KEY FACTORS IMPACTING TRAINING TRANSFER: PROPOSING A MISSING LINK THROUGH AN INTEGRATIVE LITERATURE REVIEW

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Abstract

Training has long been associated with organizations' development and their performance improvement. However, the reports of low training transfer call for attention and further investigation to researchers and HR practitioners. Low training transfer has led organizations to waste considerable amounts of money in terms of training costs each year. This study proposes key factors impacting the transfer of training in the workplace from a review of the related literature. Five key factors were identified followed by 15 underlying subfactors impacting training transfer. A conceptual framework is proposed for future research related to the topic.

Keywords: HRD, missing link, transfer of training, training transfer factors, integrative literature review.

INTRODUCTION

Advancements in technology and global competition have increased the need for a competitive workforce (Huang, Ford, & Ryan, 2017). This rapidly changing phenomenon calls for resilient and talented employees who are capable of multitasking. Because of ongoing competitiveness, experts estimate that up to 85 percent of jobs in the United States and Europe will soon require upskilling and reskilling (Noe & Kodwani, 2018). Such extensive demand for knowledge calls for more training and development activities.

Training has been identified as a strategic force, developing individuals' talents and enhancing competitiveness by bringing a permanent change to their behavior (Arthur, Bennett, Edens, & Bell, 2003). Notwithstanding the importance of training, the transfer of training has been a persistent problem for organizations (Bell, Tannenbaum, Ford, Noe, & Kraiger, 2017; Mongkolsirikiet & Akaraborworn, 2019; Wedchayanon, 2018).

Data related to training have showed that organizations spend vast amounts of money for the training and development of their employees. According to the Training Industry (TI) report (2020), companies in the United States spent $ 83 billion in 2019 on training and development (p.19). Globally, $ 370.3 billion were spent on training by organizations in the year 2019 (TI, 2019).

Table 1 provides a summary of global training expenditure from 2012- 2019:

The data presented in Table 1 show that the size of the training industry globally has kept swelling as organizations look eager to

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spend more on the training and development of individuals for a competitive and resilient workforce. Unlike the increase in training expenditure, organizations are yet to achieve distinguishable results for the transfer of training.

PROBLEM STATEMENT

Studies have shown that billions of dollars have been spent annually on training programs worldwide, but the transfer of knowledge from such training programs is considerably low. The lack of training transfer has become a persistent problem and unresolved mystery for organizations as the estimated percentage of training transfer has been reported more or less the same over the last three decades. Only about 10-30 percent of skills and knowledge from training are transferred to the job (Baldwind and ford, 1988; Baldwin, Ford, & Blume, 2009; Baldwin, Kevin Ford, & Blume, 2017; Bell, et al., 2017; Fitzpatrick, 2001; Ford, & Weissbein Daneil,1997; Holton III, Bates, & Ruona, 2000; Rehman, 2020).

Research over the last three decades has mostly agreed that there are four key factors impacting the transfer of training, namely trainee characteristics, training design, motivation to transfer, and work environment. It is argued that if these are the only key factors influencing training transfer, what is hindering organizations in reaching the maximum level of transfer and making the best use of their training expenditure? This academic curiosity leads to a notion that there could be some "missing links" which require exploration. Therefore, this study aims to explore key factors and identify gaps that might have prevented organizations from experiencing their desired level of training transfer.

Research Question

The guiding research question of this study is: What key factors proposed in the literature impact training transfer in the workplace?

METHODS

The present study is an integrative literature review of training related literature, as literature reviews are considered as important for synthesis and analysis in certain studies (Chermack & Passmore, 2005). Torraco (2005) described integrative reviews as; "a form of research that reviews, critiques, and synthesizes representative literature on a topic in an integrated way such that new frameworks and perspectives on the topic are generated" (p.356). The importance of literature reviews cannot be ignored as they play an important role in knowledge creation (Torraco, 2016).

Torraco (2005) suggested the following steps in conducting an integrative review (p.360-361):

a. Define search criteria
b. Define review criteria
c. Mention criteria used for retaining or

Table 1 Global Training Expenditure (2012-2020).

Year	Global Annual Spending on Training (in billions)	% Annual Increase
2020	$358	- 3.32
2019	$370.3	1.1
2018	$ 366.2	1.1
2017	$362.2	0.8
2016	$359.3	1.0
2015	$355.6	10.4
2014	$322.2	4.9
2013	$306.9	5.2
2012	$291.7	2.0

Training industry report, 2020, retrieved from www.trainingindustry.com on 23.03.2022.

discarding the literature.

a. Define Search Criteria

This study conducted a review of research articles as suggested by Torraco (2005). The search criteria were defined by the use of several keywords, including training, training transfer, transfer of training, HRD, and training transfer factors. Various internet-based sources such academia, Emerald, ERIC, google scholar, JSTOR, ProQuest, Psycarticles, PsycINFO, SAGE, ScienceDirect, Taylor and Francis, web of science, and Willey online library were used to search for relevant articles. Articles matching the key words were downloaded.

b. Define Review Criteria

Initially, 737 journal articles were identified using the above-mentioned databases. It was observed that 347 journal articles were duplicates, while 159 studies were from a low-quality journals or conference/working papers. These articles and conference/working papers were removed from the list. Following this procedure, the literature search concluded with a collection of 231 journal articles. To conduct the screening process, staged review criteria (Torraco, 2005) were followed. In the first phase, the titles of the papers were reviewed. Those with distant relevance were removed. In this phase, 169 journal articles

