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Variance in Transfer of training in Manufacturing and Service Sectors

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Abstract: Transfer of training is becoming more conspicuous and very vital from the organisation point of view there is mounting requirement to ascertain the methods to validate its accomplishment. Employee's performance is an essential dimension from organisational and industry perspective. The ways and means by which the transfer of training affects job satisfaction and organisation commitment across manufacturing and service sectors are envisaged here. In this research Learning transfer system inventory (LTSI) , Person Organisational fit , person Ability fit , Organisational commitment and job satisfaction practiced in manufacturing and service industries are analysed. As a positive transfer of training leads to the growth and development of the organisation and its workforce the tangible outcomes related to transfer of training are analysed in manufacturing and service industries.

Keywords: Transfer of Training, Organisational commitment, Job satisfaction, Manufacturing and service sectors

INTRODUCTION

Companies invest huge amount of money on training its employees and instruction initiatives each year. Evaluation of training programs is an vital aspect in shaping the effectiveness of training programs organised by an organization. In spite of the efforts taken by the organisations, failure to effectively use accomplished knowledge, skills, and attitudes (KSAs) at the work environment results in fast degeneration of skills. Companies should not antedate that trainees will inevitably and steadily establish suitable application of KSAs; transfer of the knowledge gained in training is not an immediate incident nor is it a check-box (i.e., training transfer is "achieved"), but, training transfer is the progression by which KSAs are entrenched and sustained with respect to the training's content and tenacity (Ford, Baldwin, & Prasad, 2018).

Transfer of training is an important apprehensions for the Human Resource Developers (HRD) of currently (Brown et al., 2011; Tian et al., 2016). The procedure of transfer of training commences at the conclusion of the training task and always demonnsted in the work environment (Chauhan et al.,2016; Zumrah and Byole, 2015; Nikandrou et al., 2009). Transfer of training refers to information attainment with aims to simplify and disseminate it (Blume et al., 2010). More precisely, transfer of training concentrates on preservation of knowledge, attitudes and skills and its standardisation. Transfer of knowledge through training is well thought-out treasured for the companies, because it constructs a knowledge-based environment contributing economical and a inimitable spot above the competitors (Bates and Khasawneh, 2004).

The purpose of the research is to investigate the extent of variations among Transfer of Training dimensions between manufacturing and service sectors. Further the variations in Organizational Commitment dimensions and Job Satisfaction scales are analysed . The extent of variation in Person – Organization fit and Ability – Job fit scales between manufacturing and service industries are studied.

Description of the Sample

The sample profile for this research was identified from four companies situated in Chennai, Tamil Nadu. The organizations selected for the study broadly belong to two sectors – the Manufacturing sector and the Service industy. The Manufacturing sector comprises two organizations and the Service sector also comprises two organizations. A total of 405 responses (206 Manufacturing and 199 Service) formed the sample for the study. The participants were selected across the departments.

Table 1: Description of the sample

Demo / Co.	Male	Female	Mang.	Non. Man	Total Training Hrs		
					<24	24-120	>120
MFG 1 (110)	100	10	53	57	32	60	18
MFG2 (96)	89	7	51	45	31	48	17
SS 1 (104)	76	28	43	61	28	55	21
SS 2 (95)	65	30	38	57	30	45	20

Note : MFG 1 – Manufacturing Company 1, MFG 2 – Manufacturing Company 2,
SS 1 – Service Company 1, SS 2 – Service Company 2.

Learning Transfer System Inventory (LTSI) scale

The LTSI scale: Though preceding research work echo that numerous factors can impact learning transfer, there is a necessity for a combined way to analyse training (learning) transfer. Holton (1996; Holton & Baldwin, 2000) developed the LTSI on the foundation of earlier research by Rouiller and Goldstein (1993), who established a questionnaire of 63 variables to quantify learning transfer. The LTSI is a psychometric device of 16 factors that can pronounce learning transfer in public, private, and non profit companies. The LTSI consists of 89 enquiries of which 66 items evaluate explicit training features and 23 items evaluate overall training features. For this study the 23 items measuring general training aspects were employed.

Organizational Commitment scale

The Organizational Commitment Scale (OCS), designed by Balfour and Wechsler (1996), employs nine objects to evaluate three dimensions of general organizational commitment: commitment grounded on association or pride in the company, commitment centred on identification with the company, and commitment based on reasonable exchange with the company consequential in thankfulness of the individual by the company. Coefficient alpha values reported by the authors were .81 for affiliation commitment, .72 for identification commitment and .83 for exchange commitment (Balfour & Wechsler, 1996; Kacmar et al., 1999).

Global Job Satisfaction scale

This scale was initially established by Quinn and Shepard (1974) and later improved by Pond and Geyer (1991) and Rice et al. (1991). It employs six items to quantify an employee's general affective response to his or her work deprived of mention to any explicit facets. Coefficient alpha for the six-item feature was .89 (Pond & Geyer, 1991).

