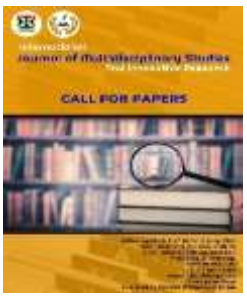

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A Review on Learning Transfer to Job Performance

Gordon Kwasi Kyere
Ghana Education Service, Post office Box 151, Jinijini, Berekum West
E-mail: kyeregordon@gmail.com

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Abstract: Organisations globally spend huge sums of money on the training and Development of employees with the aim of equipping them with the needed knowledge, skills, and attitudes to enable the organisation to gain a competitive advantage and ultimately increase organisational performance. Learning transfer has become the means through which employees can translate knowledge, skills and attitudes gained from training into job performance, leading to organisational success. As such, learning transfer should be a priority for human resource professionals. This paper reviews key theories and factors that interplay to bring about learning transfer and how these factors impact the job performance of employees in organisations. The training transfer model identifies trainee characteristics, training design, and work environment as determinants of transfer, while the learning transfer system inventory assesses ability, motivation, environment, and their influence on learning transfer. Goal-setting theory and the job characteristics model also provide lenses for understanding job performance. Again, the review identified learning design, work environment, trainee characteristics, and organisational support as learning factors that affect job performance. This research paper reviews theories and factors that influence how employees apply knowledge and skills learned in training to their job performance, which is important for organisations to realise returns on their investment in training and Development. The review explores how training design, work environment, employee characteristics, and organisational support impact learning transfer and subsequent job performance.

Keywords: Learning transfer, job performance, learning design, organizational support, trainee characteristics.

1. INTRODUCTION

Relentless efforts to improve performance and gain a competitive edge by organisations in today's hostile business environment have become a norm (Marr, 2017). Training is recognised as the most effective instrument for enhancing employees' knowledge, skills, and capabilities, which are required to improve performance and competitive edge (Bhatti, 2014). According to Frey (2017), this has led organisations to spend millions of dollars to enhance their skills, knowledge, and job-related

abilities to make employees effective. According to statista.com (2023), organisations worldwide are expected to spend $381 billion on employee training and Development in 2023 globally.

In order for organisations to fully benefit from training and development, knowledge, skills, and attitudes gained through training need to be transferred to the work place. (Holton & Bates, 2000) or there should be effective application of knowledge and skills from training to enhance individual job performance (Blume et al., 2010). This is because training and Development have been recognised as vital contributors to employee and organisational performance (McGehee & Thayer, 1967; Hoekstra, 2003).

However, a major concern is the extent to which learning from training transfers to on-the-job application, also known as learning transfer (Tannenbaum &Yukl,Ford & Weissbein, 1997). Again, some researchers have noted that there are often high levels of variance in the extent to which individuals apply the knowledge and skills gained in training to the job (Burke and Hutchins, 2007; Baldwin et al., 2009; Sitzmann and Weinhardt, 2018). Training investment is essentially wasted when learning is not generalized to work contexts (Baldwin et al., 2009). As such, learning transfer has become an important research topic with the purpose of improving training effectiveness. This paper reviews key theories and factors that interplay to bring about learning transfer and how these factors impact the job performance of employees in organisations.

2. TYPES OF LEARNING TRANSFER

According to Blume (2019) and Reinhold et al., (2018), the transfer of training, also known as learning transfer, is the rate at which acquired knowledge or skills are put into practice in the workplace. Another viewpoint considers transfer to be the quality or efficacy with which newly learned materials are applied and with the result of developed behaviour (; Hua et al., 2011; Massenberg et al., 2015 (Qamar & Baloch, 2017) or even how learning may be better customised to meet the needs of a specific profession (Blume, 2019). Learning transfer leads to an increase in employees' working efficacy following behaviour modification and applying new knowledge (Shen & Tang, 2018). The behaviour modification resulting from training transfers takes place when an employee is able to generalise to his own job setting and sustain it over a period of time (Wexley & Latham, 1981; Baldwin & Ford, 1988; Brinkerhoff & Apking, 2001; Blume et al., 2010). Scholars have identified various types of learning transfer in literature.

Positive transfer is a type of learning transfer where employees can apply acquired knowledge, skills, and attitudes effectively in work practice. The previously acquired knowledge, skills, and attitudes facilitate learning knowledge, skills, and attitudes (Baldwin & Ford, 1988). This means that the delivery was effective in transferring knowledge. Training activities aim to improve workers' performance, and there is evidence of improvement.