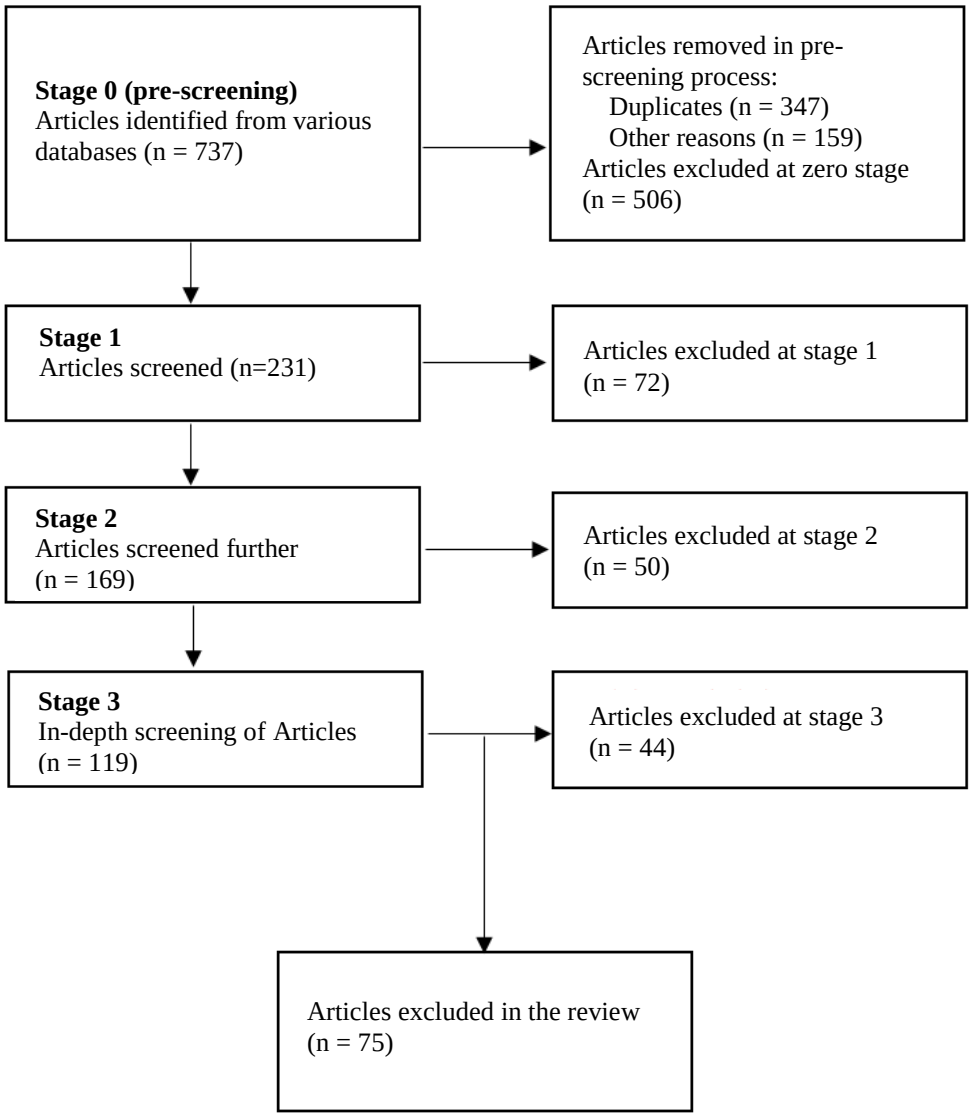

Figure 1 The Flowchart Showing the Staged Criteria

were kept. In the second phase, abstracts of the papers were skimmed, and those articles which were less relevant were set aside. This left a sample of 119 journal articles. In the third and final phase, the readings of those articles began, in which abstracts, findings and discussions within the articles were reviewed thoroughly (Torraco, 2005). The citations from the reviewed articles were also examined and some articles were downloaded with the help of those citations (Torraco, 2005). A concept matrix (Webster & Watson, 2002) was developed to articulate the central themes and concepts of the reviewed literature. Finally, 75 journal articles, including two meta-analysis and seven integrative literature reviews were included in the study. Figure 1 exhibits the flowchart of the pre-screening and screening process.

Subsequently, a consolidated list of the final number of journal articles, retrieved from various databases, was produced. Table 2 provides the details of each article included in the study and the database it was retrieved from.

c. Mention Criteria Used for Retaining or Discarding the Literature

The present study followed three criteria for retaining the literature, a) articles whose titles included the topic of transfer of training, b) articles which were published between 1988 and 2020, c) journal articles that were published under the domain of the social sciences, including HRM, HRD, Management, and Organization development.

LITERATURE REVIEW

Transfer of Training

Baldwin & Ford (1988) defined training transfer as practicing the knowledge and skills, learned during the training, at the workplace. Bates, Holton III, & Hatala, (2012) explained transfer of training as applying the knowledge, skills, and abilities (KSAs) learned in a particular training program at the workplace to the extent that those KSAs were generalized and maintained on the job (p.549).

Training transfer reflects the impact of learned knowledge, skills, and abilities at work. The transfer can be seen through job performance and fulfillment of work objectives (Blume, Kevin Ford, Surface, & Olenick, 2017). Training transfer requires that the learning and skills must be taught within the job context and should be retained by the trainee over a substantial amount of time. Baldwin and Ford (1988) suggested that transfer of training consists of learning & retention and generalization & maintenance of knowledge.

Key Factors Impacting Training Transfer

Studies have suggested that trainee characteristics, motivation to transfer, training design, and work environment, are the key factors that impact the transfer of training (Baldwin and Ford, 1988; Bell et al., 2017; Holton III, 1996).

Trainee Characteristics

In their seminal paper, Baldwin and Ford (1988) concluded that three factors: trainee characteristics, training design, and the environment, impact the successful transfer of training. Trainee characteristics are defined as the ability and readiness of the trainee to participate in the training program (Baldwin and Ford, 1988).

Bell et al., (2017) conducted a research study covering the past 100 years, attempting to come up with common themes concerning training transfer. This research revealed four themes that affect the transfer of training in organizations: training criteria, trainee characteristics, training design & delivery, and training in context (relating to the conditions experienced before and after training). Trainee characteristics are predominantly divided into three factors: ability, motivation to learn, and personality.

