

Analysing the Efficacy of Training Strategies in Enhancing Productivity and Advancement in Profession: Theoretical Analysis in Indian Context

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Abstract

An assessment of those needs, also known as a needs analysis, must be carried out in order to ascertain if the organization's requirements, objectives, and concerns can be achieved or addressed via training. In conducting our research, we reviewed training and development-related writing from 1971 to 2023. We believed that the use of more sophisticated training evaluation techniques and statistical approaches, together with an increase in the technological complexity of training design and methodology, set the post-1971 era apart. To be effective, a qualitative review must place more of a focus on qualitative methods of evaluating training effectiveness. Similar to earlier training and development reviews, the present study considered practitioner-oriented literature if it met the criteria listed below for inclusion. A thorough search of the academic literature was conducted to find empirical studies that assessed training programmes or examined the effectiveness of specific training components. After reviewing their abstracts, it was decided to keep 58 articles and papers since they had the proper information. Our research showed that organisations with a strong reputation for employee development are a completely different tale. The majority of businesses monitor the effects of their training efforts in the area of organisational effectiveness. For the second category, increases in productivity, revenue, and profitability are typical signs of organisational success. Overall, there is far more research on team and individual benefits than there is on organisational ones.

Keywords

Training Strategies, Productivity and Career Growth

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Introduction

Many factors, such as the desire to stay ahead of the competition, train and educate workers, and boost output, contribute to the ongoing interest in personal and professional growth. Training is one of the most often used approaches to raising worker output and disseminating company values to new hires (Arthur, Bennett, & Huffcutt, 2001). Companies employing 100 or more workers in the United States allocated \$54 billion towards training in 2000 ("Industry Report," 2000). To achieve this objective, we first identify design and assessment elements associated to the efficacy of organisational training programmes and interventions, with an emphasis on those factors that may be reasonably influenced by practitioners and researchers (Anderson, and Gerbing, 1988).

A Review of Key Elements in Training's Design and Evaluation for Success

Six comprehensive reviews of the literature on training and development have been published in the last 30 years. Based on these and other relevant literature, we were able to pinpoint a number of design and assessment characteristics that are inextricably linked to a program's capacity to provide desired results (Campbell, et.al., 1984).. However, this essay will only include topics that can be reasonably manipulated by researchers and trainers. We pay close attention to

1. The selection of appropriate evaluation criteria,
2. The conduct of a needs assessment,
3. The features of the skill or task that are being taught, and
4. The compatibility of these qualities with the chosen mode of instruction. We see them as variables that may be influenced throughout the planning, execution, and assessment of corporate training initiatives.

Training Evaluation Criteria

One of the most important choices to be made when assessing training's efficacy is the selection of assessment methods. Salas and Canon-Bowers (2001) and Van Buren and Erskine (2002) both agree that despite the fact that other approaches and models have been proposed (e.g., Day, Arthur, & Gettman, 2001; Kraiger, Ford, & Salas, 1993).

This was chosen as the framework of choice since it best served our conceptual needs. When asked how successful a training or teaching programme is, the standard response within the context of Kirkpatrick's model is, "Effective in terms of what?" How about responses, knowledge, activities, or the end result? Therefore, the most relevant criteria for evaluating training's success are those that directly relate to the training's stated goals. Self-report measures are used to operationalize reaction criteria, which indicate learners' emotional and cognitive reactions to the training experience.

On the other hand, there is barely any proof to suggest that trainees' opinions about a training programme have any bearing on how much apprentices learned from the programme (learning criteria), as well as changes in trainees' job-related behaviours or performance (behavioural criteria), or the program's utility to the organisation. Moreover, there is scant evidence to suggest that trainees' opinions about a training programme have any bearing on how much trainees learned from the programme (learning criteria). According to several studies, there is no correlation between response criterion and the other three criteria. Anecdotal and other data shows that response measures are the most often utilised

assessment criteria in applied contexts, despite the fact that "reaction measures are not a suitable surrogate for other indexes of training effectiveness" (Tannenbaum & Yukl, 1992).

Paper and pencil exams and other forms of evaluative documentation are common methods of operationalization. It has been suggested that "trainee learning appears to be a necessary but not sufficient prerequisite for behaviour change" by Tannenbaum and Yukl (1992). However, behavioural factors may be used to determine whether or not a training programme really improved employees' performance on the job. Training transfer issues are also important to consider (Alliger & Janak, 1989).

