

Article

<https://doi.org/10.34074/scop.6006013>

COMING READY OR NOT: THE POTENTIAL OF LEARNER-CENTRICITY  
TO TRANSFORM THE EDUCATION SYSTEM

Steve Henry, Nola Tipa and Peter Apulu

Published by Otago Polytechnic Press.

CC-BY 2024 the authors;

© illustrations: the artists or other copyright owners or as indicated.

## COMING READY OR NOT: THE POTENTIAL OF LEARNER-CENTRICITY TO TRANSFORM THE EDUCATION SYSTEM

Steve Henry, Nola Tipa and Peter Apulu

This article considers how formal education may or may not be forced to transform like information technology. Currently, education is at a pivotal point as it faces unprecedented societal and technological shifts. With the pandemic having accelerated online learning, there is a push to reconsider educational delivery. This article discusses different educational approaches, emphasising student empowerment. It also underscores the significance of incorporating diverse cultural perspectives, including those of Māori and Pasifika peoples. Ultimately, the article calls for education to embrace change and navigate the challenges of the modern world by placing the learner at the centre.

When considering the future of education, Abegglen et al. (2020) suggest there needs to be an acknowledgement of the super-complexity of education in the twenty-first century. They suggest that many educators are continuing with outdated faculty practices and languages that form silos of knowledge into which students need to be inculcated. Not only is this essentially disrespectful, it becomes a preparation for worlds and professional practices that no longer exist. Knowledge generation is changing and the status afforded formal learning institutions is waning amid a proliferation of knowledge that society has to offer. Higher education institutions face a growing number of calls for transparency, competitiveness, and quality which encourage them to improve (and report) their knowledge creation processes (Quarchioni et al., 2020).

Leal Filho et al. (2018) suggest that education is set to transform and follow other industries which have faced disruption and experienced major change. Education and health care have been largely immune to such levels of disruption (Christensen et al., 2017; Walsh, 2020). “We have entered the Transformative Age and, much like the industrial revolution before it, we can expect fundamental shifts in how we live, work and play” (Friday & Halloran, 2020, executive summary). As the institutions of post-secondary education strive to meet the challenges of a profoundly changing world, questions about *shape* and *purpose* gain increasing urgency (Henry & MacPherson, 2019).

The coronavirus pandemic has shown how patterns of disruption can lead to innovation (Eisenstein, 2020), with a rapid shift from campus-based to online learning, and with both learners and staff working from home (Smith, 2020). While there has often been an equally rapid shift back to “business as usual,” this experience provides an opportunity to re-think how formal education is delivered and customised for the individual. The pandemic has “accelerated the shift to new ways of working, new frames, new expectations and new possibilities” (Schwartz, 2021 p. xv). The ability to offer programmes away from campuses in a work-based setting carries much resilience. Many of the apparent certainties of twentieth-century life have been disrupted over the past decade from banking to travel, communication to accommodation. Smith (2020) claims that education delivery has been unchanged for so long, that the *model* has been conflated with the *mission*. Universities comprise 70 of the 85 institutions in the West that have endured in recognisable form since the year 1520 (Kerr, 2001). This stability has bred overconfidence, overpricing, and an overreliance on business models tailored to a physical world (Smith, 2020). The physical world of education delivery appears to be irrevocably changed by digital technologies.

In finding suitable language to discuss these changes, Barber (1992) suggested that the world is increasingly “volatile, uncertain, complex and ambiguous (VUCA).” More recently, anthropologist and futurist Jamais Casico suggests “Brittle, Anxious, Nonlinear and Incomprehensible (BANI)” is more accurate as we face the coming chaos (Casico, 2020). Interesting to note here are the “anxious” and “incomprehensible” components, reminding us that transformational change has cognitive, social and emotional dimensions (Grocott, 2022). Responding to change has led to positionings of education as paradigms of evolution (Moravec, 2008). These paradigms describe Education 1.0 as traditional classroom-based teacher-centred learning; Education 2.0 as classroom-based learning with knowledge from a subject expert, and Education 3.0 as student- or learner-centred and project-based learning. More recently, Education 4.0 has been suggested as personalised and optimised learning with advanced application integration, more in alignment with informal learning (Hussin, 2018). These paradigms of education are aligned with the terms Industry 1.0 to 4.0, reflecting ways of being in business in the world (Kim, 2022; Salmon, 2019). They also reflect the level of control or agency the learner has increasing from Education 1.0 to Education 4.0.

There are pros and cons of each of the paradigms. Education 1.0 and 2.0 have the strong traditions of experts teaching in a pre-planned scaffolded way that they design and deliver. This has enabled education on a mass scale. The campus has become the centre of such delivery. The right to access such education has become a hallmark of modern economies and democracies, with Education 2.0 being the established model of higher education. A weakness of such structures is their inflexibility and brittleness to rapid change, leading to closures or major change during disruption such as the recent COVID-19 pandemic. Such systems were designed for workers in a non-digital age (Kim, 2022). Another weakness is the failure of inclusion for all, especially those not considered ‘normal,’ which is increasingly under scrutiny. Mochizuki and Fadeeva (2010) describe the generally prevalent reductionist approach to learning design that fails to support learners in developing skills and capabilities such as reflexivity to respond to an increasingly complex world.

