
ADULT LEARNING XCHANGE
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PROFESSIONALS' LEARNING IN DIGITIZED WORKPLACES

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ADULT LEARNING

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Australian Research Council Discovery project titled: “Investigating Professional Learning Lives in the digital evolution of work” (DP210100164).

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Provocations

Learning fast is imperative for all workers

Most learning needs to be in the flow of work and predominantly self-directed

Apprenance is inevitable

Emerging contexts

- Intensification of digitization in workplaces
- Demands for efficiencies
- Emerging demands for new products and services to be delivered faster
- Rapid re-designing of work
- Fusion of work and learning
- Learning in the flow of work - Little dedicated time for learning

Project: Investigating professional learning lives in the digital evolution of work

Aim - to understand how professionals continuously learn and develop their knowledge, skills and dispositions throughout their careers, in evolving work contexts effected by digitalisation.

Research questions:

1. What are professionals' learning practices in evolving work contexts?
2. How are these learning practices enabled and constrained in professionals' workplaces?

Three phases:

- ***Phase 1:*** Scoping survey to identify what professionals do to continually learn as they work (2022).
- ***Phase 2:*** Qualitative case study research to examine in depth how professionals learn as they work (2023-2024).
- ***Phase 3:*** Detailed survey to identify professionals' learning practices at scale (2025).

Phase 1 Scoping Survey – Education & Health sectors

Purpose - to identify what professionals do to continually learn as they work.

Data:

- General demographics questions (including age, location, qualifications and professional role)
- Ways work is changing due to digitalization
- Ways technologies are used for learning while working
- What professionals do to learn individually and with others as they work and how they use technologies for learning while working.
- What workplace professional learning opportunities are provided for learning.

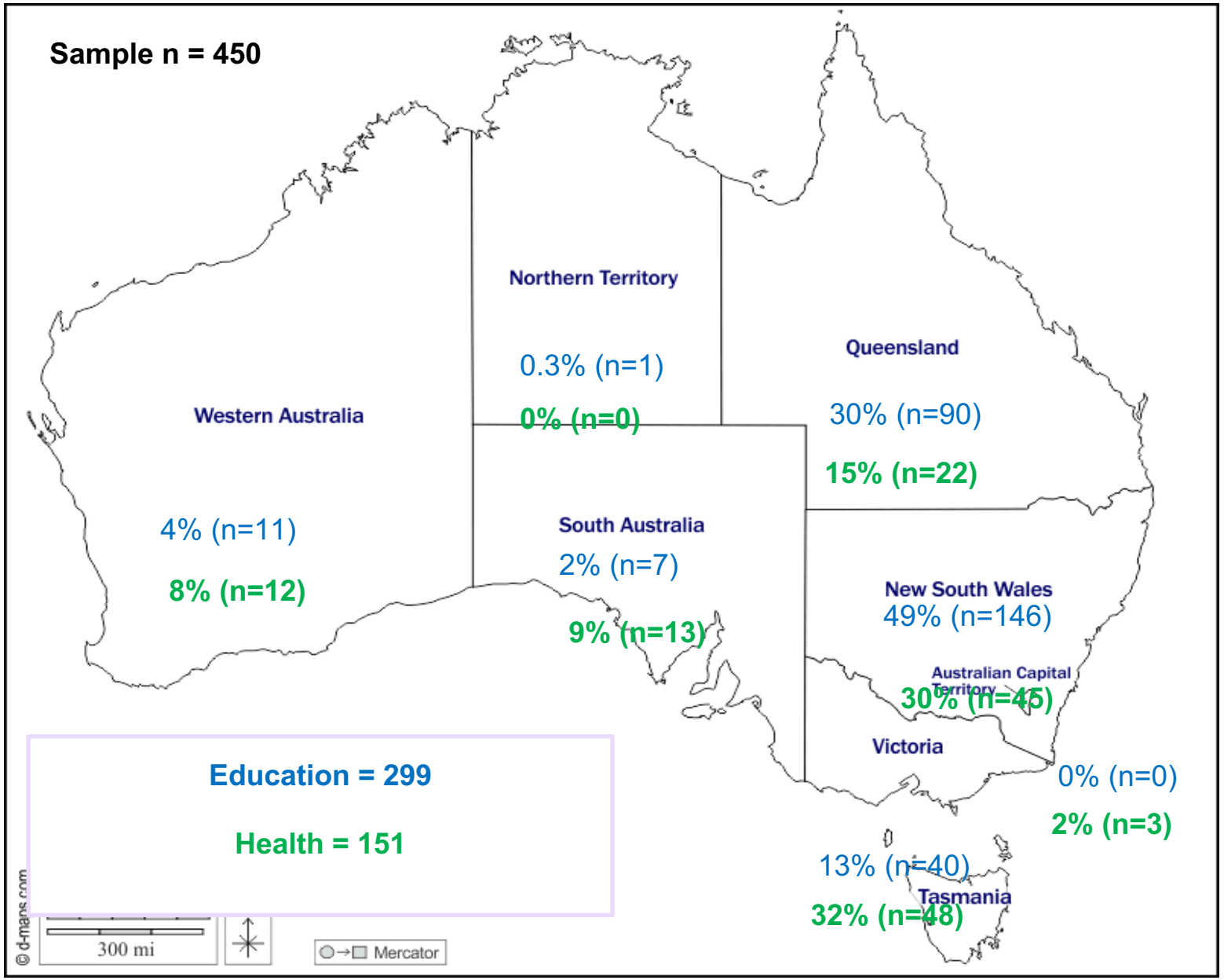
Sample n = 450
Northern Territory
0.3% (n=1)
0% (n=0)
Queensland
30% (n=90)
15% (n=22)
Western Australia
4% (n=11)
8% (n=12)
South Australia
2% (n=7)
9% (n=13)
New South Wales
49% (n=146)
Australian Capital Territory
30% (n=45)
Victoria
0% (n=0)
2% (n=3)
13% (n=40)
32% (n=48)
Tasmania
1% (n=4)
5% (n=8)
Education = 299
Health = 151
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Figure 1 Roles of respondents across schools

