusion and Recommendations

It is concluded that the employed e-learner's internal value is the prime most pertinent factor to enhance their achievement which ultimately will augment their motivation for skill transfer by the mediating role of e-learner's achievement. When their achievements will be high, they will be more willing and motivated to transfer the learned skills in real-life scenarios (in the industry). They will be more willing to apply the concepts they learned from theory and mentoring from teachers into the demands of the industry in which they are doing jobs. Whereas, the learning environment needs to be improved in the selected online courses.

On the basis of the results of this study, various recommendations are given for the e-learning system. Firstly, it is suggested that the role of teaching staff is very pertinent in the electronic learning environment, henceforth recommended to train the trainers (teachers) to help to create enough conducive environment so that students (employed and unemployed) learn in a better way. It is therefore recommended to the management of university to augment the learning environment so that

employed students may achieve more and hence their motivation to transfer the learned skills may be enhanced. As the knowledge without implementation is nothing, therefore the implementation or transfer of knowledge is of utmost importance. There is need for resilience to the situations like pandemic crises by adopting appropriate measure in the online education so that it can better lead up during and in the post pandemic functionality. For the purpose, the educationists must focus on the guidelines which are time to time provided by UNESCO.

Secondly, to enhance the impact of the sense of psychological happiness on the achievement of learners, teachers must be aware of student's career-related needs and necessary developments. It is therefore recommended to add practical study material from the real-life scenarios instead of just teaching them foreign author books. For that reason, it will be highly constructive to build effective learning strategies for each activity they designed for the students (employed and unemployed).

Thirdly, mentoring should be provided to the employed e-learners. It can be done by endowing with the systematic information about career development and the perceived usefulness associated with the motivation to skill transfer. Practical materials should be added to the courses. There should be online demos or programs for students (employed or unemployed) so that they can augment the e-learning effectiveness.

There are few limitations despite the diverse contributions of the study. Data was collected from only employed students of three courses; results could be different for other courses. Therefore, it is recommended to incorporate other courses as well to generalize the results to a wider population. Moreover, the data was collected before COVID pandemic, therefore the study results may differ afterwards. A comparative study may be performed to compare the results of different departments. Furthermore, the employment status of students should be taken as a control variable. Above and beyond the diverse contributions of this study, there is a need to work on other factors e.g. spiritual variables, motivational variables, personality variables, technology acceptance, and role of cooperative management staff to enhance their motivation for transfer of learned skills. Furthermore, clan culture and spiritual motivation can be interesting variables to study their impact on knowledge sharing (or skill transfer) in the University academia of Pakistan. Additionally, career counseling must be studied with its impact on e-learners' achievement and motivation for skill transfer. Since, when it comes to the education, there is dire need to endorse wellbeing of society. There is need to go beyond just attaining the basic knowledge towards the actions and knowledge transfer for the sustainable development. This societal transformation is as urgent as COVID response; let's not dissipate this prospect to revolutionize the knowledge transfer to build a better world.

References

- Ansari, S. A. (2010). Cross validation of Ryff Scales of psychological well-being: translation into urdu language. *Pakistan Business Review*, 12(2), 244-259.
- Anton, N. E., Mizota, T., Timsina, L. R., Whiteside, J. A., Myers, E. M., & Stefanidis, D. (2019). Attentional selectivity, automaticity, and self-efficacy predict simulator-acquired skill transfer to the clinical environment. *The American Journal of Surgery*, 217(2), 266-271.
- Arasanmi, C. N., & Ojo, A. O. (2019). Social support, computer self-efficacy, transfer motivation and ERP training transfer. *International Journal of Enterprise Information Systems (IJEIS)*, 15(2), 1-14.
- Arbaugh, J. B. (2000). How classroom environment and student engagement affect learning in Internet-based MBA courses. *Business Communication Quarterly*, 63(4), 9-26.
- Baldwin, T., Ford, K., & Blume, B. (2017). The state of transfer of training research: moving toward more consumer-centric inquiry. *Human Resource Development Quarterly*, 28(1), 17-28.
- Bao W., (2020) COVID-19 and online teaching in higher education: A case study of Peking University. *Hum Behav & Emerg Tech.*, 2, 113-115.