Perceived Person – Organization fit scale

This scale, established by Cable and Judge (1996), uses three objects to straight away measure an employee's insight of his or her fit with a company. Cable and Judge (1996) establish that coefficient alpha was .87. Perceived Person – Organization fit correlated completely with workers perceptions of their Person-Job fit, Job Satisfaction, Organizational Commitment, readiness to endorse the company to others, and worker assessment of the prominence of Person Job fit (Cable and Judge 1996).

Perceived Ability – Job fit Scale

This scale, constructed by Abdel – Halim (1981), employs five objects to measure an worker's perceived Ability-Job fit. Based on the Person – Environment fit model of stress, did a specified extent of work requirement is demanding to an employee is evaluated by his or her ability to accomplish the job (Xie, 1996).

Hypotheses Developed.

Hypothesis is a cautious statement used to offer a pivotal direction to the research. It is authenticated / rejected grounded on the outcomes of the suitable test selected. After steering a widespread review of literature, the subsequent hypothesis predominantly in the null form is framed with respect to the research problems and objectives.

The key hypotheses are indicated out as sub hypothesis to simplify testing.

H.1: Transfer of training as composite index namely 'Transfer of training composite index (TTCI) as well as its dimensions will not differ significantly between the Manufacturing and the Service sectors.

H.2: Job satisfaction as Global Job satisfaction dimension will not differ significantly between the Manufacturing and the Service sectors

H.3: The organizational commitment as composite index namely Organizational Commitment Index (OCI) and its dimensions will not differ significantly between the Manufacturing and the Service sectors

H.4: The Perceived Person – Organization fit dimension Perceived Person - Organisation fit will not differ significantly between the Manufacturing and the Service sectors

H.5: The Perceived Ability – Job fit dimension Perceived Ability – Job fit will not differ significantly between the Manufacturing and the Service sectors

T-test

The t-test for the difference in means is a hypothesis test. It evaluates the null hypothesis that the means for two clusters are identical, against the alternative hypotheses that the means are different (2-tail) or that the mean for single of the cluster is greater than the mean for the additional group (1-tail).

To understand the t-test results, the significant element one need to analyse on the result is the p-value for the evaluation. To perform a hypothesis test at a exact alpha (significance) level, one has to relate the p-value on the result (labelled as a "Sig." value on the SPSS output) to the selected alpha level. Otherwise, the researchers could just analyse the p-value, instead of analysing whether the outcome is statistically noteworthy or not at an subjective alpha level(s). In the current study t- test was employed for 13 variables and the results were compared between Manufacturing and Service sectors.

RESULTS AND DISCUSSIONS

Reliability

The reliability (Cronbach's alpha) of Learning Transfer System Inventory (LTSI), perceived person-organization fit, Perceived Ability-Job fit , Global Job Satisfaction and organizational commitment were examined. For LTSI scale, reliability analyses for each of the subscales were conducted. Similarly reliabilities for other subscales were conducted for Manufacturing (n= 206), services (n=199) and total (n=405) respectively. The reliability analyses were conducted by examining the total alpha for the subscales, as well as examining the alpha "if the item were deleted". The analysis revealed that all the scales as well as the subscales used in the present study had good reliability. Further no item deleted was necessary. The computed alphas are given in Table 4.6 Reliability of a measure is an indication of the stability and consistency with which the instruments measure the concepts and helps to assess the goodness of a measure (Sekaran, 2003) . Scale reliability is the ratio of true score variance.

For the Manufacturing sector (MF) the alpha values ranges from .53 to .84 .The LTSI values ranges from .58 to .83. The alpha values for perceived-Organization fit , perceived ability- job fit and Global Job Satisfaction were .77 , .75 and .84 respectively. The alpha values for Organizational commitment ranges from .55 to .81. For the Services sector (SS) the alpha values ranges from .53 to .83. The LTSI alpha values ranges from .53 to .75. The alpha values for perceived-Organization fit , perceived ability- job fit and Global Job Satisfaction were .83 , .80 and .78 respectively. The alpha values for Organizational commitment ranges from .62 to .73. For all companies result (total) the alpha values ranges from .59 to .81. The LTSI alpha values ranges from .59 to .77. The alpha values for Perceived-Organization fit , Perceived Ability- Job fit and Global Job Satisfaction were .81 , .78 and .81 respectively. The alpha values for Organizational Commitment ranges from .62 to .77.

