The Workforce Development Applied Research Fund (WDARF) Grant Call Singapore - 2024

RESEARCH FOCUS

Contents

PREFACE

The landscape of workforce development has undergone profound transformation in recent years.

At the forefront of this change is the rapid advancement of technology. The rise of automation and generative artificial intelligence (AI) has redefined industries and created, new possibilities for innovation and productivity. There is a shift in demand towards a workforce skilled in digital proficiency and capable of collaborating with sophisticated technologies. With the rapid pace of skills obsolescence and technology deployment at the workplace, many of the jobs today will not exist in 2030. A list of reports on the recent developments in the area of workforce development and lifelong learning is attached in Annex A.

The COVID-19 pandemic has altered the global landscape, forcing a re-evaluation of traditional paradigms, to reshape how we work and learn. Remote work and flexible work arrangements have become a permanent fixture in the modern Singapore workplace, providing employees with a greater autonomy and work-life balance. Imposed by the pandemic, employees are required to adopt new modes of communication and digital collaboration tools, highlighting the critical need for reskilling and upskilling initiatives, enabling workers to transition into new roles and industries.

The adult educational landscape has similarly adapted to these changes. Lifelong learning has become a cornerstone of professional development, as continuous learning is essential to keep pace with rapidly changing job requirements. The pandemic accelerated the adoption of online education and training platforms, making learning more accessible and flexible, thus supporting the evolving needs of workforce development.

Demographic shifts also play a pivotal role in shaping workforce development. Many countries including Singapore are grappling with an aging workforce, necessitating strategies to retain older employees and facilitate the transfer of their knowledge to younger generations. There is growing emphasis on diversity and inclusion in the workplace that requires organizations to create inclusive environments and provide opportunities through specific training and development programs.

The dynamic nature of the workforce landscape highlights the need for robust strategies to upskill and reskill workers. As Singapore's Minister for Education, Mr Chan Chun Sing, aptly stated at the SkillsFuture Festival in 2023, "With frequent tech disruptions, shortened half-life of skills and knowledge, and new job roles emerging everyday – our workforce must retool, at scale and at speed."

To address workforce development challenges, the SkillsFuture national

movement was launched in 2015 to provide Singaporeans with opportunities to develop their fullest potential throughout their life, regardless of their starting point. The next bound of SkillsFuture aims to further this provision, through key initiatives as follow:

    a.   Strengthen the enterprise pillar of the skills ecosystem;

    b.   Enhance workplace learning capabilities;

    c.   Scale up SkillsFuture work-study pathways;

    d.   Encourage and facilitate lifelong learning; and

    e.   Scale up career transition programmes for mid-career workers.

To proliferate research relevant to realise the key initiatives of the next bound of SkillsFuture, SkillsFuture Singapore (SSG) set up the Workforce Development Applied Research Fund (WDARF), a national-level research fund that supports research to create a comprehensive knowledge base for evidence- informed policies and practices on workforce development and lifelong learning. This will in turn allow for the design of evidence-informed policies, programmes and practices and the evaluation of the effectiveness and impact of such policies, programmes and practices.

The WDARF Open Grant Call completed its first five-year tranche in 2020, with SGD$14.6m awarded to 33 projects across 7 institutions through grant calls. The current five-year tranche of WDARF will run from 2021 to 2025, with SGD10m. WDARF's key themes have been reviewed and updated to ensure that they keep pace with developments in Continuing Education and Training (CET), and jobs and skills research. To be considered for funding through the WDARF, researchers' proposed projects can seek to address any of the Challenge Statements or align to the key research themes. For emerging topics related to CET, adult learning and workforce development, they may only be considered on a case-by-case basis. For projects in one of the three key research themes, researchers are encouraged to develop research proposals to address one or more of the research questions indicated in the following pages.

RESEARCH FOCUS

- **Research Theme A: Developing Effective Adult Learning Pedagogies, Skills Development and Enterprise Engagement Strategies**

This research theme focuses on enhancing the effectiveness and impact of adult learning and skills development approaches, via technology, improved andragogy and innovations in both learning and practice. Given that training and learning are also situated within the evolving needs of industry and the economy, research under this thrust should also consider the role of enterprises and their partnerships with training providers in developing and contextualising teaching and learning approaches.