- Browne, M.W., and Cudeck, R. (1993). Alternative ways of assessing model fit. *Sage Focus Editions*, 154, 136-136.
- 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.
- Chen, C. C., & Lin, P. H. (2016). Development and evaluation of a context-aware ubiquitous learning environment for astronomy education. *Interactive Learning Environments*, 24(3), 644-661.
- Eccles, J. (1983). Expectancies, values and academic behaviors. In J. T. Spence (Ed.), *Achievement and achievement motives (75–146)*. San Francisco, CA: Free man
- Elsawy, A., & Ahmed, O. S. (2019). E-Learning using the Blackboard system in Light of the Quality of Education and Cyber security. *International Journal of Current Engineering and Technology*, 9(1), 49-54.
- Fredrickson, B. L. (2001). The role of positive emotions in positive psychology: The broaden-and-build theory of positive emotions. *American psychologist*, 56(3), 218.
- 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.
- Goldberg, D., Williams, P., (1988). *A User's Guide to the General Health Questionnaire*. Windsor: NFER-Nelson
- Happy Planet Index. (2019). Retrieved from <http://happyplanetindex.org/countries/pakistan>
- 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.
- Huang, J., Ford, J., & Ryan, A. (2017). Ignored no more: Within-person variability enables better understanding of training transfer. *Personnel Psychology*, 70(3), 557–596.
- Huang, T. C., Chen, M. Y., & Hsu, W. P. (2019). Do learning styles matter? motivating learners in an augmented Geopark. *Journal of Educational Technology & Society*, 22(1), 70-81.
- Hutcheson, G., & Sofroniou, N. (1999). *The multivariate social scientist: introductory statistics using generalized linear models*. Thousand Oaks, CA: Sage Publications.
- Im, T., & Kang, M. (2019). Structural relationships of factors which impact on learner achievement in online learning environment. *International Review of Research in Open and Distributed Learning*, 20(1), 111-124.
- Jacka, L., & Booth, K. (2019). Students as designers of virtual world learning environments. In *Pre-Service and In-Service Teacher Education: Concepts, Methodologies, Tools, and Applications*, 1697-1712. PA: Information Science Reference.
- Jackson, D. (2016). Modelling graduate skill transfer from university to the workplace. *Journal of Education and Work*, 29(2), 199-231.
- 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.
- Kim, T. J., & von Dem Knesebeck, O. (2016). Perceived job insecurity, unemployment and depressive symptoms: a systematic review and meta-analysis of prospective observational studies. *International archives of occupational and environmental health*, 89(4), 561-573.
- 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.

- Kline, R. B. (2010). Promise and pitfalls of structural equation modeling in gifted research. In B. Tompson & R.F. Subotnik (Eds.), *Methodologies for conducting research on giftedness* (147-169). Washington: American Psychological Association.
- 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.
- 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.
- McKee-Ryan, F., Song, Z., Wanberg, C. R., & Kinicki, A. J. (2005). Psychological and physical well-being during unemployment: a meta-analytic study. *Journal of applied psychology*, 90(1), 53-76.
- 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), 514-523.
- Molebatsi, M., Morutwa, K., Kekwaletswe, R., & Maaka, L. (2012). Learning Management Systems' quality On e-learners satisfaction: learners' perspective. *Readings Book*, 658.
- Nietfeld, J. L. (2020). Predicting transfer from a game-based learning environment. *Computers & Education*, 146.
- 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). New York: McGraw-Hill.
- Patel, V., Chisholm, D., Parikh, R., Charlson, F. J., Degenhardt, L., Dua, T. & Lund, C. (2016). Global priorities for addressing the burden of mental, neurological, and substance use disorders. Accessed online from https://elibrary.worldbank.org/doi/abs/10.1596/978-1-4648-0426-7_ch1
- Paudel, P. (2021). Online education: Benefits, challenges and strategies during and after COVID-19 in higher education. *International Journal on Studies in Education (IJonSE)*, 3(2), 70-85.
- 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.
- Reinhold, S., Gegenfurtner, A., & Lewalter, D. (2018). Social support and motivation to transfer as predictors of training transfer: testing full and partial mediation using meta-analytic structural equation modelling. *International Journal of Training and Development*, 22(1), 1-14.
- 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.
- Sahin, I. (2007). Predicting student satisfaction in distance education and learning environment. *Turkish Online Journal of Distance-TOJDE*, 8(2), 113–119.
- Schumacker, R. E. & Lomax, R. G. (2010). A beginner's guide to structural equation modeling (3rd ed.). *New York: Routledge*.
- Shahzadi, I. (2017) Clan Culture and Spiritual Motivation to devise Academicians' Intention towards Tacit Knowledge Sharing in business schools of Pakistan. *Journal of Managerial Sciences*, XI(03), 459-484.
- Shahzadi, I., Hameed, R. M., & Kashif, A. R. (2015). Individual motivational factors of optimistic knowledge sharing behavior among University academia. *The Business & Management Review*, 6(1), 134.
- 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.

- Ullah, I., Akhtar, K. M., Shahzadi, I., Farooq, M., & Yasmin, R. (2016). Encouraging knowledge sharing behavior through team innovation climate, altruistic intention and organizational culture. *Knowledge Management & E-Learning: An International Journal*, 8(4), 628-645.
- UNESCO (2020, June 18). Build back better: Education must change after COVID-19 to meet the climate crisis. Retrieved from: <https://en.unesco.org/news/build-back-better-education-must-change-after-covid-19-meet-climate-crisis>
- Urdan, T. A., & Weggen, C. C. (2000). Corporate e-learning: Exploring a new frontier. Retrieved from <http://www.spectrainteractive.com/pdfs/CorporateELearningHamrecht.pdf>
- 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.
- Weiss, H. M., & Cropanzano, R. (1996). Affective event theory: A theoretical discussion of the structure, causes and consequences of affective experiences at work. In L. L. Cummings & B. M. Staw (Eds.). *Research in Organizational Behavior*, 1-74. NY: Elsevier.
- Zhang, D. and Nunamaker, J.F. (2003). Powering e-learning in the new millennium: an overview of e-learning and enabling technology. *Information Systems Frontiers*, 5(2), 207-2002.
- Zia-ur-Rehman, M., & Shahzadi, I. (2014). Motivation for skill transfer: mediating role of e-learner's satisfaction. *Pakistan Journal of Commerce and Social Sciences*, 8(3), 798-816.

Citation of this Article:

Shahzadi, I. & Ali, U.(2020). Mediation of e-learner's achievement: A structural model on enablers of motivation for skill transfer in job-holder e-learners of Pakistan. *Pakistan Journal of Distance and Online Learning*, 6(2). Pp x-x.