

Project Summary for IAL Website

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Project Title:	From classroom training to workplace practice: Understanding workers' learning motivation, skill acquisition and skill utilisation in the context of Continuing Education and Training (CET)
Project Number:	GA19-01
Year of Approval:	2020
Funding Source:	WDARF
Objectives and intended outcomes of the project:	The current research aims to examine (1) the influence of individual and workplace situational factors on workers' learning, skill acquisition and skill utilisation before and after completion of a CET course; and (2) whether a more structured workplace learning support system following classroom-based training may increase the likelihood of skill utilisation by the individual workers. Findings of this research could provide insights into more effective design of CET curriculum as well as workplace learning support system to promote workers' lifelong learning and organisational effectiveness.
Project Team	
Principal Investigator:	Dr Lee Ai Noi
Summary of Project (up to 300 words)	
Continuous education and training (CET) opportunities available to workers is crucial to ensure a relevant and resilient workforce. However, previous research has found that skill acquisition from classroom training may not always be effectively transferred to the workplace settings. This could be due to individual and workplace situational factors which may affect workers' learning motivation, skill acquisition and utilisation. Using a three-time point design of data collection and targeting a sample of 400-600 workers from different sectors/industries who attend CET courses in Singapore, this study aims to examine the influence of individual and workplace situational factors on workers' learning motivation, skill acquisition and skill utilisation before and after completion of a CET course. It also aims to examine whether a more structured workplace learning context could increase the likelihood of individual skill utilisation. The research is aligned with WDARF research thrusts: 'Enabling and Sustaining Economic Performance through Workforce Development/Skills' and 'Shaping Employment and CET Decisions of all Stakeholders'.	

Summary of Project Findings, Deliverables and Impacts (up to 500 words)

In Singapore, Continuing Education and Training (CET) plays a vital role in equipping workers with relevant skills to enhance workforce resilience. However, research has shown that learning acquired through CET may not always transfer effectively to the workplace due to individual and contextual barriers. Therefore, this project examined (i) workers' learning motivation, skill acquisition, and skill utilisation before and after the completion of a CET course, (ii) whether a more structured system of workplace learning support following classroom training increases the likelihood of skill utilisation, and (iii) how individual and workplace situational factors influence learning motivation, skill acquisition, and utilisation. Using a three-timepoint design, 390 workers (after data cleaning) from diverse industries in Singapore completed questionnaires before, immediately after, and three to four months post-training. Generally, results showed a significant increase in perceived skill acquisition from pre- to post-training, but no sustained gains or significant improvement in skill utilisation after three to four months. This suggests that while workers felt they learnt from CET, application at work was limited likely due to lack of opportunity, support, or motivation. Further analysis showed no significant differences in outcomes between workers with high vs. low perceived workplace learning support (PWLS). However, low-PWLS workers reported greater perceived learning gains, possibly indicating that training served as a key learning source in the absence of workplace support, though this did not translate into higher skill utilisation. The study also explored predictors of transfer motivation and skill use. Perceived workplace learning support predicted motivation to transfer, which in turn predicted skill utilisation and change readiness. Creative growth mindset predicted both autonomous and controlled motivation to transfer learning, while creative fixed mindset only predicted controlled motivation to transfer learning. Both mindsets influenced skill transfer indirectly via motivation to transfer. These findings highlight the need to foster both internal and external enablers of learning transfer, including intrinsic (e.g., autonomy, encouragement) and extrinsic (e.g., rewards, recognition) workplace supports. Organisations should establish intentional structures to support workplace learning, such as learning needs analysis, mentoring, post-training support, and incentives for applying new skills. This is especially critical in today's innovation-driven economy, where ongoing learning is essential for competitive advantage. As the data was collected during 2021–2022, marked by significant workplace disruptions due to COVID-19, conditions may have been less conducive for skill transfer; hence, further research is needed to explore personal and contextual factors affecting skill application.

Key Deliverables and Impact: This research led to the development of a brief scale to assess skill acquisition and utilisation across three timepoints, with potential for further validation and use by CET providers and workplace learning professionals to evaluate training effectiveness. Project findings have been shared with both international and local audiences (including scholars and practitioners) through six international conference presentations and a local webinar. The project also resulted in one journal paper, five book chapters and one scholarly book publication. Additionally, it supported the supervision of a doctoral student, strengthening research capacity in lifelong learning and workforce development.