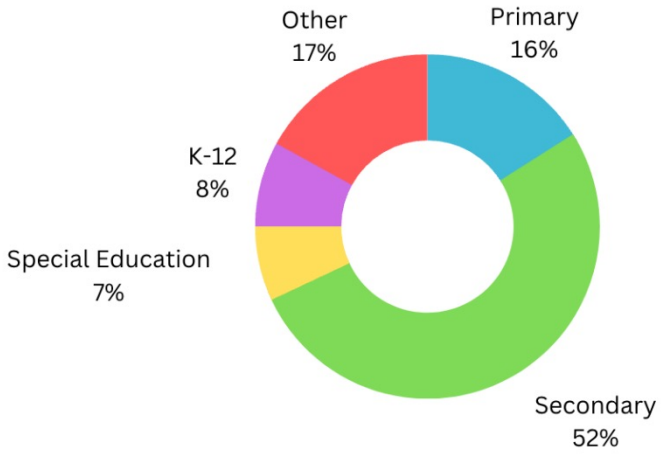
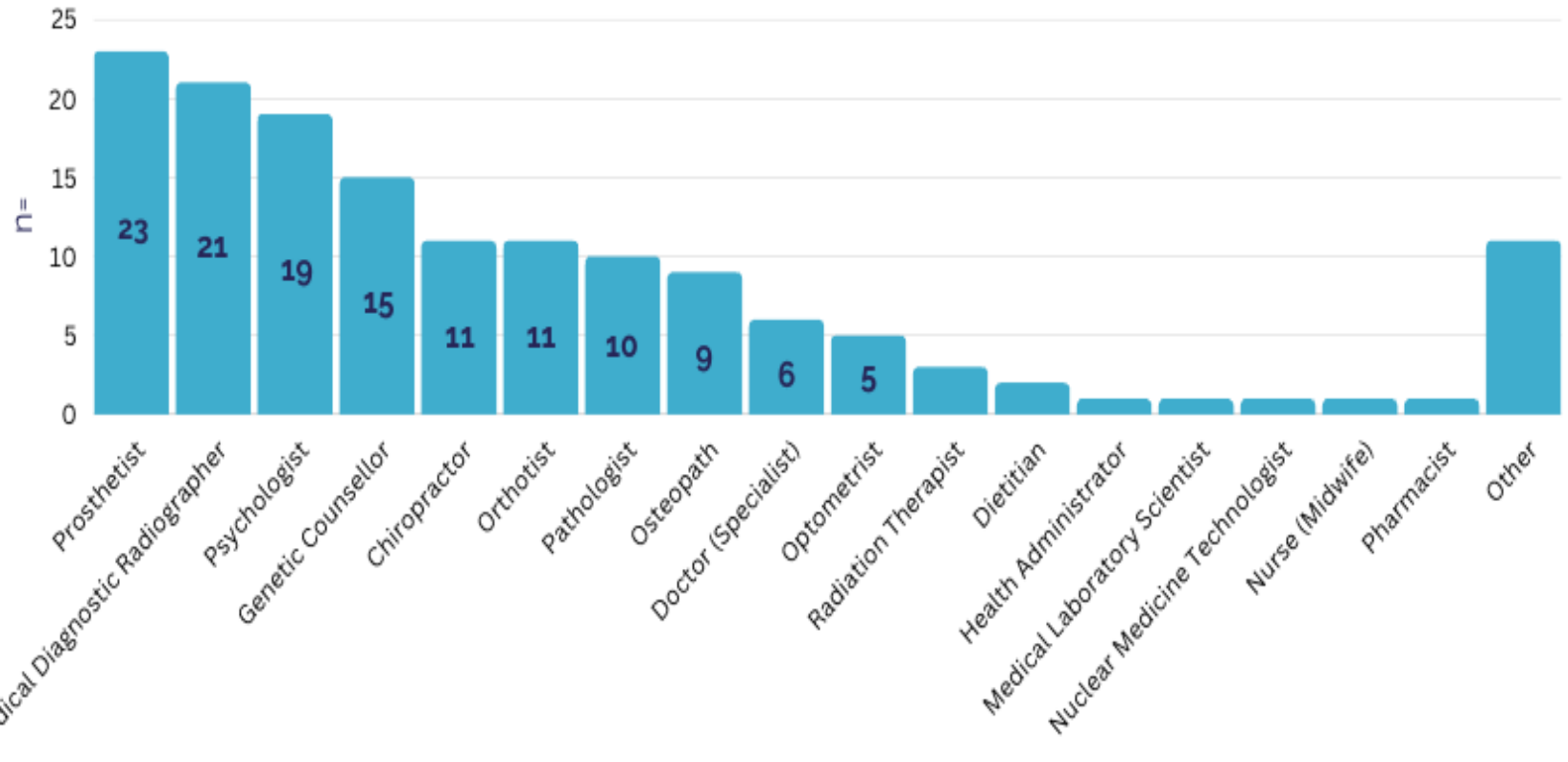