Negative transfer is when the employees' performance decreases after the training, to the extent to which an undesired effect occurs after following a training course, The previously acquired knowledge, skills, and attitudes hinder the acquisition of new knowledge, skills, and attitudes (Gick & Holyoak, 1987; Baldwin & Ford, 1988; Patrick, 1992).

Zero transfer occurs when there is no change in performance after a training session. This often means trainers may need to reevaluate their strategies. In addition, leaders will need to check for gaps before subsequent training (Werner & DeSimone, 2012)

3. THEORIES OF LEARNING TRANSFER

This section discusses the transfer of learning theories. Key theories explored are Baldwin and Ford's Transfer of Training Model, Holton's Learning Transfer System Inventory (LTSI)

Baldwin and Ford's Transfer of Training Model

Learning transfer was widely studied throughout the late 20th century, and a number of researchers studied variables that were likely to affect learning transfer rates. The prominent variables included

goal-setting and post-training intervention (Gist et al., 1990), supervisory support, training reputation, intrinsic/extrinsic incentives (Facteau et al., 1995), role ambiguity, job stress, and negative change (Bennett et al., 1999), and peer support (Bates et al., 2000). Self-efficacy and conscientiousness (Colquitt et al., 2000).

However, despite these variables being well-researched and understood, little was known about how they interacted with or overlapped each other. While a few researchers (notably Baldwin & Ford, 1988) had suggested creating a comprehensive taxonomy of variables, these remained largely conceptual and were not empirically tested. In other words, there was no single, unifying 'transfer system' that showed how all of the individual variables that affect learning transfer related to or interacted with each other. It was this seemingly unifying transfer system that led Baldwin and Ford to develop their transfer training model. The model focuses on the factors that influence the transfer of training, which is the application of knowledge, skills, and abilities acquired during training to the job environment (Blume et al., 2010).

The learning transfer model proposes that transfer of learning is determined by three key influences: trainee characteristics, the design of the training programme, and aspects of the work environment back on the job (Baldwin & Ford, 1988). Trainee characteristics like cognitive ability, self-efficacy, motivation, and personality affect an individual's ability to assimilate training content and apply it to the work setting after training. Training design factors such as identical elements, general principles, stimulus variability, and conditions of practice also facilitate or inhibit transfer. Finally, the transfer climate, support, opportunity to use learning, and follow-up after training shape the extent to which transfer occurs. Their model launched a field of study examining how these key factors interact to influence transfer. Empirical research over the years has provided strong support for the validity of the learning transfer mode (Blume et al., 2010).

There is evidence that trainee characteristics like cognitive ability, self-efficacy, motivation, and personality influence transfer (Colquitt et al., 2000). Training design factors, including identical elements, general principles, variability, and practice conditions, also affect transfer as theorised (Burke & Hutchins, 2007). Additionally, Saks and Belcourt (2006) posited that research confirms the importance of transfer climate, support, opportunity, and follow-up in shaping transfer outcomes. While the model has garnered substantial empirical support, researchers have noted some limitations over the years. Some argue that the model provides a limited view of transfer as an outcome rather than a process (Baldwin & Ford, 1988). The model has also been critiqued for not accounting for continuing changes in workplace conditions after training that may influence transfer (Ford &Weissbein, 1997) and for focusing more on individual-level transfer with less attention to team and organisational factors (Kozlowski et al., 2001). Others note that trainee characteristics like ability and motivation are overly emphasised compared to situational influences that organisations and trainers have more control over (Cheng &Ho, 2001).

Based on these limitations, there have been continued efforts by researchers to build upon and expand Baldwin and Ford's original learning transfer model over the past few decades. For example, newer models account for the role of individual motivation to transfer (Noe, 1986; Gegenfurtner, 2013). Trainee characteristics have also been expanded to include the perceived utility of training and career planning (Kirwan & Birchall, 2006). Furthermore, the influence of the work environment has also been elaborated on in newer transfer models. Key environmental factors have been identified as relational, informational, and organisational support (Mikkelsen & Grønhaug, 1999). Transfer climate has been divided into situational and social cues to understand nuances (Rouiller& Goldstein, 1993). Supervisory support has been highlighted through constructs like transfer coaching (Park & Yang, 2020). Some researchers have also shifted away from trainee characteristics to focus more on improving situational influences like work design, as organisations have more control over those factors (Cheng & Hampson, 2008). Measurement has also evolved from an emphasis on immediate

knowledge acquisition to assessing longitudinal changes in job performance (Blume et al., 2010).

