

**CRITICAL FACTORS INFLUENCING HUMAN
RESOURCE TRAINING EFFECTIVENESS IN
PAKISTAN'S HIGHER EDUCATIONAL
SECTOR**

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CRITICAL FACTORS INFLUENCING HUMAN RESOURCE TRAINING
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ABSTRACT

In the era of rapid technological advancement, organizations increasingly adopt new technologies, underscoring the need for skilled human resources. The quality of education in higher education institutions heavily relies on the qualifications and abilities of human resource staff, making their learning and development a critical priority. Despite significant investments in human resource training, evaluation of these programs is often lacking, limiting the ability to assess their effectiveness. This research evaluates training effectiveness using first two levels of Kirkpatrick's model of training evaluation (1959) and identifies key factors the model overlooks, particularly in the Asian context. The study focuses on the influence of training and individual factors on outcomes like reaction and learning and examines the moderating role of organizational and work environment factors. The study used a quantitative, cross-sectional survey approach with a positivist philosophy and applied a stratified random sampling approach to ensure equal gender representation. A quantitative survey of 655 trainees of Human Resource Capacity Building Program, analyzed using SPSS for descriptive statistics and exploratory factor analysis, and AMOS for structural equation modelling, revealed that training factors significantly impact reaction outcomes, while individual factors are more critical for learning outcomes. Organizational and work environment factors partially moderate the relationship between individual factors and training effectiveness. The findings provide valuable insights for HR professionals, training departments, and stakeholders, encouraging them to design training programs that closely mirror job requirements and involve hands-on applications to help trainees apply new skills effectively in the workplace. The study highlights the importance of peer and organizational support in achieving positive training outcomes and calls for further research within Asian organizations that are investing in and anticipating positive results from their training programs, despite its methodological limitations and scope constraints.

Keywords: Training effectiveness, critical individual factors, critical training factors, training learning, training reaction

APPROVAL

This is to certify that this thesis conforms to acceptable standards of scholarly presentation and is fully adequate, in quality and scope, for the fulfilment of the requirements for the Degree of Doctor of Philosophy.

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DECLARATION

I hereby declare that the thesis submitted in fulfilment of the PhD degree is my own work and that all contributions from any other person or sources are properly and duly cited. I further declare that the material has not been submitted either in whole or in part, for a degree at this or any other university. In making this declaration, I understand and acknowledge any breaches in this declaration constitute academic misconduct, which may result in my expulsion from the programme and/or exclusion from the award of the degree.

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LIST OF ABBREVIATION

TVET	Technical and Vocational Education and Training
OECD	Organization for Economic Co-operation and Development
UNESCO	United Nations Educational, Scientific and Cultural Organization
HEC	Higher Education Commission
HEIs	Higher Education Institutions
UGC	University Grants Commission
NAHE	National Academy of Higher Education
CB	Capacity Building
CPD	Continuous Professional Development
ISO	International Organization for Standardization
OSHA	Occupational Safety and Health Administration
CIRO	Context, Input, Reaction and Output
CIPP	Context, Input, Process and Product
ROI	Return on Investment
HRD	Human Resource Development
HR	Human Resources

SCM	Success Case Method
ATD	Association for Talent Development
HCT	Human Capital Theory
SCT	Theory of Social Cognitive
AMO	Ability, Motivation and Opportunity Theory
TRA	Theory of Reasoned Action
TPB	Theory of Planned Behavior
MT-FPDP	Master Trainer Faculty Professional Development Program
TF	Training Factors
IF	Individual Factors
OF	Organizational Factors
WEF	Work Environment Factors
SPSS	Statistical Package for the Social Sciences
AMOS	Analysis of Moment Structures
CFA	Confirmatory Factor Analysis
SEM	Structural Equation Modelling
VIF	Variance Inflation Factors

EFA	Exploratory Factor Analysis
PCA	Principal Component Analysis
ANOVA	Analysis of Variance
GOF	Goodness of Fit
AVE	Average Variance Extracted
MAR	Missing at Random
MACR	Missing Completely at Random
CR	Critical Ratio
Q-Q	Quantile-Quantile
P-P	Probability Plot
K-S	Kolmogorov and Shapiro Test
SMC	Squared Multiple Correlations
KMO	Kaiser-Meyer-Olkin
ML	Maximum Likelihood
GFI	Goodness of Fit Index
CFI	Comparative Fit Index
AGFI	Adjusted Goodness of Fit Index

NFI	Normed Fit Index
PNFI	Parsimony Normed Fit Index
PGFI	Parsimony Goodness of Fit Index
RMSEA	Root Mean Square Error of Approximation
MI	Modification Indices
DF	Degrees of Freedom
CR	Construct Reliability

CHAPTER 1

INTRODUCTION

The first chapter laid the foundation by introducing the research problem, framing the objectives, and outlining the structure of the dissertation. It begins with a detailed overview of the importance of human resource training and challenges in the effective evaluation of training programs, providing the necessary background to understand the importance of this research in both theoretical and practical contexts. This includes a review of the historical evolution of the topic, its current state in academic discourse, and its relevance to contemporary challenges faced by scholars, practitioners, and policymakers. By tracing the critical factors for evaluation of the training effectiveness outcomes, this chapter emphasizes the gaps in existing literature and demonstrates the necessity of addressing these issues in a comprehensive manner.

Subsequently, the research questions and objectives are clearly articulated, guiding the trajectory of the study. The questions are formulated to bridge the identified gaps and to explore unexplored dimensions of the topic, ensuring that the research remains focused and contributes new insights to the field. These objectives are aligned with broader academic goals and practical implications, ensuring that the outcomes of this research can be applied in real-world settings and can inform future studies in related areas.

This chapter also introduced the methodological approach, providing a rationale for research design, data collection, and analysis methods. The chosen methodology is not only appropriate for the nature of the study but also ensures robustness and rigor in addressing the research questions. A brief discussion on the scope and limitations of the study is presented, acknowledging the constraints while reinforcing the significance of the findings.

Finally, the chapter concludes with an outline of the structure of the dissertation, offering the reader a roadmap for the analysis that follows. Each chapter is summarized, providing a snapshot of the key themes and arguments that will be explored, ensuring coherence and continuity throughout the dissertation. This overview also highlights the logical progression of the research, from the initial theoretical framework to the concluding discussion, where implications, recommendations, and potential areas for future research are drawn.

1.0 Background of Study

In an era of rapid technological developments, all indicators reveal that technological innovation will continue to speed up in the future (Wai, 2022; Tkachenko et al., 2022; Febrian & Solihin, 2024). It is clear that a person must be able to adapt in order to tackle new problems in a rapidly changing environment (Mojumder, 2021). The economy of the twenty-first century is knowledge and technology-based, highly informational, and attentive to society and the environment (Shibiti, 2022; Bhat, 2024). Specifically, as technology advances, the nature of work activities continue to change, necessitating the acquisition of new knowledge and abilities by human resource working in the organizations in order to fulfill their roles (Daniëls et al., 2021).

To meet the challenges of the changing world and for building a skilled and competent human resource, the demand of today's economy is a responsive society (Akther & Rahman, 2021; Blanchard & Thacker, 2023). From the global perspective, for the economic development of underdeveloped and developing countries, the role of higher education is very significant, more aligned, and imperative with economic and social demands (Jain, Sharma, & Shrivastava, 2021). Although primary and secondary education has an important share in the nation-building process, it is higher education that expedites in safeguarding the national philosophy, values, principles,