In most organisations, performance evaluations from superiors or other quantifiable metrics are used to operationalize behavioural standards. Although there is an intuitive connection. Researchers have had limited success in producing empirical proof of the relationship underlying comprehension and operational requirements, despite efforts to do so (Colquitt et al., 2000).

This is as a result of the fact that environmental factors can have an effect on the manner in which well-trained abilities and competencies are transmitted into and utilised on the job when defined by personality specifications. For instance, it's likely that the trainee won't have the opportunity to put any of the training they got to use once they return to their post-training employment (Ford, Quinones, Sego, and Speer Sorra, 1992). This is one of the findings from a study that was conducted by Ford, Quinones, Sego, and Speer Sorra. In the end, the most broad and far-reaching criterion used to judge the performance of training is outcomes criteria, such as productivity or company profits. It is typical practise to employ estimates derived from utility analysis in the process of operationalizing outcomes criteria (Cascio, 1991, 1998).

According to Adhiatma et al. (2022), utility analysis is a method that can be used to calculate the monetary value of doing specific actions with the current workforce. As like, do training programmes that are assessed based on learning criteria as opposed to behavioural criteria provide bigger impact sizes? It must be stressed that the criteria type used in this research does not play a role as an independent or causative variable. Our goal is to find out whether there is a connection between how the dependent variable is defined and the results of the training (Garavan, et. al. (2022).

Therefore, the many criteria for judging the success of a training programme (i.e., response, learning, behavioural, and outcomes) are only different operationalizations of the same concept. Therefore, the first question we want to investigate is: Does the size of the ds vary depending on how the dependent variable is operationalized, and if so, by how much?

Conducting a Training Needs Assessment

In order to govern whether the administration's requirements, areas, and problems can be satisfied or addressed via training, an evaluation of those needs (also known as a needs analysis) must first be conducted. In this setting, determining who needs what kind of training requires a three-pronged approach: an examination of the organisation itself (what are its goals and where does training make the most sense), an examination of the job itself (what does the trainee need to know to do the job well), and an examination of the people who will be receiving that training (who needs it and why) (Fachrunnisa, et. al. (2022)). Consequently, a requirements assessment is an essential first stage in the strategy and expansion of training and may have a major impact on the success of training programmes as a whole. In particular, a thorough requirements analysis may oblige as the foundation intended for the training program's functioning and operational, and it can be used to pin down various aspects of its implementation (inputs) and assessment (outcomes). Therefore, the existence and thoroughness of a requirements assessment should be considered when designing effective training programmes.

More efficient training might be achieved by the methodical analysis of training requirements, the determination of job requirements to be trained for, and the selection of personnel to be trained for those requirements in need of training, and the identification of the appropriate training to be given (Hellriegel, et.al., 2021). The purpose of this study was, thus, to investigate the connection between needs assessment and the results of training.

Compatible Methods of Instruction and Needed Skills or Tasks

The requirements analysis should provide a set of training goals that detail the knowledge and abilities that will be acquired as a result of the programme. Various typologies have been proposed for classifying a wide range of abilities and activities. Given their commonalities, we may group them into a generic typology that divides knowledge and actions into the following three domains: cognition, interaction, and action. Thinking, creating ideas, comprehending, and solving problems are all examples of cognitive activities and talents. Work that requires interaction with others, whether coworkers or customers, falls under the category of "interpersonal skills and tasks." Skills in leadership, communication, conflict resolution, and team building are just few of the many that will be called for (Gagne, Briggs, & Wagner, 1992; Rasmussen, 1986; Schneider & Shiffrin, 1977).

Finally, the use of one's musculoskeletal system to carry out behavioural actions is what we mean when we talk about psychomotor skills. Therefore, psychomotor tasks are those requiring physical or manual exertion and a wide variety of movement, from the most delicate to the most robust forms of motor control. The findings of the needs assessment and the training goals dictate the specific set of skills and activities that will be learned, leaving practitioners and researchers with little leeway (Hunter,1990). They do, however, have greater leeway in selecting and designing training delivery methods, as well as in matching them to the necessary skills or tasks. It's possible that one training method is more effective than another when it comes to a particular profession or body of information that's being taught.