Holton's Learning Transfer System Inventory

In addition to Baldwin and Ford's, Holton's Learning Transfer System Inventory is also another theory that explains learning transfer. Holton's Learning Transfer System Inventory is a research-based diagnostic tool developed by Elwood F. Holton III and Reid A. Bates in the late 1990s to assess factors that influence the transfer of learning in organizational settings (Holton et al., 2000). The Holton's Learning Transfer System Inventory is intended to help organizations identify barriers and facilitators of learning transfer, enabling them to develop focused interventions to improve the effectiveness of their training programs (Holton, 2005).The foundation of Holton's Learning Transfer System Inventory is Holton's (1996) learning transfer systems model, which proposes that learning transfer is influenced by training design, individual learner characteristics, and work environment factors. The Holton's Learning Transfer System Inventory contains 89 items across 16 constructs that are grouped into 4 categories: ability factors, motivation factors, work environment factors, and secondary influences.

While the Holton's Learning Transfer System Inventory has become a popular instrument for assessing learning transfer in organizations, it has been criticized for not having a specific theoretical model underlying it and not well-specified, making it difficult to understand the proposed relationships between factors (Blume et al., 2010). More clarity is needed on how the 16 factors theoretically influence transfer. Also, there is debate about the appropriate factor structure of the Learning Transfer System Inventory, with some studies finding support for alternative factor solutions (Bates et al., 2012). This suggests the relationships between scale items and factors may not be optimal. Evidence for the validity of the Holton's Learning Transfer System Inventory scores is mixed, with some studies failing to find expected relationships with transfer outcomes (Bates et al., 2007). More research is needed to validate the meaning of Learning Transfer System Inventory scale scores. Again, Holton's Learning Transfer System Inventory was developed in a Western cultural context, raising questions about its applicability in non-Western cultural settings (Yamnill & McLean, 2005). Adaptation may be required for use in different cultures. As a self-report measure, the Holton's Learning Transfer System Inventory can be susceptible to response biases like social desirability. Inclusion of more objective indicators could strengthen measurement of the factors.

Furthermore, limited longitudinal research makes it difficult to ascertain the Holton's Learning Transfer System Inventory value for predicting future transfer (Blume et al., 2010). Tracking changes over time could better demonstrate predictive validity.

4. FACTORS AFFECTING LEARNING TRANSFER

Learning Environment

The learning environment has been identified as significantly influencing the learning transfer process. A training environment that closely simulates the job context can improve the extent of transfer (Burke & Hutchins, 2007). This is corroborated by Barnett and Ceci (2002), who found that positive transfer is increased if the learning environment closely resembles the actual work context because situational cues will be similar and serve as reminders for using the new knowledge. However, negative transfer may occur if the learning and transfer contexts are vastly different, meaning the knowledge is applied inappropriately to the new situation (Blume et al., 2010).

Contextual conditions such as the relevance of training content to the job, opportunities to practice, and feedback on performance can also enhance or impede transfer (Baldwin & Ford, 1988). Research also shows that transfer success depends on alignment between what is learned and the requirements of the transfer context (Ford &Weissbein, 1997). The work context trainees are learning in and the nature of the transfer context to which they will be applying skills affect the degree of transfer that will occur. Trainees need

to learn skills relevant to their jobs to be able to apply them later.

Learning Design

Additionally, the learning intervention's design significantly impacts whether transfer will occur (Blume et al., 2010). Research shows that learning transfer is enhanced when training incorporates a number of key instructional design elements. Providing trainees with a diversity of examples demonstrating how to apply skills in varied scenarios aids transfer by helping trainees develop more abstract mental models (Royer et al., 2005). Trainees also benefit from extensive practice opportunities and repeated retrieval of the knowledge over time, strengthening memory and making the information more accessible for later application (Carpenter et al., 2012). Again, providing metacognitive prompts for trainees to reflect on how to use their new knowledge also boosts transfer (Bell & Kozlowski, 2008). Additionally, spacing learning sessions out over time rather than massing instruction into a single session creates a distributed practice effect that improves long-term retention and flexibility of knowledge (Cepeda et al., 2006).

Individual Characteristics

Individual characteristics also play a crucial role in learning transfer. These include self-efficacy and motivation, cognitive abilities, and the personality of the learner (Ford et al., 1998). Learners with high self-efficacy and motivation are more likely to transfer learned skills to the job (Gistet al., 1991; Gegenfurtner, 2013). Certain individual differences also influence learning transfer. Trainees' cognitive ability impacts their capacity to retain and flexibly apply new information (Blume et al., 2010). Ford and Weissbein (1997) also emphasise that conscientious individuals who are achievement-oriented tend to be more successful at transfer (Blume et al., 2010). Prior domain knowledge in the area of training provides conceptual schemas for understanding and integrating the new information. Demographic variables like age and job tenure have also shown inconsistent effects on transfer (Blume et al., 2010). Overall, it is critical to consider how these individual differences may interact with training design and the work environment to impact transfer success.