Figure 2 Roles of respondents across the health professions



Education – 75% female, 25% male
Health – 68% Female, 32% Male

Top 5 ways work is changing due to digilization

Education (n = 299)	Ranking
Curation, creation and management of online resources [curriculum and resources]	1 (44%)
Online meetings [Skype, zoom, teams etc]	2 (34%
Communication - colleagues, students, parents, school community, professionals, other stakeholders – within and outside school hours [online, synchronous, asynchronous – extends the work boundaries and times] Increase in administration, expectations, communication speed	3 (19%)
Lesson delivery [Blended, hybrid modes]	4 (16%)
Professional development - more flexible [online, self-paced, formal, informal]	5 (13%)

I feel overconnected

Feel like you are always ‘on’

There has been a steady increase in workload as there is an **<u>expectation</u>** that we are **contactable 24/7**

Top 5 ways work is changing due to digitalization

Health	Ranking
Access to information & learning ... access, store, document or share information, education and training opportunities. This also includes discussions of how this applies to patient information, and their own learning	1 (24%)
Digitally-enabled communication & collaboration ... with patients, colleagues and/or supervisors, meet online and work remotely or across multiple sites.	2 (23%)
Advancement in medical diagnostics & procedures ... discuss improvements, increased efficiency or 'new ways' of diagnosing or delivering medical care/procedures to patients.	3 (22%)
Telehealth & Virtual Consultation ... provide virtual consultations to patients over the phone or via video call.	4 (21%)
Administrative tasks & automation ... support administrative tasks such as reviewing patient information, ordering products, typing reports, applying for funding, processing/delivering prescriptions, and social media/marketing.	4 (21%)

Acceptability (public, professionally and in workplace culture) of **remote work/WFH/telehealth**

Enhanced **time management, diagnostic capabilities and...storage** (how I manage my own data).

