Fourth Industrial Revolution - Cultivating future-fit-learners

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Introduction

As the benefits and challenges of Fourth industrial Revolution (4th IR) for both business and society become more visible, the cultivation of future fit learners and talent will also require a reconsideration of their own understanding of the importance of personal learning. This especially true since access to agile learning opportunities do not appear to be the definitive requirement for developing agile future fit learners. While competencies and skills can be developed through formal and informal education, training and development, individual capability is bounded by personal potential, even if it can be enhanced through learning and experience. The ability to be cognitively agile and socially adept is particularly important in contexts where technology is disrupting the nature of work by replacing human cognition with machine- based learning. In these circumstances Geyer (2019) suggests that the 4th IR will require a "more inventive, inclusive approach to talent development," that includes personalized learning and continual development. While the notion of 'work' in the new world of work may be redefined, learning and self-development remains a lifelong process that will enhance your employability.

As concerns about employment and employability have escalated, governments like the South African government, are increasingly turning their attention towards technological connectivity as a means of leveraging the benefits of 4 IR through education. Always-available, reliable connectivity is regarded as a cornerstone in leveraging digital technologies for education. While it is true that these technologies can extend and increase education and learning capacity, and, reduce the overall cost of delivering these services to learners in the entire education system, the provision of access to learning opportunities alone, will not be enough if learners themselves do not take self-responsibility for their own continuous life-ready learning. On its own technology only offers one solution path, but what is really required is adaptive, flexible minds that have the cognitive agility to keep up with the fast-paced shifts in their work and personal lives (Gleason, 2018).

Not New Skill-sets but New Mindsets

Agile learners are those that are able to learn from experience, apply their knowledge and skills to new situations, are passionate about continuous learning, and are able to remain resilient in the face of instability, through increased self-awareness and the ability to respond to complexity (Lombardo & Eichinger, 2000). Question is, how can this kind of learning be accomplished? For Gleason (2018) this means we should be focusing our efforts on shifting learners' mindsets to constant learning, comfort with change, and adaptability to new environments. While modern technologies are affecting students' learning skills, our focus should be on how we can change learner's own mindsets to actively engage and take self-responsibility for constructing their own learning. What is required is not new skillsets, but rather new mindsets if we are to leverage the opportunities and overcome the challenges posed by the 4th IR. According to the global research, the time it takes to close a skills gap through training has increased by more than 10 times in just four years (IBM, 2019).

The 2019 IBM (NYSE: IBM) Institute for Business Value (IBV) study, notes that in 2016, executives ranked technical core capabilities for STEM and basic computer and software/application skills as the top two most critical skills for employees but by 2018, the top two skills sought were both behavioural skills -- willingness to be flexible, agile, and adaptable to change and time management skills with an ability to prioritize.

While most companies are trying to address the skills gap by creating personal educational journeys that are appropriate to current experience level, skills, job role and career aspirations, and are doing so within an ecosystem of partners that expand their employees access to content, and innovative learning technologies, the skills gap is continuing to widen at an alarming rate. The widening skills gap and tightened labour markets are mounting business concerns about the potential to impact business futures as well as those of worldwide economies (IBV Study, 2019) The truth is that the technology skills gap will only continue to grow if real change is not implemented when it comes to how learners approach their own learning and development. Viewed from this perspective, agile learning may be a critical capability for responding to the disruptive challenges of the 4th IR.

Re-imagining Learning

In his 1970 book "Future Shock" Alvin Toffler predicted that "The illiterate of the 21st century will not be those who cannot read and write, but those who cannot learn, unlearn, and relearn." What this suggests is that in times of uncertainty and rapid change the most valuable personal capability may be the ability to learn continuously, and apply this learning to new contexts - which is what agile learning is all about. While questions regarding learning is most generally posed about how the education system responds to learning challenges in the 4IR context, or how business is responding to training and development challenges in terms of reskilling, the focus rarely falls on how individual learners are responding to what Gleason (2018) refers to as the " learning-cognition gap. " While there is no doubt that education systems will have to put more emphasis on creativity, critical thinking, flexibility and resilience in an effort to stimulate the kind deep learning that is required, learners will also have to assume greater responsibility for their own learning through more active engagement with learning opportunities that enable them to actively construct their own learning. Gleason (2018) suggests that real challenge is that people do not know how to learn, do not have the time, or are somehow unwilling to try. She believes the challenge does not lie in telling people what to learn, but rather lies in fostering an interest on how to learn continuously with a real desire and motivation for learning. While there are learning gaps that result from unequal or inequitable distribution of resources and opportunities, this is not to be confused with a cognition gap. A cognition gap bears reference to a deficit in respect of individually bounded mindset of curiosity and desire for lifelong learning. Although it is an individually bounded capability it can be enhanced through experience and involvement in problem-based and solution focused learning. Gleason (2018) describes this capability as the ability every person has to develop a self-awareness of what they themselves can deconstruct, reflect upon, and create in order to construct their own learning.

Final Thoughts

The challenge remains how we are going to actively engage learners through the development of self-responsibility for their own learning. Often the challenge in the South African context is framed as a challenge that stems from unequal resources or access to learning opportunities. While it is true that these disparities exist, eradicating learning achievement gaps, should not be our only or even main concern. Instead we should be focussing on how we can address the learning -cognition gap for each individual learner by fostering self-awareness and self-responsibility their own learning. While governments around the world have prioritised 4IR and are making significant investments into technology-enabled education as a means of

responding to societal issues, these investments can only improve access to learning opportunities through technologies such as collaboration platforms, artificial intelligence and augmented or virtual realities (DFA, 2019). In itself it will not be sufficient to address the ever increasing the 4th IR skills gap. As noted by the 2019 World Economic Forum Agenda the coming decade will be a pivotal time for organizations to establish the 4th IR trajectories, but this requires a willingness to unlearn, learn and relearn the concept of accountability. This accountability starts with every individual learner.

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