Organizational Support

Again, organisational support, including supervisory and peer support, opportunities for the application of new skills, and reinforcement, substantially influences learning transfer (Baldwin & Ford, 1988; Clarke, 2002). A culture that encourages learning, values training, and provides sufficient resources for implementation can enhance transfer (Rouiller& Goldstein, 1993). The amount of organisational support for transferring learning also affects transfer outcomes. Resources and opportunities to apply new skills on the job are key to a successful transfer (Ford &Weissbein, 1997). Trainees need time available upon return to work to implement new knowledge. Coaching and feedback from managers reinforce the use of trained skills and behaviours (Saks & Burke, 2012). Peers can also provide informational and social support for integrating new learning (Van den Bossche et al., 2010). Without adequate organisational support, even the best-designed training programmes will struggle to produce transfer

5. JOB PERFORMANCE

Job performance is considered an outcome because it can be achieved as a result of a certain behaviour (Pandey, 2019; Siddiqui & Iqbal, 202). Organisations are investing in training and development to enhance individuals' competencies and expect them to give the required output (Na-Nan et al., 2017). Moreover, training investment aims to achieve positive outcomes, such as job performance, by ensuring the transfer of learned skills on the job. The effectiveness of training is measured using the transfer of training at the workplace (Shi & Liu, 2015). Enterprises are successful when they are able to measure the transfer of learning that comes from training at the workplace, providing the outcomes of improved individual and organisational performance.

A change at the organisational, group, and individual level is the definition of a learning outcome (Turi et al., 2019). Job performance can be defined as the measurable actions, behaviours, and outcomes that an employee engages in and works towards to achieve his own goal or task that are linked with and contribute to organisational

goals (Barrick et al., 2001. Several studies have confirmed and provided evidence that training can increase the productivity of an individual and also found a positive impact on the productivity of individuals, which in turn increases organisational performance (Sahinidis & Bouris, 2008; Dumas & Hanchane, 2010; Mohammed Turab & Casimir, 20153). The benefits of training for individuals include up-to-date skills and knowledge, improved effectiveness on the job, and increased performance (Nikandrou et al., 2009).

6. THEORIES OF JOB PERFORMANCE

This section discusses job performance theories. Key theories explored are the goal setting theory of Locke and Latham (1990) and the job characteristics model of Hackman & Oldham.

Goal Setting Theory (Locke & Latham, 1990)

The Goal-Setting Theory (Locke & Latham, 1990) is one of the most influential theories of job performance. The core premise of the theory is that setting specific and challenging goals leads to higher performance compared to easy or vague goals. This motivational effect applies across tasks and contexts (Latham & Locke, 2006). The underlying principles of the theory are specificity, difficulty, feedback, commitment, and task complexity. Specificity refers to setting specific, difficult goals for employees that lead to higher performance than vague or abstract goals. The more precise the goal, the clearer it is for one to know what one needs to do; this will enhance its achievement (Locke & Latham, 2013). The difficulty of the goal is another principle of goal-setting theory. Difficult goals require effort and mobilisation of skills and persistence which leads to higher performance than easy goals (Locke & Latham, 2013).

As difficult goals are set, providing feedback on progress towards those goals enhances their effectiveness too (Locke & Latham, 1990). Feedback allows people to track progress and adjust effort or strategy; this is another theory principle. Again, commitment to the goal is essential for goal-setting to work (Hollenbeck & Klein, 1987). People have to accept and be committed to the goal in order to influence performance. Furthermore, task complexity is another principle that posits that the effectiveness of specific difficult goals is most pronounced for simple tasks versus complex or creative tasks, where specific goals can sometimes hinder flexible thinking (Latham & Locke, 2006). The strength of the theory lies in its strong empirical support. According to Locke and Latham (2013), hundreds of studies have confirmed goal-setting theory across different contexts and that it is one of the most robust theories in industrial-organisational psychology. Again, the theory can readily be applied in organisations to improve motivation and productivity (Locke & Latham, 2002). Goal-setting interventions tend to have significant positive impacts.

Aside from these strengths, researchers have also critiqued the goal-setting theory. For example, Schweitzer, Ordóñez, and Douma (2004) argue that the theory places an overemphasis on quantity over quality and ethics. It is claimed that pressure to meet quantitative goals can lead to unethical behaviour. O'Leary-Kelly, Martocchio, and Frink (1994) also raised issues with the focus on individuals and the emphasis on collaboration and teamwork, which are also essential.