Ability. Ability refers to the trainee's qualifications and potential to participate, comprehend, and synthesize, the knowledge in the training program (Nikandrou, Brinia, & Bereri, 2009). Salleh, Amin, & Mamat (2017)

Table 2 List of the Shortlisted Articles Database Names

No	Article title	Name of the database
1	Aguinis, H., & Kraiger, K. (2009). Benefits of Training and Development for Individuals and Teams, Organizations, and Society. *Annual Review of Psychology, 60*(1), 451–474.	APA PsycNet
2	Allen, W. C. (2006). Overview and Evolution of the ADDIE Training System. *Advances in Developing Human Resources, 8*(4), 430–441.	SAGE
3	Arthur, W., Bennett, W., Edens, P. S., & Bell, S. T. (2003). Effectiveness of training in organizations: A meta-analysis of design and evaluation features. *Journal of Applied Psychology, 88*(2), 234–245.	SAGE
4	Baldwin, T. T., & Ford, J. K. (1988). Transfer of training: A review and directions for future research. *Personnel psychology, 41*(1), 63-105.	APA Psycarticles
5	Baldwin, T. T., Ford, J. K., & Blume, B. D. (2009). Transfer of training 1988–2008: An updated review and agenda for future research. *International review of industrial and organizational psychology*, 24(1), 41-70.	Willey online library
6	Baldwin, T. T., Kevin Ford, J., & Blume, B. D. (2017). The state of transfer of training research: Moving toward more consumer-centric inquiry. *Human Resource Development Quarterly, 28*(1), 17-28.	APA PsycNet
7	Bates, R. A., Holton, E. F., & Seyler, D. L. (1997). Validation of a Transfer Climate Instrument. *Transfer of Training, 8*(2), 95–113.	Google scholar
8	Bates, R. (2004). A critical analysis of evaluation practice: the Kirkpatrick model and the principle of beneficence. *Evaluation and program planning*, 27(3), 341-347.	Elsevier
9	Bates, R., Holton III, E. F., & Hatala, J. P. (2012). A revised learning transfer system inventory: factorial replication and validation. *Human Resource Development International, 15(5)*, 549-569.	Taylor and Francis
10	Beer, M., Finnstrom, M., & Schrader, D. (2016). Why leadership training fails—and what to do about it. *Harvard Business Review, 94*(10), 50-57).	HBR/Google scholar
11	Bell, B. S., Tannenbaum, S. I., Ford, J. K., Noe, R. A., & Kraiger, K. (2017). 100 Years of Training and Development Research: What We Know and Where We Should Go. *Journal of Applied Psychology, 102*(3), 305–323.	APA Psycarticle
12	Bhutto, A., & Tunio, R. A. (2017). Factor Affecting the Transfer of Training at the Workplace: Case study of SSGC Ltd, Pakistan. *International Journal of Academic Research in Business and Social Sciences*, 7(2), 2222-6990.	Google scholar
13	Birdi, K. S. (2005). No idea? Evaluating the effectiveness of creativity training. *Journal of European Industrial Training, 29*(2), 102-111.	Emerald
14	Blume, B. D., Ford, J. K., Baldwin, T. T., & Huang, J. L. (2010). Transfer of training: A meta-analytic review. *Journal of Management, 36*(4), 1065–1105.	SAGE
15	Botke, J. A., Jansen, P. G., Khapova, S. N., & Tims, M. (2018). Work factors influencing the transfer stages of soft skills training: A literature review. Educational Research Review, 24, 130-147.	ScienceDirect
16	Brown, T. C. (2005). Effectiveness of distal and proximal goals as transfer-of-training interventions: A field experiment. *Human Resource Development Quarterly, 16*, 369–387.	ERIC
17	Bunch, K. J. (2007). Training failure as a consequence of organizational culture. *Human Resource Development Review, 6*(2), 142–163.	SAGE
18	Burke, L. A., & Hutchins, H. M. (2007). Training Transfer: An Integrative Literature Review, *Human resource development review, 6*(3), 263-296.	SAGE
19	Cheng, E. W., & Hampson, I. (2008). Transfer of training: A review and new insights. *International journal of management reviews, 10*(4), 327-341.	Willey online library

Table 2 (Continued)

No	Article title	Name of the database
20	Chermack, T. J., & Passmore, D. L. (2005). Using journals and databases in research. *Research in organizations: Foundations and methods of inquiry*, 401-418.	Google scholar
21	Cromwell, E., S., & Kolb, A., J. (2004). An examination of work-environment support factors affecting transfer of supervisory skills training to the workplace. *Human Resource Development Quarterly, 15*(4), 449.	Willey online library
22	Eid, A., & Quinn, D. (2017). Factors predicting training transfer in health professionals participating in quality improvement educational interventions. BMC medical education, 17(1), 26.	Springer
23	Fitzpatrick, R. (2001). The Strange Case of the Transfer of Training Estimate. *The Industrial-Organisational Psychologist*, (39), 18–19.	Google scholar
24	Ford, J. K., & Weissbein Daneil, A. (1997). Transfer of Training: An updated Review and Analysis. *Performance Improvement Quarterly, 10*(2), 22–41.	Willey online library
25	Ford, L. (2009). Improving training transfer. Industrial and Commercial Training, 41(2), 92-96.	Emerald
26	Franklin, A. L., & Pagan, J. F. (2006). Organization Culture as an Explanation for Employee Discipline Practices. *Review of Public Personnel Administration, 26*(1), 52–73.	SAGE
27	Galang, M. C., & Ferris, G. R. (1997). Human resource department power and influence through symbolic action. *Human Relations, 50*(11), 1403-1426.	SAGE
28	Gegenfurtner, A., & Vauras, M. (2012). Age-related differences in the relation between motivation to learn and transfer of training in adult continuing education. *Contemporary Educational Psychology, 37*(1), 33-46.	ScienceDirect
29	Granado Alonso, C. (2016). A study of the potential of training to be transferred to the workplace. *Journal for Educators, Teachers and Trainers JETT, 7 (1), 89-100.*	JSTOR
30	Grossman, R., & Salas, E. (2011). The transfer of training: what really matters. *International Journal of Training and Development, 15*(2), 103-120.	ERIC
31	Holton III, E. F. (1996). The Flawed Four-Level Evaluation Model. *Human Resource Development Quarterly, 7*(1), 5–21.	ProQuest
32	Holton, E. F., Bates, R. A., & Ruona, W. E. A. (2000). Development of a generalized learning transfer system inventory. *Human Resource Development Quarterly, 11*(4), 333–360..	Willey online library
33	Holton III, E. F., & Baldwin, T. T. (2003). *Improving learning transfer in organizations*. John Wiley & Sons.	ProQuest
34	Holton, E. F. (2005). Holton's Evaluation Model: New Evidence and Construct Elaborations. *Advances in Developing Human Resources, 7*(1), 37–54.	SAGE
35	Huang, J. L., Ford, J. K., & Ryan, A. M. (2017). Ignored no more: Within-person variability enables better understanding of training transfer. *Personnel Psychology, 70*(3), 557-596.	APA PsycNet
36	Hutchins, H. M., Nimon, K., Bates, R., & Holton, E. (2013). Can the LTSI predict transfer performance? Testing intent to transfer as a proximal transfer of training outcome. *International Journal of Selection and Assessment, 21*(3), 251-263.	APA PsycNet
37	Hutchins, H. M., Burke, L. A., & Berthelsen, A. M. (2010). A missing link in the transfer problem? Examining how trainers learn about training transfer. *Human Resource Management, 49*(4), 599-618.	Academia
38	Hutchins, H. M. (2009). In the trainer's voice: A study of training transfer practices. *Performance improvement quarterly, 22*(1), 69-93.	JSTOR
39	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.	ERIC

