



**THE FUTURE
OF LEARNING
+ TRAINING +
DEVELOPMENT**

**Scan Club Output
ESDC College's Learning Services**

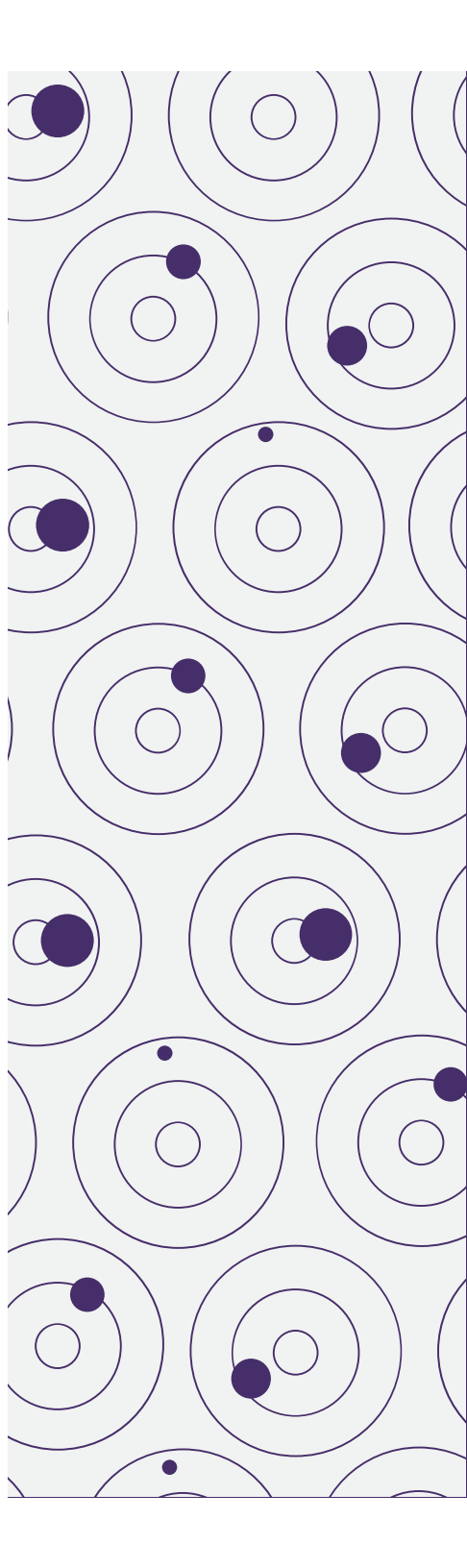
DECEMBER 2022



Employment and
Social Development Canada

Emploi et
Développement social Canada

Canada 



On December 2022, the Human Resources Innovation Foresight Team (“HRI”) hosted and facilitated a Scan Club on “The Future of Learning + Training + Development” with the ESDC College’s Integrity Design Team.

HRI and two of the Design Team’s members provided participants with three specific “Weak Signals”:

- LEARNING IN THE FLOW OF WORK
- VR TRAINING 101
- THE END OF HIGH-SCHOOL ENGLISH

Participants then discussed the importance of these signals and their potential impact on their work and the Federal Public Service at-large. The following infographics summarize each Weak Signal and organizes the participants’ insights and discussions into various areas of implications using a STEPPV framework.

Visit HRI at:

GC-Wiki: https://wiki.gccollab.ca/EDSC_Innovation_RH_-_HR_Innovation_ESDC

GC-Collab: <https://gccollab.ca/groups/profile/928221/esdchuman-resources-innovation-innovation-en-ressourceshumaines-de-edsc>



LEARNING IN THE FLOW OF WORK

A recent study found that organizations that already launched successful reskilling programs before COVID-19 were better able to address skills gaps caused by technological disruptions or implement new business models or strategies. In other words, they were future-proofed.

Technology is moving fast and finding agile and innovative ways to incorporate learning with little disruption to daily operations is vital.

There are a variety of emerging models and technologies to support learning in the flow of work. One model of particular interest is Digital Adoption Platforms (DAPs).

A DAP is no-code software that integrates with digital tools already in place to provide automated training tailored to the user to learn how to use the application while in the flow of work.

IMPACTED GROUPS

- Lower Management
- HR
- Employees
- New Candidates + Employees
- Employees seeking new opportunities

SO WHAT? HOW MIGHT THIS AFFECT THE FUTURE?



Social + Cultural

No Friends Allowed: How will on-demand training and teaching change personal relationships in the workplace? Will interactions between colleagues and managers/employees become less intimate and more transactional as traditional and casual exchanges such as mentorship and “figuring things out together” are automated?