Attend **many more work-related meetings**...participate in **more teaching sessions** for my registrars and **attend virtual conferences**

Better **integration of digital technology into everyday practice**, **better communication** with staff

Top 7 (of 18) ways technology is used for learning while working

Education professionals	(n = 299)	Health professionals	(n =151)
i) Search the internet and/or institutional knowledge bases for information.	1 (76%)	i) Search the internet and/or company knowledge bases for information	1 (77%)
ii) Share information online with colleagues	2 (56%)	ii) Search databases and/or online journal repositories	2 (44%)
iii) Collate online information relevant to work	3 (47%)	iii) Access online self-study materials	3 (39%)
iv) Collect examples of work tasks in online folders for future reference	4 (46%)	iv) Collate online information relevant to work	4 (37%)
v) Access online self-study materials	5 (44%)	v) Communicate online with experts and colleagues outside of their physical workplace	5 (33%)
vi) Communicate online with experts and colleagues outside of my physical workplace	6 (42%)	vi) Share information online with colleagues	6 (32%)
vii) Create online content for myself and/or others to use	7 (40%)	vii) Attend online conferences	7 (31%)

Other examples of ways technology is used for learning while working - Education

Learning activities	Quotes
Engage in professional development	“Conducting professional learning forums for staff at my school.” “Webinars and exchange around the world with different societies” “Twitter …[for] quick bites of new knowledge and great people who share them.”
Collaborate as a team	“I study with others using online tools like Teams and Zoom.” “We use online groups to target action research as a collaborative approach to learning...”
Develop & distribute learning resources	“To film teaching and learning moments for reflection by staff.” “I produce a fortnightly podcast on education, which allows me to speak directly to researchers and leaders in education.” “I have my own websites that I share professional learning, teaching tips, resources for each subject etc.” “… using Google sites as a repository of information for students and Google Classroom for current class work”
Support & engage learning of students	“Using new forms of technology such as robotics [and] devices to make videos [to] engage others in learning.” “To make content more engaging.”
Explore, access & apply data	“Use of ESRI platform...for fieldwork data collection in geography classes.” “Increased use of survey tools to acquire work-related data sets to inform practice and progress.” “Zoom or Teams to talk to teachers and support staff internally to gather data on their learning and their learning needs... also inform strategic planning for school professional learning going forward.”

Other examples of ways technology is used for learning while working - Health

Learning activities	Presentative quotes
Access & engage with professional learning/development opportunities	“Working in a regional area, technology (especially advances over COVID) makes learning possible for me by attending remote learning, statewide meetings and other online learning and CPD. Since COVID a lot more has become accessible as city colleagues have worked out how to use videoconferencing, which allows for a more inclusive profession.”
Communication/collaboration	“I have learned …that doing phone consultations is "good enough". that way patients (especially if they are having Chemo or radiation) don't need to find the covid screening building and then come and find my building. I do save a heap of time though and hence can see more patients.”
Seek and/or give feedback	“Discussions with colleagues, see my patients with a colleague to get their idea/opinion, utilise mentors in my workplace to assist with my work”
Access organisation-specific knowledge-bases or systems	“I use the company health portal to seek out additional materials” “All of our work instructions are electronic as are the ‘manuals’ for our work”
Educate patients and students during or after consultation	“I also use the internet (google image searching in particular) to educate and explain medical concepts to patients”

Individual learning activities

Individual learning activities	Education (n=299)	Ranking	Health (n=151)	Ranking
i) Reflect on how they have completed a task	82%	1	72%	1
ii) Follow new developments in my field	70%	2	72%	1
iii) Look for opportunities to perform new tasks	67%	3	57%	3
iv) Find a better way to do a task by trial and error	53%	4	33%	9
v) Use self-study materials	52%	5	52%	5
vi) Learn through repetition of tasks	45%	6	54%	4
vii) Commit time during my work week to focus on my development	45%	6	41%	6
viii) Attend training courses	40%	8	40%	7
ix) Work alone to problem solve	30%	9	33%	8
x) Attend conferences	26%	10	28%	10