Sub-Themes under Research Theme A:
1. Improving training participation, engagement and outcomes through effective learning design and delivery model
2. Enhancing and promoting the adoptions, including technology in adult learning and workplace learning of skills recognition systems
3. Developing adult educators for effective adult learning curriculum development and facilitation
4. Strengthening partnerships with enterprises to enable a responsive skills ecosystem

Key Interests / Priority Questions in Research Theme A:
a. What are the ROIs and implications for SMEs that invest in workplace learning and how can they be supported (i.e. affordances) to invest in CET?
b. Which communication strategies are most impactful in conveying the long-term benefits to SMEs?
c. What are the various training modalities and approaches that can effectively address the specific challenges of SMEs (i.e. archetype, size, industry)?
d. What are the diverse barriers and priorities that prevent SMEs from supporting workplace, and how can interventions be tailored to address the specific needs and constraints of different SME profiles, including variations in size and industry?
e. How can we understand SME archetypes (portfolios of TPs and SMEs) better to

help guide training needs?

- **Research Theme B: Facilitating Learning and Career Choices among Adult Learners**

This research theme identifies the key factors influencing CET decisions and those related to career and employment, including the understanding of cognition, emotion and behaviours of all stakeholders concerned (i.e. individuals, employers, educators, career facilitators, policymakers). Cultural and socio-environmental factors, and the varying needs and differences among different adult learner groups (such as mature and vulnerable adult learners) including aspects of accessibility, adaptability and appropriateness should also be considered.

Sub-Themes under Research Theme B:
1. Enhancing and promoting lifelong learning and career resilience
2. Developing differentiated learning and career support for identified groups (e.g. mid-careerists, older workers/seniors, persons with disabilities, self-employed persons)

Key Interests / Priority Questions in Research Theme B:
a. What are the prevalent attitudes and beliefs among mid-career workers regarding the importance of continuing education, and how do these attitudes differ across industries and sectors?
b. How can individuals be empowered to take purposeful ownership of their career health throughout the trajectory of their working life?

- **Research Theme C: Enhancing Employment Outcomes through Adult Learning and Skills Development**

This research theme aims to generate insights and provide recommendations for sustaining Singapore's competitive advantage in the global economy through adult learning and skills development that enables Singaporeans to access good jobs, earn good wages and stay employable. Research should be directed at examining emerging jobs and skills, returns and other benefits of skills development strategies, and exploring interventions (e.g. behavioural insights, financial and non-financial incentives) to guide locals towards better leveraging of learning and better employment outcomes.

Sub-Themes under Research Theme C:
1. Identifying emerging and future skills needs (e.g. including impact of digitalisation on the future of work) and adapting policies to support these needs
2. Optimising employment outcomes from skills development and training strategies
3. Enhancing CET incentives and interventions to promote up/re-skilling efforts
4. Evaluating the effectiveness and impact of CET interventions on enterprises and individuals

Key Interests / Priority Questions in Research Theme C:
a. What types of incentives, both tangible and intangible, are most influential in encouraging meaningful partnerships between SMEs and training providers within the CET ecosystem?
b. How effective are the current incentive structures in encouraging meaningful partnerships within the various ecosystem entities?
c. What methodologies and systems are most effective in tracking and measuring outcomes of CET initiatives?
d. How do different stakeholder groups perceive the outcomes of training and the current method and efficacy of communicating them?
e. What factors contribute to the successful establishment and maintenance of an active learning/community network within the SME CET ecosystem?

CHALLENGE STATEMENTS

- ### Challenge Statement #1: Overcoming barriers to participation

  How can we better understand barriers and motivations faced by specific learner groups, i.e. mature workers, non-degree holders, low-wage workers, persons with disabilities in participating in CET? Are there more learner groups facing significant barriers to participation in lifelong learning? How can we better support and encourage/nudge these groups to advance their skills/training development journey through signposting, incentives and government programmes, and/or enhanced education and career guidance or any other proposed means? What are some inventive ways we can adopt to overcome any barriers to participation in lifelong learning?

- ### Challenge Statement #2: Don't PET the CET

  What are the differences in learning and training approach between that for working adults and pre-employment training? What principles of learning and training apply well to working adults but not pre-employment students? Conversely, what pedagogical/andragogical principles can apply well to both demographics? What relevant pedagogical/andragogical approaches are we able to create which focus on honing the learning of working adults?

- ### Challenge Statement #3: Digitalising adult learning

  How do we define and measure "good" use of the digital medium for adult learning? What modes – synchronous/asynchronous; hybrid/single-mode; gamified etc. – are most effective under what circumstances? How may we best harness the digital means to strengthen adult learning?

- ### Challenge Statement #4: Every workplace a learning workplace

  What companies succeed in building a learning workplace for themselves? How can the rest be helped? What modes of workplace learning (e.g. OJT, WSP) work best under what circumstances? How may we best enhance workplace learning opportunities – formal, informal and non-formal – to make workforce learning a norm for all?