In New Zealand, the estimated 20 percent of the population who are Indigenous Māori currently have well-documented limited success in formal education (Te Maihāroa et al., 2021; Te Maihāroa & Woodhouse, 2023; Te Pūkenga, 2023). Such learners are considered priority learners in New Zealand’s current vocational education restructure alongside those considered disabled, including the estimated 11 percent of the population who are dyslexic (Styles, 2022).

Historically, in Education 1.0 and 2.0 paradigms, Indigenous knowledge systems were often excluded, a legacy of colonisation that marginalised Māori and Pasifika perspectives and methodologies (Lawson, 2023; Peterson et al., 2023). There are challenges and gaps in acknowledging and utilising Indigenous wisdom in professional practices, suggesting a broader issue of cultural integration (Lawson, 2023). It is time to advocate for transformative educational strategies that include Indigenous methodologies, aiming to improve the success rates of Māori and Pacific students. This will require a re-imagining of diversity, inclusion, and success for sustained transformation (Peterson et al., 2023). Acknowledging and incorporating these rich cultural heritages not only respects but also enhances the effectiveness and relevance of education and professional practices in New Zealand’s culturally diverse society.

A highly impactful shift is in technology which has created the expectation that any product or service will be delivered to the user’s personal device and that the user has the agency to decide where, when, and with whom they engage. This key factor has driven the breakthrough of Education 3.0 where the learner has unprecedented agency to make decisions. The expert educator is now just one voice among many. Recently, the role of the teacher has attracted more scrutiny; there is a clear move to regard the teacher as a mentor-facilitator, focusing on the learner’s learning journey rather than on the content being studied (Hoidn & Reusser, 2020). The linear, scaffolded models of Education 2.0 bend and may break under the pressure of this customised learner journey. The VUCA and BANI world means our previous subject matter experts cannot know everything, leading to an erosion of their prestige. The educator’s role now becomes facilitative and the shift in power is tectonic

compared to the status enjoyed at Education 2.0. Gerstein (2014) cynically re-names the three Rs of Education 1.0 and 2.0, “receive, respond and regurgitate.” The place of the expert remains highly valued when curating suitable knowledge pathways, yet increasingly VUCA and BANI contexts risk the expert becoming impotent as their single discipline may fail to have the answers. The disadvantages of Education 3.0 include a learner placing themselves at the centre of their world when they have a low criticality of their world – an echo chamber amplified by social media. Here, the absence of the expert educator’s voice means there is a fragmented pathway to learn criticality from the perspective of those whose experience is immensely valuable.

As with other sectors of our society, the expectation for services to be online is a strong driver for change towards Education 3.0. Some say it is inevitable (Kim, 2022; Leal Filho et al., 2018). An example can be seen in the rapid emergence of Artificial Intelligence (AI) into the education space. AI has drawn considerable media and academic attention, “tak[ing] the internet by storm” (Mishra, 2023). For example, ChatGPT is a cutting-edge language model that leverages generative AI techniques to provide algorithm-generated conversational responses to question prompts (van Dis et al., 2023). The outputs from generative AI models are almost indistinguishable from human-generated content, as they are trained using nearly everything available on the web. Educators have already taught about disruption in a variety of industries and so, Dwivedi et al. (2023) insightfully ask, why shouldn’t the academic production of knowledge also be disrupted? Zhai (2022) has shown the power of ChatGPT to write academic papers to illustrate disruptive capabilities. It is worth being cautious over language-trained AI before it has a chance to learn from feedback, as it may appear to have the answers yet be limited in its ability to capture and convey experience; or, as Denzin (2013) suggests, language and speech do not mirror experience.

The academic disruption of knowledge is not just caused by technology. Higher education gets criticised for the way it has historically maintained certain forms of privilege and power (Lynch, 2022). There is a need to integrate Māori and Pasifika Indigenous knowledge within New Zealand’s educational frameworks (Lawson, 2023; Peterson et al., 2023). Global discourses around decolonising higher education practice are driving change that seeks to enhance education from voices of the present over voices from the past (Tran, 2021). This is not without challenge in New Zealand. This challenge was summarised by Penetito (2010) who said that “while mainstream institutions use education as a mechanism for cultural control, Māori also use education as a mechanism for cultural revitalisation. This means that the emphasis has taken away the essential purpose of education.”

While the shift to Education 3.0 may be considered a major leap, the paradigm of Education 4.0 is incomprehensible to most. It is no surprise that Education 4.0, where the learner is fully at the centre, is largely absent from formal education institutions because of the incompatibility of the paradigm with Education 2.0. It is worth noting that established conventional practice does not like such transformation; banks do not like bitcoin (Cunha et al., 2021), hotels do not like Airbnb (Zervas et al., 2017), and oil companies do not like Tesla (Lehtinen, 2015). The expert teacher in formal education (1.0 and 2.0) does not like learners being placed at the centre in Education 3.0 and 4.0. The language changes from teacher and student to facilitator-mentor and learner, subtle yet powerful signals of where the agency sits.