Because of this, different training methods may be used to teach trainees distinct material (i.e., skill, knowledge, attitude, or task) information. This is because all training methods are designed to teach trainees specific information. Therefore, one of the most important aspects of the effect that the kind of skill or task has on the effectiveness of training is how well the training delivery method corresponds to the skill or task that has to be acquired. When deciding on the most effective method of training, Latham (2002) emphasised the importance of taking into consideration both the current skill level of the person as well as the particulars of the task. On the other hand, there hasn't been a great deal of primary research done to analyse these findings. As a result, the objective of this research was to assess the effectiveness of training in respect to both the ability or task that was being acquired and the training strategy that was used.

This inquiry aimed to find answers to the following issues based on the concerns that have been expressed up to this point: 1. Does the effectiveness of training change in a consistent manner depending on the success metric that is being used? Is it the case, for instance, that the magnitude of observed effect sizes lowers as one changes from learning criteria to outcomes criteria, owing to the rising influence of extra training restrictions and situational factors? 2. How does figuring out the requirements a group needs prior to receiving training impact the level of success the group experiences? To be more specific, would investigations that do needs assessments in a more in-depth manner have a greater rate of success, as measured by larger effect sizes, in comparison to those that do not? We predicted that the effectiveness would vary depending on the evaluation criteria that were used, therefore we disaggregated all of the moderators according to the kind of criterion that was being used. This is a crucial point to make.

Objective of the study

1. To make a qualitative review must place more of a focus on quantitative methods of evaluating training effectiveness
2. To find empirical studies that assessed training programmes or examined the effectiveness of specific training components.

Methodology

In our investigation, we looked at what has already been written on training and development from 1971 to the year 2023. We saw the time period after 1971 as being distinguished by the employment of more extensive training assessment methodologies and analytical methods for approaching right outcome, as well as by the increasing technical sophistication in training design and methodology. For a quantitative review to be useful, there has to be a greater emphasis on quantitative techniques for assessing the success of training. The current research included the practitioner-oriented literature provided it matched the criteria for inclusion as indicated below, corresponding previous training and development evaluations. Studies in journals, books, book chapters, conference papers, presentations, dissertations, and these were included in the literature search because they evaluated organisational training programmes or examined the efficacy of organisational training in some way. An exhaustive search of the scholarly literature was done to uncover pragmatic studies that evaluated a training programme or tested certain elements of training's efficacy. In the end, 58 articles and papers were kept after a review of their abstracts revealed appropriate content.

Area of the study: study is conducted in Indian scenario and companies involved in enhancing the employee's performance with the infusion of training programs and technologies.

Review methodology: As study is qualitative and based on the several literatures in the field of human resources, literatures are written in thematic version rather in chronological order. Literature writing style follows cohesive format with theme flow.

Review of Relevant Research to Evaluate Training Methods for Improving Efficiency and Career Prospects

Improved work performance and other positive changes are antecedents of job performance (Kraiger 2002), and therefore should emerge from training. However, the efficacy of training varied according to the training delivery mode and the skill or task being learned, despite the fact that variances in effect sizes were not great. Training programmes that focused on developing both cognitive and interpersonal abilities outperformed those that focused only on developing psychomotor abilities. Following this, we include descriptions of experiments that both illustrate and expand upon the broader conclusions described by Arthur et al. (2003). the (measurable) impact of training on performance may be difficult to detect at first. Barber (2004) conducted qualitative research with mechanics in Northern India and concluded that on-the-job training boosted creative output and tacit knowledge. Effective performance often relies on tacit abilities, which are learned behaviours. In terms of originality, skilled technicians learned to construct two Jeep bodies using nothing but a hammer, chisel, and an oxyacetylene welder (the learning of new skills; Hill & Lent 2006, Satterfield & Hughes 2007). Barber mentioned "feel" as an example of a tacit talent essential to the success of a mechanic. In order to remove dents, which may