Table 2 (Continued)

No	Article title	Name of the database
40	Kopelman, R. E., Brief, A. P., & Guzzo, R. A. (1990). *The Role of Climate and Culture in Productivity. (*B. Schneider, Ed.). Jossey-Bass Publishers.	Google scholar
41	Kraiger, K., & Ford, K. J. (2007). *The Expanding Role of Workplace Training: Themes and Trends Influencing Training Research and Practice*. In L. L. Koppes (Ed.), Historical Perspectives in Industrial and Organizational Psychology (p. 555). New York: Psychology Press.	Taylor and Francis
42	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.	ERIC
43	Ma, F., Bai, Y., Bai, Y., Ma, W., Yang, X., & Li, J. (2018). Factors influencing training transfer in nursing profession: a qualitative study. BMC medical education, 18(1), 44.	Google scholar
44	Mongkolsirikiet, K., & Akaraborworn, C. (2019). A Revisit of Holton's HRD Evaluation and Research Model (2005) for Learning Transfer. *Journal of Community Development Research (Humanities and Social Sciences), 12*(2), 15-34.	Google scholar
45	Nijman, D. J. J., Nijhof, W. J., Wognum, A. I., & Veldkamp, B. P. (2006). Exploring differential effects of supervisor support on transfer of training. *Journal of European industrial training*	Emerald
46	Nikandrou, I., Brinia, V., & Bereri, E. (2009). Trainee perceptions of training transfer: an empirical analysis. *Journal of European Industrial Training, 33*(3), 255-270.	Emerald
47	Noe, R. A., Clarke, A. D., & Klein, H. J. (2014). Learning in the twenty-first-century workplace. Annu. Rev. Organ. Psychol. *Organizational Behavior*. 1(1), 245-275.	Academia
48	Noe, R. A., & Kodwani, A. D. (2018). *Employee Training and Development*, 7th edition. McGraw-Hill Education.	Taylor and Francis
49	Palthe, J., & Ernst Kossek, E. (2003). Subcultures and employment modes: Translating HR strategy into practice. *Journal of Organizational Change Management, 16*(3), 287-308.	Emerald
50	Raja, S., Kasim, R., & Ali, S. (2011). The influence of training design on training transfer performance among support staff of higher education institution in Malaysia. *International Journal of Innovation Management and Technology, 2*(5), 2011.	Google scholar
51	Rehman, A. U., Khan, A. M., & Khan, R. A. (2011). Measuring training effectiveness: A case study of public sector project management in Pakistan. *Journal of Diversity Management (JDM), 6*(1).	Google scholar
52	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.	Willey online library
53	Rousseau, D. (1991). Quantitative assessment of organizational culture. *Group and Organizations Studies, 15*(4), 448-460.	Google scholar
54	Rummler, G. A., & Brache, A. P. (1995). *Improving Performance: How To Manage the White Space on the Organization Chart.* The Jossey-Bass Management Series. Jossey-Bass, Inc., 350 Sansome Street, San Francisco, CA 94104.	ERIC
55	Saks, A. M., & Belcourt Monica. (2006). An Investigation of Training Activities And Transfer of Training in Organizations. *Human Resource Management, 46*(4), 629–648. doi.org/10.1002/hrm.20135.	APA Psycarticles
56	Salas, E., & Cannon-Bowers, J. A. (2001). The Science of Training: A Decade of progress. Annual Review of Pyschology, 52(4), 71–99.	ProQuest
57	Salas, E., Tannenbaum, S. I., Kraiger, K., & Smith-Jentsch, K. A. (2012). The science of training and development in organizations: What matters in practice. Psychological science in the public interest. 13(2), 74-101.	SAGE

Table 2 (Continued)