Table 2: Reliability Scores (Cronbach's alpha)

S. No	Measure	Scales	No of Items	MFG	SS	TOTAL
1.	LTSI - (Transfer of Training)	Resistance / Openness to change (VI)	6 (2,3,5 ,6,12,18)	.79	.68	.72
2.		Feedback / Performance coaching (V2)	4 (7,8,9,10)	.58	.53	.59
3.		Transfer Effort – Performance Expectations (V3)	4 (1,4, 11,14)	.83	.68	.77
4.		Performance – Outcomes Expectation (V4)	5 (13,15, 16,17,19)	.64	.68	.65
5.		Performance Self Efficacy (V5)	4 (20,21, 22,23)	.75	.72	.74
6.	**V13**	Transfer of Training (V13) V1+V2+V3+V4+V5	23	.71	.75	.73
7.	**P- O**	Perceived Person- Organization Fit (V6)	3 (24,25,26)	.77	.83	.81
8.	A-J	Perceived Ability – Job Fit (V7)	5 (27,28, 29,30,31)	.75	.80	.78
9.	**J S**	Global Job Satisfaction (V8)	6 (32,33, 34,35,36,37)	.84	.78	.81
10.	**OC**	Identification Commitment (V9)	3 (38,39,40)	.82	.73	.78
11.		Affiliation Commitment (V10)	3(41,42,43)	.62	.62	.62
12.		Exchange- commitment (VI1)	3(44,45,46)	.55	.70	.62
13.	**V12**	Organizational Commitment (V12) : V9+V10+V11	9	.73	.73	.71

T-test on all variables across the Manufacturing and the Service Sector

Comparison of Transfer of Training dimensions between the Manufacturing and the Service Sector

H.1: Transfer of Training as composite index namely 'Transfer of Training composite index (TTCI) as well as its dimensions will not differ significantly between the Manufacturing and the Service sectors.

H.1.1: The TTCI will not differ significantly between the Manufacturing and the Service sectors.
H.1.2: The TTCI dimension Resistance / Openness to change will not differ significantly between the Manufacturing and the Service sectors.
H.1.3: The TTCI dimension Feedback / Performance coaching will not differ significantly between the Manufacturing and the Service sectors.
H.1.4: The TTCI dimension Transfer Effort – Performance Expectations will not differ significantly between the Manufacturing and the Service sectors.
H.1.5: The TTCI dimension Performance – Outcomes Expectations will not differ significantly between the Manufacturing and the Service sectors.
H.1.6: The TTCI dimension Performance Self Efficacy will not differ significantly between the Manufacturing and the Service sectors.
The above hypotheses were tested by subjecting the mean scores of each Transfer of Training dimensions to T-test. The results are given in Table 4.7.a. The results shows that there is a significant difference for four Transfer of Training dimensions namely, Resistance / Openness to change, Feedback / Performance coaching, transfer effort – performance expectations and Performance Self Efficacy between the personnel working in the Manufacturing and the service industry. The only insignificant difference identified was for performance – outcomes expectations dimension. The Transfer of Training dimensions Resistance / Openness to change ($P<0.01$), Feedback / Performance coaching ($P<0.01$) , Transfer effort – performance expectations ($P<0.05$) and Performance Self Efficacy ($P<0.01$) have emerged as noteworthy dimensions that exhibit a significant difference between Manufacturing and service sector. Hence we understand that there is a significant difference between Manufacturing Sector and Service sector with respect to these transfers of training dimensions.
This resulted in the hypotheses H1.1, H1.2, H1.3 H1.4 and H1.6. not being accepted.

Table 3: Difference in Transfer of Training dimensions between the Manufacturing and the Service sector

Independent variable Transfer of Training.	**MFG (N 206)**		**SS (199)**		**T**
	M	**SD**	**M**	**SD**	
Resistance / Openness to change	22.64	3.37	20.59	4.00	5.59**
Feedback / Performance coaching	14.25	2.24	15.59	2.09	-6.22**
Transfer Effort – Performance Expectations	17.56	1.74	17.95	1.46	-2.42*
Performance – Outcomes Expectation	21.46	1.83	21.29	1.89	.95
Performance Self Efficacy	15.95	2.05	16.81	2.06	-4.21**

Note: ** $p<0.01$, * $p<0.05$

The Transfer of Training dimension performance – outcomes expectations has emerged as an insignificant variable. Hence we infer that the Transfer of Training dimension performance – outcomes expectations ($P>0.05$) demonstrate an insignificant difference between Manufacturing and Service sector.
This has resulted in the acceptance of the Hypothesis H1.5.

Comparison of Global Job Satisfaction and Organizational Commitment dimensions across the Manufacturing and the Service Sector
H.2: Job satisfaction as Global Job Satisfaction dimension will not differ significantly between the Manufacturing and the Service sectors.
H.3: The organizational commitment as composite index namely Organizational Commitment Index (OCI) and its dimensions will not differ significantly between the Manufacturing and the Service sectors.
H.3.1: The OCI will not differ significantly between the Manufacturing and the Service sectors.
H.3.2: The OCI dimension Identification Commitment will not differ significantly between the Manufacturing and the Service sectors.
H.3.3: The OCI dimension Affiliation Commitment will not differ significantly between the Manufacturing and the Service sectors.
H.3.4: The OCI dimension Exchange- commitment will not differ significantly between the Manufacturing and the Service sectors.