be difficult, especially if the fender is substantially crushed, professional technicians have acquired an instinctive feel for the technique. This sort of repair is normal procedure in the poor world, which makes this tacit ability particularly valuable in the Indian environment (Barber, 2004). Although most shops in developed nations wouldn't even attempt to mend a fender that was damaged so badly, this form of maintenance is common technique in the poor world. It has also been illustrated that training may increase one's technical ability. For instance, Davis and Yi (2004) employed behavior-modeling training with participants in two different experiments, which led to substantial improvements in participants' levels of computer literacy. Despite the long list of successful behavior-modeling training programmes (Decker & Nathan 1985, Robertson 1990), this study's novel finding that training affects changes in worker skills is particularly noteworthy. After participating in mental rehearsal for ten days after the conclusion of the programme, participants demonstrated better coherent knowledge and task performance. A more recent meta-analysis on the topic of behavior-modeling training was undertaken by Taylor et al. (2015). Declarative and procedural knowledge were shown to have the greatest impacts (ds close to 1.0 when comparing the training and no-training or pretest conditions). Knowledge of "what" (e.g., facts, meaning of terminology) is called declarative knowledge, whereas knowledge of "how" (i.e., how to conduct skilled behaviour) is called procedural knowledge (Aguinis 2009, Kraiger et al. 1993).

The average impact size associated with changes in employee behaviour was $d = 0.27$. There is a need to look at modifiers of the link between behavior-modeling training and outcomes since Taylor et al. (2005) revealed a wide range of impact sizes. In the section under "Suggestions for Future Research," we discuss the difficulty of moderators. Strategic knowledge, which is defined as understanding when to use a particular knowledge or ability, may be influenced by training as well as declarative information and procedural knowledge (Kozlowski et al. 2001, Kraiger et al. 1993).

Training for adaptive competence is what Smith et al. (1997) call it (Ford & Schmidt, 2000). Furthermore, training may allow for generalisation of performance to other contexts. For instance, Driskell et al. (2001) surveyed 79 American adults. Students from the Navy's Institute of Naval Technology who completed a computational exercise. A training exercise including stress exposure was undertaken by the trainees. Stressors (such as noise and time pressure) and their potential effects on learner performance are discussed throughout the course of this training. Training's positive effects were shown by the trainees' improved performance in the face of a new stressor and in the execution of a novel task. Therefore, stress training aids in preserving consistency of performance. Improvements in trainees' self-efficacy or self-management may also lead to more consistent performance.

Two, training for supervisors and superiors has been shown to improve organisational performance. When comparing training with no training, they discovered that the mean ds for knowledge outcomes was 0.96, while for expertise/behavioral outcomes, it varied from 0.35 to 1.01. Principles, facts, attitudes, and abilities were all considered forms of knowledge, and they were evaluated using both subjective (through things like self-reports) and objective (through things like standardised exams) methods. Both subjective (for example, peer evaluations) and objective (for example, changes in behaviour on the job) measurements were used to evaluate the expertise/behavioral results. Finally, cross-cultural training is a good example of training's positive effects on performance since it helps workers fulfil their duties in a new culture and/or adapt psychologically to daily life in that culture (Bhawuk & Brislin 2000, Lievens et al. 2003). Morris and Robie (2001) conducted research to investigate the positive effects that cross-cultural training has on the overall performance and adjustment of expatriates.

They did this by combining the findings from a number of research that investigated adaptation. and that used work output as the primary metric. Adjustment and training had a mean correlation of 0.12 ($p > 0.05$), whereas performance and training had a correlation of 0.23 ($p > 0.05$). However, there was a wide range of effect sizes, indicating the presence of potential moderators. Newer study examines the efficacy

of cross-cultural training in preparing managers for a foreign assignment; Littrell et al. (2006) did a qualitative evaluation of 25 years' worth of research (1980-2005).

Littrell et al. (2006) looked at 16 empirical research and 29 conceptual reviews that came before. Overall, they determined that expatriate success may be improved by cross-cultural training. They also found many variables that You may modify the impact of training on expatriate performance by taking into account factors such as the time of training (for example, before leave, during project, and after assignment), family concerns, work qualities (for example, job discretion), and cultural variations amongst your nation of origin and the assignment country.

Three, studies show that training affects non-work-related outcomes and factors that predict work performance. We stress, however, that these supplementary gains from training are not wholly unconnected to improved productivity in the workplace. Indeed, in many instances they are tangentially connected to performance, and in others they may be associated with personal and group happiness, factors that are, in turn, tangentially connected to productivity on the job. For instance, leadership development is gaining popularity again (Collins & Holton 2004, Day 2000).

To test the efficacy of transformational leadership training, Dvir et al. (2002) conducted a long-term randomised field experiment with cadets from the Israel Defence Forces. Charismatic leaders are those that inspire and challenge their people intellectually while also treating each of them as an individual. According to the findings, The participants in transformational leadership programmes experienced greater increases in their followers' levels of motivation (i.e., self-actualization needs and willingness to exert extra effort), morality (i.e., internationalisation of their organization's moral values), and empowerment (i.e., critical-independent approach, active engagement in the task, and specific self-efficacy).