No	Article title	Name of the database
58	Salleh, N. S. N. M., Amin, W. A. A. W. M., & Mamat, I. (2017). Employee Readiness, Training Design and Work Environment in Influencing Training Transfer Among Academic Staffs of Uitm. *International Journal of Academic Research in Business and Social Sciences*, *7*(10), 275-290.	Google scholar
59	Seyler, D. L., Bates, R. A., Carvalho, M. A., Holton III, E. F., & Burnett, M. F. (1998). Factors Affecting Motivation to Transfer Training. *International Journal of Training and Development*, *2*(1), 16. doi.org/10.1111/1468-2419.00031.	ERIC
60	Schein, E. H. (2004). *Organizational Culture and Leadership* (3rd ed.). San Francisco, CA: John Wiley & Sons, Inc.	John Wiley & Sons
61	Singh, S. (2017). Trainee Characteristics and Transfer of Training : Effect of Supervisory Support (A Study of Public Managers in Nepal), *2*(1), 1–13.	Google scholar
62	Sitzmann, T., & Weinhardt, J. M. (2017). Approaching evaluation from a multilevel perspective: A comprehensive analysis of the indicators of training effectiveness. *Human Resource Management Review, 29*(2), 253-269.	Elsevier
63	State of the industry report (2019) retrieved from https://www.td.org/research-reports/2019-state-of-the-industry, on 22.01.2020.	Google scholar
64	Tabassi, A. A., Ramli, M., & Bakar, A. H. A. (2012). Effects of training and motivation practices on teamwork improvement and task efficiency: The case of construction firms. International journal of project management, 30(2), 213-224.	Elsevier
65	Tai, W. T. (2006). Effects of training framing, general self-efficacy and training motivation on trainees' training effectiveness. *Personnel Review*, *35*(1), 51–65. doi.org/10.1108/00483480610636786.	Emerald
66	Tian, W. A., Cordery, J., & Gamble, J. (2016). Returning the favor: positive employee responses to supervisor and peer support for training transfer. *International Journal of Training and Development*, *20*(1), 1–16.	ERIC
67	Tonhauser, C., & Buker, L. (2016). Determinants of transfer of training: A comprehensive literature review. International journal for research in vocational education and training, 3(2), 127-165.	ERIC
68	Torraco, R. J. (2005). Writing integrative literature reviews: Guidelines and examples. *Human resource development review*, *4*(3), 356-367.	ERIC
69	Torraco, R. J. (2016). Writing integrative literature reviews: Using the past and present to explore the future. *Human resource development review*, *15*(4), 404-428.	APA PsycNet
70	Training Industry Report (2020) retrieved from https://trainingmag.com on 23.03.2022	Google scholar
71	Van den Bossche, P., Segers, M., & Jansen, N. (2010). Transfer of training: The role of feedback in supportive social networks. *International Journal of Training and Development*, *14*(2), 81-94.	ERIC
72	Velada, R., Caetano, A., Michel, J. W., Lyons, B. D., & Kavanagh, M. J. (2007). The effects of training design, individual characteristics and work environment on transfer of training. *International Journal of Training and Development, 11*(4), 282-294.	ERIC
73	Webster, J., & Watson, R. T. (2002). Analyzing the past to prepare for the future: Writing a literature review. *MIS quarterly*, xiii-xxiii.	JSTOR
74	Wedchayanon, N. (2018). The Factors Affecting the Transfer of Training: A Case Study of the Metropolitan Waterworks Authority of Thailand. ABAC ODI Journal Vision. Action. Outcome, 5(1), 75.	ProQuest
75	Yamnill, S., & McLean, G. N. (2005). Factors affecting transfer of training in Thailand. *Human Resource Development Quarterly*, *16*(3), 323-344.	ERIC

examined the impact of ability, error management, supervisor's role, and opportunity to use the training, on the transfer of training. The statistical results of their study confirmed that ability, along with other factors, significantly impact the transfer of training.

Motivation to Learn. Prior motivation of the trainee to transfer the expected skills and knowledge at work, plays a significant role in the positive transfer of training (Baldwin and Ford (1988). A well-designed training might not be worthwhile if trainees are demotivated and remain as passive learners during the training program. Singh (2017) suggested that among the other factors, motivation of the trainee is significant for transfer of training skills in the workplace.

Personality. Personality of trainees refers to the personal philosophy and perception of trainees regarding the training program and its usefulness (Nikandrou et al., 2009). Extant research has shown that personality characteristics also play an important role in the transfer of training. Eid & Quinn (2017) conducted a research study of health professionals to determine the factors predicting training transfer. They found five personality characteristics that were critical for training transfer, namely positivity, wisdom, resilience, humility, and curiosity (p. 5).

Motivation to Transfer

Motivation to transfer refers to trainees' willingness to employ the learned knowledge, skills and attitudes at work. Motivation influences a trainee's performance and transfer (Seyler, Bates, Carvalho, Holton III, & Burnett, 1998). Transfer design and the perceived utility of the training contribute to motivation.

Transfer Design. Research has shown that one of the agreed upon factors of poor transfer of training is a dearth of adequate transfer design. Holton (1996) argued that trainees should be taught how to transfer their acquired skills and knowledge in the workplace. Kasim & Ali (2011) concluded that transfer design is a strong predictor of the transfer of training.

Perceived Utility. Vroom (1964) contended that motivation is a fundamental element for the accomplishment of a task. He suggested that motivation of an employee increases if he/she sees utility in what he/she is doing. A research study conducted by Saks and Belcourt (2006) concluded that 62% of employees immediately apply the skills they have learned on the job, while 44% apply their new skills six months after training, and 34% one year after the training. This declining trend delineates that with the passage of time, trainees' level of motivation to transfer their newly learned knowledge at work decreases substantially. This indicates that if individuals see no utility in transferring the training contents in the workplace, or if they are short of motivation or expectations, the tendency to transfer the training will gradually decline. Studies suggest that perceived utility is one of the key factors for transfer of training (Bhatti, Battour, Sundram, & Othman, 2013; Botke, Jansen, Khapova, & Tims, 2018; Reinhold et al., 2018).

Training Design

Training design is the process of creating a blueprint for the development of instruction. Salas & Cannon-Bowers (1997) defined training design as choosing the most appropriate and relevant contents, methods, and techniques, to deliver in a training program. Yusof (2012) conducted a study in the Malaysian context, attempting to investigate the relationship between training transfer, trainee characteristics, training design, and work environment. The findings suggested that trainee characteristics, training design, and work environment, had a significant positive correlation with the transfer of training. Training design includes the three factors of training contents, learning principles, and logical sequencing of the training events (Baldwin & Ford, 1988).