Job Characteristics Model (Hackman & Oldham, 1976)

In addition to goal-setting theory, there is a job characteristics model. This model identifies five core job characteristics (skill variety, task identity, task significance, autonomy, and feedback) that impact critical psychological states related to motivation and satisfaction, which in turn influence work performance. Jobs with these core characteristics foster higher internal work motivation. Skill variety: the degree to which a job requires various skills and talents (Humphrey et al., 2007). Task identity is the extent to which a job involves completing a whole identifiable piece of work (Parker, 1998). Task significance is the perceived importance and impact of the work (Grant, 2008). Autonomy is the freedom and discretion to schedule and perform work (Morgeson& Humphrey, 2006).

Feedback is receiving clear information about effectiveness in the job (Pritchard et al., 1988). These characteristics influence critical psychological states of meaningfulness, responsibility, and knowledge of results related to motivation, performance, and satisfaction.

The model's strength is predicated on its informative nature, empirical support, and applicability. On the informative front, it provides a framework for enriching jobs by enhancing motivating characteristics (Johns, 2010), while a meta-analysis validates the model and shows job design impacts attitudes and performance (Fried & Ferris, 1987). Organisations also use it extensively to diagnose and enrich jobs (Parker et al., 2001).

The model has been critiqued for its overemphasis on job scope. For example, Roberts and Glick (1981) argue that the model overlooks social and work-context factors influencing motivation. Again, Salancik and Pfeffer (1978 also critique the linear motivational sequence as overly rational, not capturing nuances in behaviour or broader performance outcomes. The Job Characteristics Model delivers valuable insights but could be improved by incorporating contextual factors, social needs, and broader performance criteria.

7. Learning Transfer Factors that Affect Job Performance

Learning transfer represents the crucial step of generalising knowledge and skills beyond the training environment and applying them appropriately on the job. Research has identified learning design, work environment, trainee characteristics, and organisational support as key determinants enabling learning and job performance transfer. In a study, Burke and Hutchins (2008) found that work climate (work environment) has an estimated 49% impact on learning transfer after training and job performance. The trainer's role (trainee characteristics) was 48%, the design and delivery of training interventions had an impact of 46%, and the learner characteristics impact was 2%. Furthermore, Burke and Hutchins (2008) found in that study that the role of supervisors implied (25%) and the trainees (23%) had implied significantly over the training during (48%), after (32%), and before (12%).

Transfer of learning shows the extent to which the participant in the training acquires a sustained change in how work is performed due to the change in skill, knowledge, and ability (Wenzel & Cordery, 2014). Training leads to improved self-confidence and competence levels and more knowledge of job content, which leads to increased interest in the performance of daily tasks. Training has improved employees' problem-solving ability and critical analysis, as well as assuming more responsibility to perform their jobs than before and improved work methods (Ellstrom & Ellstrom, 2014). Transfer learning leads to two outcomes: individual workplace learning outcomes and organisational learning outcomes, where the former involves improved competence and confidence with the motivational desire to learn, the Development of leadership and management skills, and the latter involves two main themes of enhanced professional practice and organisational gain: being able to integrate HRM with organisational strategy (Crouse et al., 2011). Learning transfer directly affects job performance when employees effectively apply the skills and knowledge acquired from training to their jobs; it leads to improved work performance, productivity, and innovative problem-solving abilities (Swanson & Holton, 2001). By applying trained knowledge and skills, trainees are able to execute job tasks more proficiently, demonstrate broader skill sets, and take on expanded work roles (Tonette& Flora, 2019).

This leads to higher supervisor ratings of job competence (Blume et al., 2010). Moreover, it can result in the Development of new strategies and techniques and foster a culture of continuous learning and Development (Yamnill& McLean, 2001). At an organisational level, these individual performance boosts cumulate to impact organisational effectiveness in areas like safety, quality control, sales, and customer service (Tonette& Flora, 2019). When effective transfer does occur, the payoff can be significant improvements in individual and organisational performance metrics. The successful transfer has been linked to more frequent use of trained

behaviours, higher productivity, and better task performance, and investing in designing for and supporting transfer can yield impressive returns across levels of the organisation.

8. CONCLUSION

Learning transfer has been identified as having an impact on the job performance of employees. Organisations spend huge sums in training and development budgets to improve the overall performance. To reap the benefits organizations should leverage learning transfer factors such as trainee characteristics, training design, and work environment to develop holistic strategies to maximize the likelihood that expensive training efforts pay off through enhanced individual and organizational performance. While the transfer is challenging, a thorough understanding of influencing factors informs practices for overcoming barriers and reaping substantial benefits for the organisation.

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