

Chapter 11

Designing Just Reskilling Pathways for AI-Driven Logistics Transformation

Nguyen Vu Thao Huynh

 <http://orcid.org/0009-0002-2238-2313>

RMIT University, Vietnam

ABSTRACT

Reskilling is often presented as a positive response to AI-driven change in logistics, assuming workers can easily move from routine tasks to digital and AI-related roles once training is offered. This chapter argues that such assumptions are incomplete. Reskilling is not only a technical issue of training design but also a socio-political process shaped by organisational priorities, unequal learning support, and workers' access to opportunity. Drawing on a case study of a logistics organisation, the chapter shows that workers began reskilling from unequal starting points. Outcomes were shaped by workload, digital confidence, education, supervisory support, scheduling flexibility, language ability, and assumptions about who was considered "trainable." As a result, reskilling benefits were unevenly distributed: some workers moved into more secure analytical roles, while others remained excluded from these gains. The chapter proposes an equity-oriented reskilling model to explain these unequal outcomes.

1. INTRODUCTION

Artificial intelligence is reshaping logistics at once operationally, organisationally, and socially. The sector has become a central arena for AI deployment because it combines data-intensive flows, time-critical decision-making, and enduring pres-

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sure to improve cost efficiency, visibility, resilience, and service performance. AI is now increasingly integrated into demand forecasting, route optimisation, warehouse orchestration, inventory planning, supplier coordination, customer service, document processing, and predictive maintenance. This expansion has led both practitioners and scholars to argue that the future of logistics will not be defined simply by labour replacement, but by the reorganisation of work into new forms of human–AI complementarity (Richey Jr et al., 2023; Samuels, 2025; Riad et al., 2024). Within this framing, reskilling has become a dominant policy and managerial response: workers whose roles are altered by automation are expected to acquire new competencies, adjust to AI-enabled workplaces, and transition into jobs centred on interpretation, judgement, exception management, cross-functional coordination, and digital oversight.

At first sight, this emphasis on reskilling appears both reasonable and progressive. If AI transforms work, then workers should be supported in learning; if logistics requires more digitally capable employees, then training systems should evolve accordingly. A growing body of research on workforce readiness, future competencies, and human–AI collaboration reinforces this position by advocating continuous capability renewal, more agile learning systems, and proactive organisational investment in upskilling and reskilling (Li, 2024; Tenakwah and Watson, 2025; Asiedu and Tenakwah, 2025; da SILVA, 2025). Recent review studies likewise show that reskilling has become central to governmental, higher education, and corporate responses to digital transformation and AI disruption (Ersanlı et al., 2025; Shimray and Subaveerapandiyan, 2025; Vuc et al., 2025).

Yet the dominant discourse on reskilling carries an important limitation. It often treats reskilling as a neutral and universally available good, presuming that workers will benefit from training so long as organisations provide the appropriate programmes. Such an assumption masks the unequal realities of technological transition. Workers do not encounter AI transformation from equivalent starting points: they differ in educational background, contract security, language ability, technological familiarity, time availability, caregiving responsibilities, health conditions, and managerial recognition. Organisations, moreover, do not distribute training opportunities in an even or impartial manner. Decisions regarding who is selected, which roles are prioritised, what forms of learning are valued, and how much support is provided are shaped by power relations, cost considerations, performance pressures, and strategic priorities. Under these conditions, reskilling can function not only as a mechanism of adaptation, but also as a process of sorting, stratification, and exclusion.

This issue is particularly acute in logistics. Logistics firms often operate with layered occupational hierarchies, strict time discipline, performance metrics, variable scheduling, and segmented workforces spanning warehouse operators, drivers, clerical

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