Training Contents. Training contents refer to the ability of the trainees to judge the relevance and utility of the training content within their job context. Training contents play a fundamental role in the process of

learning, retention, generalization, and maintenance (Holton et al., 2000). Granado (2016) conducted a study in Spain to see the impact of training design on the transfer of knowledge & skills from training. The findings of the study revealed that instead of focusing on learning transfer, most trainers focus their interventions on the trainees' satisfaction with the training program.

Sequencing. Sequencing involves organizing the training events in a proper way. The events or activities include lectures, discussions, group activities, visuals, various tasks, presentations, and others, depending on the type of training. Widely used methodology for developing well-articulated training programs is generally named as instructional systems design (ISD). There are several models that can be used while designing training. Several models are predominantly based on the ADDIE model (Allen, 2006), which stands for Analyze, Design, Develop, Implement & Evaluate. This is a commonly used instructional deign model in the community of practice.

Principles of Learning. The design phase of developing training includes establishing learning objectives and planning the steps to achieve those objectives. Baldwin first mentioned the principles of learning as one of the factors that influence the transfer of training during the design phase of a training program (Baldwin and Ford, 1988). Learning theory helps organizations to train their employees according to their capabilities and organizational needs. For this, many theories and frameworks have been developed. Among them is behaviorism (Skinner, 1976) which emphasizes skills and disclosed behavior; humanism (Maslow,1943; Roger, 1959) which focusses on the inner person and utilization of one's full potential; cognitive theory (Gagne, 1970; Piaget, 1936; bloom, 1978) which considers how the brain learns, processes, and retains information; social Learning theory (Bandura, 1969; Mezirow, 1990); constructive learning (Vygotsky, 1980); and andragogy (Knowles, 1970); all of which are being applied in the design phase of training programs.

Work environment

Holton et al. (2000) identified work environment factors as supervisor support, supervisor sanctions, and peer support. They concluded that the work environment is a strong predictor for transfer of training in organizations. Reinhold et al. (2018), in addition to supervisor support, peer support, and supervisor sanctions, added one more factor identified as feedback or coaching (p.2). Eid & Quinn (2017) suggested that trainee characteristics, training course (training design), and work environment, were strong predictors of quality improvement from training transfer**.**

Supervisor support. Reinhold et al. (2018) concluded that unsupportive behavior of supervisors negatively affects the transfer of training. Singh (2017) conducted a study in Nepal to investigate the effects of supervisory support on training transfer. The findings of the study suggested that supervisory support moderates the transfer of training in the Nepalese context. Similar results were suggested by Nijman, Nijhof, Wognum, & Veldkamp (2006). Govaerts, Kyndt, & Dochy (2018) concluded that supervisor support, particularly supervisor involvement and accountability, significantly predicted the transfer of training.

Supervisor sanctions. Studies suggest that if a trainee is not given an opportunity to use their newly learned knowledge, training transfer will fail (Reinhold et al. (2018). Birdi (2005) suggested that poor managerial support or an unfavorable departmental climate could limit the impact of training.

Peer support. Peer support refers to the social support provided by the colleagues of an employee in using their newly acquired skills on the job (Tian, Cordery, & Gamble, 2016). According to Holten, Bates, Seyler, & Carvalho (1997), peer support includes social and professional support from peers by providing encouragement and reinforcing trainees' motivation to apply their trained knowledge and skills at work. Reinhold et al. (2018) found that peer support was the strongest predictor of motivation to transfer the trained skills on the job.

Feedback and coaching. Feedback and coaching is referred to as an indicator or response received from the organization about the post training job performance of the trainee (Kirwan & Birchall, 2006). Reinhold et al. (2018) argued that feedback and coaching enables the trainee to be focused and motivated. They found that feedback or coaching was the strongest predictor of transfer of training. Van den et al. (2010) investigated the role of feedback in transfer of training among academic staff in the Netherlands. The results suggested that feedback was positively related with the motivation to transfer as well as to the transfer of training. Noe and Kodwani, (2018) also concluded that lack of feedback from supervisors reduces motivation to transfer training in the workplace.

From the review of the literature it is concluded that in general the factors that affect the transfer of training are grouped into four categories; 1) trainee characteristics, 2) training design, 3) motivation to transfer, and 4) work environment. Each category contains various factors.

Table 3 shows the factors and their subfactors proposed in this study in the context of the transfer of training.

Critique of and Identified Gaps in the Extant Literature

Baldwin and Ford's seminal work in 1988 initiated much of the transfer research in the following decades. They concluded that three factors, trainee characteristics, training design, and work environment, influenced training transfer in the workplace (Baldwin and Ford (1988). A decade later, Ford and Weisbein (1997) updated the work of Baldwin and Ford. However, the article only added one subfactor (opportunity to use) in the work environment factor.

Burke & Hutchins (2007) conducted a literature review-based research and attempted to find updated effects on training transfer. They also found that primary factors influencing the transfer of learning were, learner's characteristics, training/intervention design & delivery, and work environment. They, however, extended the scope of training design arguing that the delivery of the training (trainer's role) was also crucial to the transfer of training. However, only two studies were found in the transfer research which added the trainer's role.

However, Cheng & Hampson (2008), in their literature review concluded that training transfer studies contain several inconsistencies which make training transfer research more complicated and researchable. Despite the indications of inconsistencies pointed out by Cheng & Hampson (2008), the training transfer literature spread over three decades have posited four key factors and 12 underlying subfactors (Table 3). Similarly, it is also evident from the extant literature that

Table 3 Summary of Factors and Sub-factors Mentioned in the Literature

Category		Factors
Trainee characteristics	I.	Ability
	II.	Motivation
	III.	Personality
Training design	I.	Training contents
	II.	Sequencing
	III.	Principles of leaning
Motivation to transfer	I.	Transfer design
	II.	Perceived utility
Work environment	I.	Supervisor support
	II.	Supervisor sanctions
	III.	Peer support
	IV.	Feedback and coaching

despite the agreement of a large number of HRD researchers regarding the key factors impacting the transfer of training, organizations at large have still witnessed an estimated 30 percent transfer of training. This is small compared to the immense investment in training worldwide. It is prudent to recognize that the factors mentioned in Table 3 are insufficient to reach an above-average level of training transfer. Thus, the present study arguably proposes a "missing link" of training transfer in the related research which has largely been overlooked in HRD research.