Oppression by Learning: Knowing that they are being evaluated and monitored - for their benefit - employees may be reticent to experiment or do things they may not be comfortable doing for fear of that being recorded through a “learning offering”. Creativity through experimentation and ingenuity may also be snuffed out by Learning’s “fix for everything” suite.

Isolation Station: A consequence of above is a potential – like other digital and virtual advancements – for further isolating employees as computers and Artificial Intelligence answer to and for the employee. Workshops, seminars, and other group activities will no longer be offered nor will “showing by doing” be led by another human.



Technological + Infrastructural

L+D+T 4 U: An optimal L+D service would adapt to an employee’s everyday needs. As work is submitted, tasks performed, and meetings held, feedback mechanisms, either manually employed by peers and managers providing evaluation or a software monitoring performance and comparing it to organizational goals and criteria, could promptly provide employees with suggestions for improvement.

Background to Foreground: The immediacy of workflow technologies is not just about the adaptive prompts,

but also the ability to incorporate historical, individual data of users, and to know what a user has and has not accomplished and at what level. When offerings are suggested they will avoid redundant or unimportant areas of study.

Enough is Enough: At some point, the volume of learning and training may result in diminishing returns. A software constantly tracking and reminding users of new things to learn could get tedious or overbearing. Employees may tune out or reject the services offered. Overtime disenchanted employees may filter out “important” learning as a result of being inundated with superfluous offerings. Or flock to analog employment.

Clippy, Leave Me Alone: Constant prompts - “Want to try this?” “Have you learned about that?” “Remember tomorrow to do this” - might counteract overall productivity.



Values + Ethics

Bigger Sibling Oversight: The bespoke and individualized designing of learning and development begs a question of data collection and privacy. Such nuanced development requires an immense amount of individual data being collected at all times. Who and how this data is stored, what can and cannot be collected, and what control employees might have in all of this are a few of many questions to consider.



VR TRAINING 101: THE FUTURE OF TRAINING?

As we face the possibility of working permanently in a hybrid model, it's difficult to make in-office perks meet the appeal of working from home or at the cottage. So how do we keep up with learning in the future, if the future of work is virtual?

Virtual Reality is an artificial environment in which the user is fully immersed in an experience. Putting on a VR headset transports a learner to a new location where they can look around themselves, walk up to computer-generated objects, and interact with items and people. In the virtual environment, learners can complete activities and scenarios from anywhere at anytime.

Ramp VR, for example, is a company providing virtual reality training for ground operations personnel at airports, combining VR with International Air Transport Association (IATA) training criteria.

IMPACTED GROUPS

- Employees in remote locations
- Employees with accessibility challenges
- Employees with complex/dangerous/difficult tasks
- Dispersed workforces

SO WHAT? HOW MIGHT THIS AFFECT THE FUTURE?



Social + Cultural

Bed Ridden: VR may not lead to an exact immobile life, but there are a variety of health implications exacerbated by its use. Immobility, for example, could lead to many chronic issues like 20th century desk jobs perpetrated. Existence in the virtual realm could also detract from an awareness of the physical one. What we assume to be apparent issues - sudden emergencies, lack of spatial awareness, a loss of time - might be missed while in VR.

Accessibility for the Win: Remote-working has democratized a lot of work for a lot of people with accessibility issues. VR will do the same. VR avatars are able-bodied – or can fly, for that matter – enabling people to sense and experience what in the able-world they could not. This in turn creates job and task opportunities for them too.

Accessibility for the Loss: Those with visual and hearing impairments and mental health challenges may not be able to participate to the same extent that others can nor benefit fully from VR's advantages.



Technological + Infrastructural

The Duality of Worlds: Can VR become so intense and all-encompassing people begin to lose grip with the two worlds they co-habit? Or at least suffer from a merging of the two?