The above hypotheses framed were tested by subjecting the mean scores of each of the Organizational Commitment dimensions to T-test. The results are given in Table
4

Table 4 : Difference in Global Job Satisfaction and Organizational Commitment dimensions and between the Manufacturing and the Service sector

Dependent Variables	MFG (N= 206)		SS (N=199)		t
	M	SD	M	SD	
Global Job Satisfaction	23.31	3.76	22.96	3.65	.94
Identification Commitment	13.03	1.68	12.39	1.93	3.55**
Affiliation Commitment	12.26	1.59	12.31	1.28	-.38
Exchange- commitment	12.10	1.42	12.56	1.34	-3.39**

Note : ** p<0.01

The Global Job Satisfaction dimension has also emerged as an insignificant variable with respect of Manufacturing and Service sector. Therefore Global Job Satisfaction dimensions (P>0.05) (refer table 4.7.b) shows that there is no significant difference between Manufacturing and Service sector as far as job satisfaction of its employees are concerned.

This has resulted in the Hypothesis H .2 being accepted

The results show no significant difference for the Organizational Commitment dimension namely affiliation commitment, between the personnel working in the Manufacturing and the Service industry. Whereas two Organizational Commitment dimensions identification and exchange commitment show a significant difference between the two sector.

The Organizational Commitment dimensions Identification Commitment (P<0.01), and Exchange Commitment (P<0.01) have emerged as variables exhibiting significant difference. Hence it is inferred that there is a noteworthy difference between the Manufacturing sector and the Service sector with respect to these two Organizational Commitment dimensions. Further the mean scores reveal that the employees in Manufacturing sector score higher on Identification Commitment while employees in services sector score higher on exchange commitment.

This resulted in the hypotheses H 3.2 and H 3.4. not being accepted On the contrary the Organizational Commitment dimension - Affiliation Commitment has emerged as an insignificant (P>0.05) in difference between the Manufacturing and Service sector.

This has resulted in the acceptance of the Hypothesis H 3.3.

Comparison of Perceived Person-Organization fit and Perceived Ability –Job fit dimensions across the Manufacturing and the Service sector

H.4: The Perceived Person - Organization fit dimension will not differ significantly between the Manufacturing and the Service sectors.

H.5: The Perceived Ability – Job fit dimension will not differ significantly between the Manufacturing and the Service sectors.

The above hypotheses were tested by subjecting the mean scores of Perceived Person – Organization fit and Perceived Ability – Job fit to T-test. The results are given in Table 5

The results prove that there is no significant difference in Perceived Person – Organization fit dimension between the personnel working in the Manufacturing and the Service industry.

The Perceived Person – Organization fit dimension (P<0.01) has however showed significant difference. Hence we infer that there is a significant difference between Manufacturing sector and Service sector with respect to Perceived Person – Organization fit.

This resulted in the hypothesis H4.not being accepted.

Table 5 : Difference in Perceived Person – Organization fit and Perceived Ability-Job fit between the Manufacturing and the Service sector

Mediatory Variables	MFG (N : 206)		SS (199)		t
	M	SD	M	SD	
Perceived Person- Organization fit	11.69	2.09	10.58	2.61	4.70**
Perceived Ability – Job Fit	19.80	2.63	19.30	2.96	1.77

Note: ** p<0.01

The Perceived Ability-Job fit dimension has emerged as an insignificant (P> 0.05) in the difference between Manufacturing and Service Sector.
This has resulted in the acceptance of the Hypothesis H5.
** p<0.01, * p<0.05
The study implies that there is a strong significant relationship between Exchange Commitment and Transfer of Training dimensions - Resistance / Openness to change and transfer effort – performance expectations in service sector. The Beta score signifies a positive relationship between Exchange Commitment and each of the predictor variables. This indicates higher the Resistance / Openness to change and transfer effort – performance expectations , greater will be the Exchange Commitment in service sector.

CONCLUSION AND FUTURE DIRECTIONS

It has been found that the LTSI scale, Person – organisation fit, Person – Ability fit, Organisation commitment and Job satisfaction scales used in this study are having a good reliability scores in both manufacturing and service industry. The study further envisages that the scales are suitable to Indian industries in the manufacturing and service sectors. This research work helps us to understand the transfer of training and the related outcomes such as job satisfaction and organisational commitment from recent industry practices.
The transfer of training holds a very important role in keeping the employees efficient and enable them to embrace the persistent modernisation in future. As the industry requirements keeps varying and the rapid enhancement in technology brings a relentless threat for industries to endure and flourish this research work overlays the approach of a better understanding of transfer of training.

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