Organizational Culture as a "missing link" to Transfer of Training.

An extensive search of the related literature revealed organizational culture as a critical factor influencing transfer at work, which has been largely overlooked by HRD researchers (Bunch, 2009; Palthe and Kossek, 2003). Only a few scholars have discussed organizational culture and its role in transfer of training (Bell et al, 2017; Bunch, 2007, 2009). Nevertheless, no research was found in this study which investigated organizational culture in combination with the commonly identified key training transfer factors (trainee characteristics, training design, motivation to transfer, and work environment).

Schein, (2004) termed organizational culture as one of the most powerful and stable forces within an organization that influences every level of the organization. Studies showed that organizational culture influences, at greater extent, several organizational units, factors and practices including productivity (Kopelman et al., 1990), use of technology (cf. Zammuto & O'Connor, 1992), employee retention (cf. Sheridan, 1992), improvement initiatives (cf. Detert, Schroader, & Mauriel, 2000), discipline (cf. Frankling & Pagan, 2006), and absenteeism (cf. Martocchio, 1994- cited from Bunch, 2007). Franklin & Pagan, (2006) also stressed upon the need to investigate organizational culture. They contended that organizational culture must be aligned with the pre-existing beliefs of employees and argued that in case of non-alignment, differences will emerge between organizational culture and employees' beliefs and perceptions (p.66-65). Schein (2004) proposed three levels of culture, namely artifacts, espoused beliefs & values, and underlying assumptions. However, the most prominent levels of culture that can be measured in organizational settings are artifacts, and espoused beliefs & values.

Artifacts. Schein (2004) defined artifacts as physical objects such as the architecture and language spoken in an organization; the technology used and products or services sold; the style of the people in the organization, including their manners, way of behaving, and addressing each other; organizational history and the organization's past and present stories; the published rules, regulations, and procedures of the organization; and the organization's observable rituals. In the training context, excellent training facilities, issuing certificates of completion to trainees, involving top management in training activities and linking promotion with successful training, are few of the examples of artifacts (Bunch, 2009; Galang & Ferris, 1997). Bunch (2009) observed that hiring unqualified trainers may reduce the training effectiveness. In an organization where there is no serious recognition for attending training or the time spent on training by trainees, this may presumably lead to less than desired training transfer.

Espoused beliefs and values. Espoused beliefs and values refer to the company strategies, core values, behaviors, and philosophies of an organization. These beliefs and values guide the members of an organization to certain common actions (Schein, 2004). Research indicates that most training interventions are carried out as an independent event and are not linked to the organizational mission, vision, and strategy (Rummler and Brache,1995). Such separation from the organization may result in the failure of training transfer. For effective training transfer, training programs must be integrated with organizational strategy and should be aligned with organizational goals (Rummler and Brache,1995).

The strong influence of culture can be seen from the fact that members of a particular group use underlying assumptions as a guideline to determine what to listen to and what not to listen to. There are taken-for-granted assumptions about what to pay attention to and what to ignore. Therefore, people only tend to perceive what matches their taken-for-granted assumptions and throw away any contradictions (Schein, 2004). As these assumptions and beliefs are ingrained in individuals' minds, it is pertinent that these beliefs should be investigated and taken into consideration before expecting positive transfer of training. If not, any training is unlikely to produce desirable results (Bunch (2007).

Bunch (2009) concluded that the organizational culture is a strong force influencing the decisions and determining the success or failure of training transfer. Already prevailing assumptions regarding the futility and insignificance of training programs may pave the way for poor training transfer. This can be reflected through various means such as hiring inexperienced or incompetent trainers, paying no heed to the recommendations of professional trainers, or having an apathetic attitude towards transfer of training (Bunch, 2009, p.207). Exploring other areas which have potential effects on training transfer will surely introduce new dimensions to the community of practice.

This study has brought to light that organizational culture has rarely been discussed in the context of training transfer. Hence, given its vitality and instrumentality, there is a need for exploring this factor in conglomeration with the other training transfer factors. This study has included two levels of organizational culture including artifacts and espoused beliefs & values.