The results of an experiment conducted by Kabanoff and Brown (2008) on a group of forty-one business students compared the effectiveness of three distinct forms of training: (a) no training; (b) instruction in presenting skills; and (c) training in charismatic influence. Training for charismatic effect included things like articulating a vision, making value appeals, writing an autobiography, using metaphors, analogies, and stories, and speaking positively about one's own abilities. The 102 students from the other school watched the videos of the pupils studying business giving their presentations as the talks were shot. It is consistent with the results of Katou et al. (2009) that they discovered some evidence indicating the effectiveness of spectacular persuasion training on the behaviour and attitudes of the persons who viewed the videotapes.

Another area that is now receiving a lot of attention is the issue of human instruction for the aviation sector. Due to the fact that it has been known since the late 1970s that human error is one of the leading causes of crashes in aircraft (Kehoe, et al. 2013), this area of research is very important. According to a qualitative review of the aviation human factor training literature that was conducted by Kehoe et al. (2013), safety and collaborative training sessions result in (a) safety-related advantages such as a rise in lost time due to complications, and (b) teamwork-related benefits, such as improved team performance.

These benefits can be broken down into two categories: (a) safety-related benefits; and (b) teamwork-related benefits. Training for teams seems to be a necessary intervention owing to the frequency of errors associated to safety in fields such as aviation and medical care as a result of poor collaboration among teammates (e.g., Morey et al. 2002, Salas et al. 2001). These errors are caused by a lack of communication between members of the team. 65 different groups of four participants each took part in the experiment that was carried out by Ellis et al. (2005).

Participants in this interactive command and control exercise-maintained vigil over a geographic region and defended themselves against attacks from the ground and the air. Training led to an increase in the declarative knowledge of the members of the team, which resulted in the members being more capable to function together to find solutions to issues and exchange information in new circumstances.

Training in crew resource management, often known as CRM, is the most common kind of intervention used to improve the communication and performance of teams. Customer relationship management (CRM) training is intended to shape the attitudes of flight crews for the purpose of the safety of passengers and the aircraft itself. This kind of training, which is often carried out with the assistance of cutting-edge flight simulators, covers a variety of topics, some of which include communication, teamwork, decision-making, and awareness in relation to accidents and incidents, as well as the role that human error plays. Flight attendants working for an airline based in eastern Europe received instruction in customer relationship management from Montreal et al. (1996).

As a consequence of training, aircrews' nontechnical talents, such as team building, as well as their situational awareness and decision-making skills, were significantly improved, which ultimately led to an improvement in air safety. Both O'Connor et al. (2002) and Salas et al. (2001) carried out qualitative literature reviews of research that addressed CRM training. The former group looked at 48 studies, whereas the latter group looked at 58. Because these literature reviews included overlapping sets of primary research, it should not come as a surprise that their results converged on the idea that the majority of studies focused on the benefits in terms of attitudes and knowledge at the individual and team levels of analysis.

Benefits such as improved mindsets towards training, familiarity with concepts for cooperation, as well as greater communication and performance among members of an aircrew have been proven. A more recent qualitative review was carried out by Salas et al. (2006). This assessment encompassed CRM studies on cockpits in addition to other contexts like aircraft maintenance and healthcare. It looked at 28 articles that were published after the first study carried out by Salas et al. (2001). In the areas of trainee learning and on-the-job conduct, the results were inconsistent; nevertheless, Salas et al. (2006) demonstrated that CRM training had a positive influence on trainee replies. In one study, Jacobsen et al. (2001) found that learners had a high degree of awareness of the situation and often communicated.

Despite this, trainees had trouble spotting medical issues, and no member of the team took the lead or was assigned duties. The aviation business has been employing customer relationship management for a far longer period of time than the healthcare industry has. Enhanced performance is one of these benefits, as is the development of talents that either directly or indirectly contribute to that performance in some way. Research on the beneficial benefits that training has on companies is going to be covered in the next section.

Fewer than five percent of training programmes are evaluated for their financial advantages to the organisation (Boyatzis, 2001). Companies with a solid reputation for employee development are a different story altogether. Organisational effectiveness is one area where most companies track the results of their training efforts (Paradise 2007, Rivera & Paradise 2006).