ANNEX A – LIST OF RECOMMENDED READING

Research Theme A: Developing Effective Adult Learning Pedagogies and Skills Development Strategies

World Economic Forum (2021). *Education and Skills.* Retrieved from
https://intelligence.weforum.org/topics/a1Gb0000000LPFfEAO?tab=publications
(Focuses on technology and innovation)

World Economic Forum (2020). *Jobs of Tomorrow: Mapping Opportunity in the New Economy.* Retrieved from https://www.weforum.org/reports/jobs-of-tomorrow-mapping-opportunity-in-the-new-economy
(Focuses on fast emerging professions)

International Labour Organisation (2021). World Employment and Social Outlook: Trends 2021. Retrieved from
https://www.ilo.org/global/research/global-reports/weso/trends2021/lang--en/index.htm
(Focuses on effect of COVID-19 pandemic on technological innovation)

International Labour Organisation (2021). The role of digital labour platforms in transforming the world of work. Retrieved from
https://www.ilo.org/global/research/global-reports/weso/2021/WCMS_771749/lang--en/index.htm
(Focuses on how the contemporary platform economy is transforming the way work is organized)

<u>Key Journals</u>
- □ Work and Occupations (https://journals.sagepub.com/home/wox)
- □ Journal of Industrial Relations (https://journals.sagepub.com/home/jir)
- □ The international Journal of Human Resource Management (https://www.tandfonline.com/action/showAxaArticles?journalCode=rijh20)

Research Theme B: Facilitating Learning and Career Choices among Adult Learners

Organisation for Economic Cooperation & Development (2021). Fostering a culture of lifelong learning. Retrieved from https://www.oecd-ilibrary.org/education/oecd-skills-strategy-latvia_cd9e1561-en
(Focuses on lifelong learning culture)

Organisation for Economic Cooperation & Development (2021). OECD Skills Outlook 2021: Learning for Life*, OECD Publishing.*
Retrieved from https://www.oecd-ilibrary.org/education/oecd-skills-outlook-2021_0ae365b4-en
(The report exploits comparative quantitative data to highlight the key role played by socio-emotional and motivational factors in shaping successful engagement with lifelong learning)

Deloitte Global Human Capital Trends (2019*). The Social Enterprise in a world disrupted* Retrieved from
https://www2.deloitte.com/us/en/insights/focus/human-capital-trends.html
(Highlights how social enterprise reinvents itself on the back of COVID-19 pandemic disruption)

Wales 4.0 (2019). *Delivering Economic Transformation for a Better Future of Work).*
Retrieved from: https://gov.wales/sites/default/files/publications/2019-09/delivering-economic-transformation-for-a-better-future-of-work.pdf
(Focuses on the Wales' strategies for economic transformation through digital innovations)

Key Journals
- ☐ Work, Employment and Society https://journals.sagepub.com/home/wes)
- ☐ Higher Education, Skills and Work-based learning
  (https://www.emeraldgrouppublishing.com/heswbl.htm)
- ☐ Journal of Vocational Behaviour
  (https://www.journals.elsevier.com/journal-of-vocational-behavior)

Research Theme C: Enhancing Employment Outcomes through Adult Learning and Skills Development

UNESCO Institute for Lifelong Learning (2021). Curriculum globALE: competency framework for adult educators Retrieved from
https://unesdoc.unesco.org/ark:/48223/pf0000377422
(A reference framework, Curriculum globALE, improves not only the standard of adult learning and education programmes but also the capacities of countries to meet the Sustainable Development Goals.)

World Economic Forum: Upskilling for Shared Prosperity. Retrieved from
http://www3.weforum.org/docs/WEF_Upskilling_for_Shared_Prosperity_2021.pdf
(provides a quantitative analysis of the impact upskilling can have on economic growth)

UNESCO Education Sector (2020). Adult learning and education and COVID-19 Retrieved from:
https://unesdoc.unesco.org/ark:/48223/pf0000374636
(Focuses on role played by ALE and its means of delivery, such as through ICTs for distance learning solutions, and community learning centres (CLCs), in supporting individuals and communities to rise to challenges such as those posed by the pandemic.)

Key Journals
- □ Journal of Workplace Learning (http://emeraldinsight.com/1366-5626.htm)
- □ Journal of Education and Work (https://www.tandfonline.com/toc/cjew20/current)
- □ Research in Learning Technology (https://journal.alt.ac.uk/index.php/rlt)
- □ Journal of Vocational Education & Training
  (https://www.tandfonline.com/loi/rjve20