Learning activities with others

Learning activities with others	Education (n= 299)	Ranking	Health (n=151)	Ranking
i) Learn from others by asking questions, observing, listening and discussing	80%	1	79%	1
ii) Work with others to develop new ideas and problem solve	77%	2	54%	3
iii) Ask colleagues for advice about methods, tips and tricks they use	70%	3	63%	2
iv) Learn through teaching others	63%	4	45%	5
v) Seek feedback on tasks from work colleagues	59%	5	38%	8
vi) Reach out to professional networks	56%	6	44%	6
vii) Actively engage with a professional association	52%	7	48%	4
viii) Replicate colleagues' strategies to complete a task or solve problems	45%	8	42%	7
ix) Learn incidentally at work (eg. through overhearing colleagues talking, reading material left in staff rooms, book recommendations from colleagues etc…)	43%	9	29%	10
x) Seek feedback from a supervisor/manager on my performance	37%	10	27%	11
xi) Mentoringd by self-selected mentors	22%	11	31%	9

Professional learning and development

	Education	Ranking	Health	Ranking
i) Encouraged to develop myself	75%	1	61%	1
ii) Opportunities to share ideas and knowledge with others	66%	2	60%	2
iii) Encouraged to network with peers in my field	61%	3	52%	3
iv) Opportunities to access and work with leaders/experts in my field	49%	4	36%	5
v) Provided regular inhouse training sessions	36%	5	34%	6
vi) Access to mentoring and/or coaching	34%	6	34%	6
vii) Encouraged to use work time to focus on my own development	31%	7	38%	4
viii) Access to financial support to continue my learning	30%	8	24%	8
ix) Provided release time from work to continue my learning	25%	9	25%	7
x) Request/volunteer for higher duties	18%	10	6%	10
xi) Opportunities to serve in acting roles (replacing someone on leave at a higher level)	18%	10	5%	11
xii) Opportunities for secondment (move to a different role)	13%	11	8%	9
xiii) Opportunities for exchange (doing the same role in different organisations)	4%	12	3%	12

Implications for learning futures

- Digitization will make learning and work more connected than ever
- Technology becomes the re-calibrator
- Learn fast to maintain currency – learn in the flow of work
- A curriculum for learning - merge the economics and sociality by bringing together knowing, doing, connecting and 'being' for productive work and life + occupational renewal - Focus on a growth capability model –
- Responsibility for renewal by learning in a digitized world of work will increasingly rest with the individuals.

Back to basics - Curriculum for learning at workplace

Affordances

- Access to other workers
- Time to practice and learn
- Inclusion in knowledge sharing
- Discussion groups
- Access to knowledge
- Implementation of training programs
- Encouragement
- Attitude and skills of coworkers
- Opportunity to practice

Engagement

- Asking questions
- Satisfaction with performance
- Improving performance-self direction
- Self-interest
- Advancement

Practice pedagogies

- Story telling (Jordan, 1989)
- Verbalisation (Gowlland, 2010)
- Pedagogically rich activities (Billett 2010)
- Guided learning/proximal guidance (Rogoff 1995 Billett 2001)
- Direct instruction and ‘hands on’ (Makovicky, 2010)
- Indirect/distal guidance (Gowlland, 2011)
- Heuristics (Billett, 1997) and mnemonics (Sinclair 1997, Rice 2012)
- Partially worked example/Notation system (Makovicky, 2010)

(Billett, Scott & McCann 1998)

Some other considerations:

More time for learning in the flow of work	Dedicated time for learning at work
Establish an accessible, effective and easy to use learning system	Schedule learning time into the calendar
Offer stretch assignments - give a challenge to solve a problem and offer rewards	Link with workforce development and career development to make learning relevant
Make it short and sweet – short videos for micro learning, set a micro-learning library for just-what-is-needed now.	Form learning communities, reading groups, gigs or hubs – culture of learning together in person and online spaces
Make it available, just in time on mobile devices.	Give recognition – add to learning logs, log in PD hrs, micro credential
Allow use of generative AI — it will become ubiquitous in the workplace	Sponsorship of short courses/conferences

Questions/comments