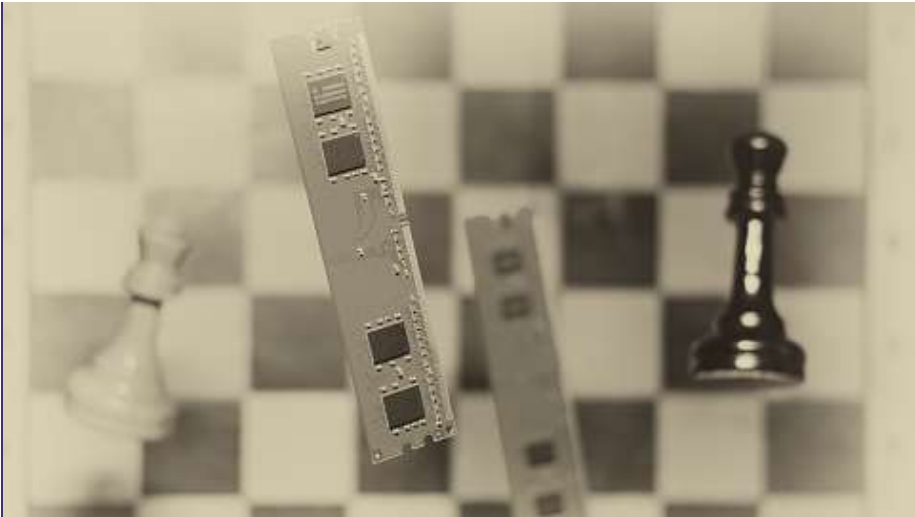
Values + Ethics

VR PTSD: As experienced with the use of social media and digital communications in the workplace, VR can unearth a myriad of psychological challenges, abuse, and other mental health issues unanticipated by employers. Certain training programs could be triggering or traumatic for groups of people.



Policy + Government

Danger No More: For staff dealing in perilous or high-tension situations, VR can provide/emulate similar experiences without most of the repercussions and consequences (see VR PTSD).



THE END OF HIGH-SCHOOL ENGLISH

In an article for The Atlantic, an English teacher laments (?), exults (?), wonders (?) about the increasing power of Artificial Intelligence, its ability to intuitively and analytically create unique written work (such as ChatGPT) and how that will impact a new generation of students.

The author discusses how pedagogically speaking, this kind of advanced technology will affect teachers and students.

English is a medium to develop critical thinking, argumentation, empathy, creativity, and so on: “Unconventional, improvisatory, expressive, meta-cognitive writing can be an extraordinary vehicle for those things,” he explains.

What happens when writing and the thought process behind it is automated?

IMPACTED GROUPS

- Everyone

SO WHAT? HOW MIGHT THIS AFFECT THE FUTURE?



Social + Cultural

Who Does The Thinking? Employers could see a new generation of employees unable to critically think and analyze in a traditional, “analog” way. This may not be a negative thing; their minds may be more adept in other areas. Thus, roles will change or employers will be responsible for teaching fundamental skills once tasked to education systems.

Job + Task Obsolescence: ChatGPT among other AI technologies have the potential to replace much of what is currently conducted by human employees.

Job + Task Enhancement: In the same breath, obsolescence also can mean liberation. Those working on repetitive tasks or overburdening portfolios may find time and space to utilize other critical faculties beneficial to an organization: creativity, deep analysis, empathy, experimentation, etc.

Learning Algorithms: New education systems teach ways to succeed with AI “in your pocket”. AI becomes an inseparable part of who we are in every part of our lives. Children learn how to leverage it and use it effectively.

Learning Nihilism: A new objection to learning arises as the inertia of “AI can do it all” sets in. A generation of “WALL-E” employees lack the motivation and aspiration to learn and may need incentives to continue to develop.

Learning Analog: A niche group of people reject AI. They put their children in “techless” schools where no AI or any other automation technology is allowed, harkening back to an era where teaching relies on 20th century media for learning.

Isolation: In what ways will an AI-forward world or organization affect human dynamics. Will employees become even more isolated as the AI becomes their guide, mentor, evaluator, and eventually, friend?



Technological + Infrastructural

AI What you Want: Customizable, on-demand services will become a common benefit from AI technologies. Course outlines, for example, that take months to develop and comprehensively design could take upwards of hours. In addition, the curriculum can be altered on the spot, users will have options to adjust the learnings making it more impactful and specific to their needs.

HR Bots: If learning is somewhat automated then so too can teaching. AI with the right pedagogical wiring can provide the learning and training interactively or supportively with employees in ways a human cannot. This includes a customized, personal curriculum that is adaptive to a person’s learning needs.

AI in One: Learning and Development functions will centralize allowing what previously was a mishmash – HR curricula, indirect learning, casual learning, learning-by-doing, institutional learning (reading documents) - to become one single AI experience. For example, AI can track an employee’s work and provide prompts (see above) for needs to improve or suggestions or “what was done previously by others”, etc.



Economic + Legal

Security + Privacy: AI depends upon data. AI bespoke to individuals relies upon individual data. For employees who are working intimately with AI technologies and using it to enhance their own work, such ethical questions around security and privacy will become prominent.

AI-liability: What happens when AI teaches something incorrectly and subsequent harm comes to the employee or the people the employee serves?



Values + Ethics

Echo Education: Schools choose one AI company's education system (aka "Teacher Microsoft") over another. As they become the predominant teacher or resource in school, regions, dependent upon their political perspectives, use a particular type of AI reinforcing ideologies.

*“The future is already here –
it’s just not evenly distributed.”*

— *William Gibson*