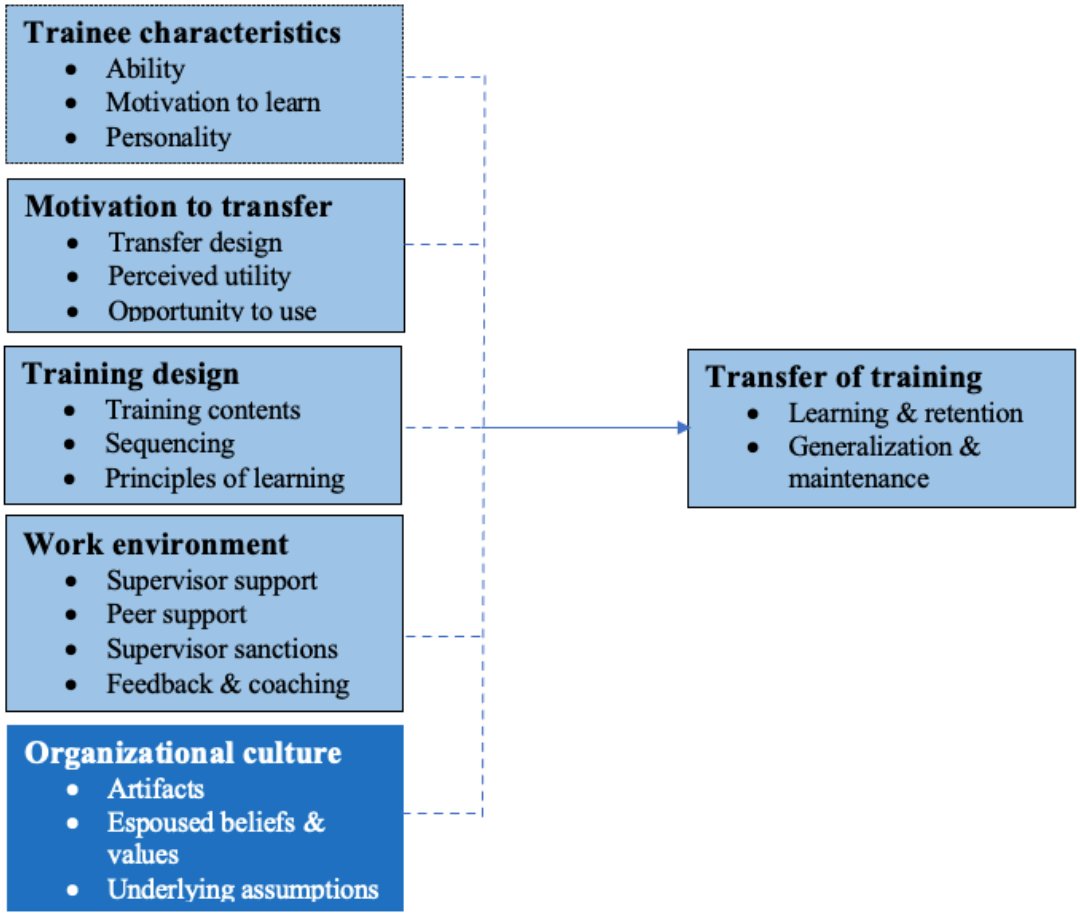

Figure 2 The Conceptual Framework of Training Transfer Proposed by Present Study.

DISCUSSION

The results of the literature synthesis indicated that there are four key factors that play a significant role in transferring learned skills to one's job. Those factors include, trainee characteristics, motivation to transfer, training design, and work environment (Balwin and Ford, 1988; Bell et al., 2017; Blume et al, 2017; Ford et al., 1997; Ford et al., 2009; Holton III, 1996; Holton et al, 2000; Kraiger and Ford., 2007; Tonhauser & Buker, 2016; Wedchayanon, 2018; Yusof, 2012). This research has also proposed organizational culture as a potential "missing link" impacting training transfer, and argues that due to the absence of organizational culture in current understanding, training transfer is yet to improve in the workplace.

Based on a review of the extant literature on the transfer of training, this study proposes a framework that has been conceptualized as per the following five premises.

The conceptual framework presented in the Figure 2 depicts five key factors and 15 underlying subfactors that significantly impact the transfer of training in organizations. Among the other factors, the framework above incorporates the new factor of organizational culture, as this has a significant impact on employees' actions and performance (Bunch, 2007). Culture represents the organizational identity and work processes (Helms & Stern, 2001).

Baldwin and Ford's training transfer model was a seminal framework which was taken as a baseline for the training transfer by a number of researchers**.** From the classic training transfer framework by Baldwin and Ford (1988) until the present time, some commonalities can be seen throughout the three decades. There is a significant consensus about the factors effecting training transfer (i.e. trainee characteristics, training design, motivation to transfer, and social support). Ignoring these factors can make transfer of training difficult in organizations. Additionally, the "missing link" (i.e., organizational culture) proposed in this review has largely remained absent in transfer research. Adding this "missing link" will provide new direction to research related to training transfer.

Implications to HRD Research and Practice

The present study is an attempt to add into the body of HRD literature, specifically in the area of training transfer. It is proposed that the selection of literature reviewed in this article is used for further scholarly discussion, debate, and refinement, with an aim to further inquiry about this topic for its scholarly evolution. Scholars may find future avenues of research and propose solutions for the persistent issue of the transfer of training by adding organizational culture as a new factor and a "missing link". This review highlighted much of the known scholarly literature on the transfer of training and showcased five key factors and categories that influence the transfer of training in the workplace. Based on the five key factors, a conceptual framework was proposed in this review study. HRD practitioners can benefit from the proposed framework, using it to improve the transfer of training in their organizations.

Future Research

Torraco (2005) suggested that a review of literature should provide new perspectives and constitute questions that can capture the interest of scholars for further inquiry. It is proposed that the selection of literature reviewed in this article is used for further scholarly discussion, debate, and refinement, with an aim to further inquiry about this topic for its scholarly evolution. As a result of this review, two key questions have surfaced for future research.

1. What is the next step for research in the transfer of training and how can HRD researchers, and practitioners respond to it?

The research related to training transfer conducted during past three decades has brought up several factors responsible for the transfer of training. This study concluded that

five key factors and their 15 underlying subfactors are significant influencers of transfer of training on the job. Hence, a conceptual framework was proposed. It seems prudent that this be explored further. Conceptualization of an extended framework could mean "an old wine in a new bottle" if research is not carried out at the next level. Thus, further research must be conducted to bring the transfer related research to the next step so that the gap between training investment and training transfer can be minimized. As part of the next level research, empirical studies can be conducted by combining all the five factors to see their level of significance on the transfer of training.

2. Are there any other "missing links" between training and the transfer of training in the workplace?

It is evident from the extant literature that despite the agreement of a large number of HRD researchers and practitioners over the key factors impacting the transfer of training, organizations at large, are still witnessing an estimated 30 percent transfer of training, which is small in comparison to the investment in training worldwide.

This study identified organizational culture as a gap in the current research that may potentially be a "missing link" to bridge the gap between training expenditure and training transfer. Nevertheless, this may not be the only "missing link" impacting the transfer of training. The second question for the future study points to the notion that there could be some important "missing links" for transfer related research which require exploration in future studies. Empirical research is necessary to explore the topic further by using both ideographic and nomothetic approaches. This may help dig deeper into the topic of training transfer and uncover further factors affecting training transfer, a topic of research that has attracted the attention of researchers and practitioners over several decades.

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