Improvements in productivity, sales, and profitability are typical indicators of organisational success in the second group. Overall, the literature on individual and team advantages is far more robust than that on organisational ones. Self-report data and an ambiguous causal relationship back to training activities are common in the few empirical studies that have been conducted indicating organizational-level influence (Burke et al., 2007).

Only around 5 percent of training programmes are evaluated based on the money they save the company (Boyatzis, 2001). Companies with a solid reputation for employee development are a different story altogether. Organisational effectiveness is one area where most companies track the results of their training efforts (Paradise 2007, Rivera & Paradise 2006). Improvements in productivity, sales, and profitability are typical indicators of organisational success in the second group. Overall, the literature on individual and team advantages is far more robust than that on organisational ones. Self-report data and an ambiguous causal relationship back to training activities are common in the few empirical studies that have been conducted indicating organizational-level influence (Tharenou et al., 2007).

Caldwell et.al. (2002) define career development as "the process by which an individual creates a career pattern, decision-making style, integrated life roles, value expression, and life-role self-concepts" (p.15). When organisations invest in their employees' professional growth, they strengthen the bond between the company and its workers while also raising productivity (Colbert et al., 2014). According to McGraw (2014), an individual's competence and productivity may benefit greatly from well-implemented career management systems. Scholars such as Egan et al. (2004), Farina and Wheaton (2005), and others have shown that redefining success in the workplace in a more inclusive manner may have a good effect on both employee happiness and loyalty to the company. Organisational participation in individual career planning is often justified on the grounds that doing so decreases employee uncertainty, aids in planning, and ultimately benefits people (Granrose & Portwood, 1987). Therefore, we hypothesise that the career development activities of an organization's employees improve the organization's competitive advantage.

The research by Sahoo has theoretical implications for HRD and OE connectivity, and it was undertaken in an Indian setting. We looked at the workers instead of the designers and strategists who had been the focus of previous empirical and theoretical studies. Our research supports the predictions of Guzzo et. al (2014) and Kehoe and Wright (2013), who postulated a causal link between HRD interventions and improved employee competence. When it comes to the notion of employee competences for organisational performance proposed by Hassi, and Storti, (2011), our conceptual model stands out since it provides empirical validation.

Conclusion

Although they often conversed with one another and were typically aware of their surroundings, the trainees struggled to detect conditions and situation, and no one assumed leadership or delegated work. In one Indian company, CRM has been used in the aviation business far longer than it has in the healthcare industry. Among these advantages are enhancements in performance as well as the development of abilities that either directly or indirectly affect performance (such as creative and tacit talents, adaptive knowledge, technical expertise, self-management, and intercultural competence, for example). The consideration of research that demonstrate the advantages of training for businesses will come next.

Companies that have a history of fostering and supporting employee development are an exception. Most firms gauge the effectiveness of their training programmes by how well they function as a whole. Increases in productivity, sales, and profits are often used to gauge organisational performance in the second category. Individual and group benefits have received significantly more attention than organisational advantages. Few empirical studies have been conducted to demonstrate an organizational-level impact, and those that have tended to depend on self-report data and a shaky causal relationship back to training activities.

Players stood watch over an area in this dynamic simulation of command and control, defending against aircraft and ground attacks. Training boosted the team's capacity to solve issues and convey information in unfamiliar circumstances, which raised the members' declarative knowledge. Training in crew resource management, often known as CRM, is the most common kind of intervention used to improve team communication and performance. Customer relationship management (CRM) training may help flight attendants improve their attitudes towards passengers and the aircraft itself. Communication, teamwork, decision-making, and awareness of accidents and incidents, as well as the role of human error, are just a few of the topics addressed in this kind of training, which is often conducted using cutting-edge flight simulators.

The majority of businesses monitor the effects of their training efforts in the area of organisational effectiveness. For the second category, increases in productivity, revenue, and profitability are typical signs of organisational success. Overall, there is far more research on team and individual benefits than there is on organisational ones.

As a result, our work contributes to the literature on organisational efficiency by providing evidence for a theoretical model. In the lack of a single validated scale, the current research contributes by merging a number of existing measures to assess personnel competence in OE. Therefore, we feel that we have made a significant theoretical addition to the current HRD-OE linking literature by answering the research questions and experimentally testing a hypothetical model.

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