Student-centred learning and learner agency are as yet largely misunderstood and undefined in higher education (Hoidn & Klemenčič, 2020; Roodt et al., 2022). Heutagogy, or self-determined learning, is built on three theories: complexity theory, systems thinking, and capability (Hase, 2013). Understanding these theories is a requirement for navigating the VUCA and BANI world. It is the capacity to use one’s competencies (knowledge and skills) in novel circumstances as well as familiar. Transformation and innovation are directly related to a person’s capacity for learning (Grant, 2017). Capable people have justified high self-efficacy, work well in teams, and know how to learn (Hase, 2013). An advantage of Education 4.0 is that it allows learners to respond to a VUCA and BANI world, with the at-work learner and educator-mentor making sense of their practice together.

With the progress of technology and the rise in mobile learning, now more than ever self-directed learning is not just possible, but natural, and almost awkward to *not* use (Heick, 2015). The challenge for higher education is how to embrace this disruption and use it to activate new levels of criticality usually reserved for research 'on' others. These changes seem to be coming, whether we are ready or not.

**Steve Henry** is based at Otago Polytechnic's CapableNZ where he facilitates learners in independent learning pathways. His passion is for learner agency to enable a customised approach that is learner centred. His current doctorate research explores transformational learning in vocational education.

🌐 <https://orcid.org/0000-0002-4903-7213>

**Nola Tipa** is a Māori facilitator for Otago Polytechnic's CapableNZ whose passion is ensuring students achieve successful outcomes. She follows best practice andragogy that is inclusive, culturally responsive and individually tailored to meet the unique needs of each student.

**Peter Apulu** is the Pasifika Facilitator for Otago Polytechnic CapableNZ, holding a Master of Professional Practice and a Bachelor of Social Services. Peter's dialogic pedagogy fosters an engaging, inclusive learning environment where students' voices are valued, and learning is encouraged as a collaborative, communal experience tailored to their lived experience.

## REFERENCES

- Abegglen, S., Burns, S., Maier, T., & Sinfield, S. (2020). Supercomplexity: Acknowledging students' lives in the 21st century university. *Innovation Practice in Higher Education*, 4(1), 20–38.
- Barber, H. F. (1992). Developing strategic leadership: The US Army War College experience. *Journal of Management Development*, 11(6), 4–12. <https://doi.org/10.1108/02621719210018208>
- Cascio, J. (2020, April 29). *Facing the age of chaos*. Medium. <https://medium.com/@cascio/facing-the-age-of-chaos-b00687bf51d>
- Christensen, C. M., Waldeck, A., & Fogg, R. (2017, October 30). *The innovation health care really needs: Help people manage their own health*. Harvard Business Review. <https://hbr.org/2017/10/the-innovation-health-care-really-needs-help-people-manage-their-own-health>
- Cunha, P. R., Melo, P., & Sebastião, H. (2021). From bitcoin to central bank digital currencies: Making sense of the digital money revolution. *Future Internet*, 13(7), Article 165.
- Denzin, N. (2013). *Interpretive autoethnography*. Sage Publications.
- Dwivedi, Y. K., Kshetri, N., Hughes, L., Slade, E. L., Jeyaraj, A., Kar, A. K., Baabdullah, A. M., Koohang, A., Raghavan, V., Ahuja, M., Albanna, H., Albashrawi, M. A., Al-Busaidi, A. S., Balakrishnan, J., Barlette, Y., Basu, S., Bose, I., Brooks, L., Buhalis, D., ... Wright, R. (2023). Opinion paper: "So what if ChatGPT wrote it?" Multidisciplinary perspectives on opportunities, challenges and implications of generative conversational AI for research, practice and policy. *International Journal of Information Management*, 71, Article 102642. <https://doi.org/10.1016/j.ijinfomgt.2023.102642>
- Eisenstein, C. (2020, March 27). *The coronation*. Charles Eisenstein. <https://charleseisenstein.org/essays/the-coronation/>
- Friday, C., & Halloran, L. (2019). *Can the universities of today lead learning for tomorrow? The university of the future*. Ernst & Young Global Limited. [https://assets.ey.com/content/dam/ey-sites/ey-com/en\\_au/topics/government-and-public-sector/ey-university-of-the-future-2030.pdf](https://assets.ey.com/content/dam/ey-sites/ey-com/en_au/topics/government-and-public-sector/ey-university-of-the-future-2030.pdf)
- Gerstein, J. (2014). Moving from Education 1.0 through Education 2.0 towards Education 3.0. In L. M. Blaschke, C. Kenyon, & S. Hase (Eds.), *Experiences in self-determined learning* (pp. 83–98). CreateSpace Independent Publishing Platform.
- Grant, G. (2017). *The untapped power of imagination in the workplace*. In J. Neal (Ed.), *Handbook of personal and organizational transformation* (pp. 147–181). Springer International Publishing.

- Grocott, L. (2022). *Design for transformative learning*. Routledge.
- Hase, S. (2013). *Self-determined learning: Heutagogy in action*. Bloomsbury.
- Heick, T. (2015, October 10). *The difference between pedagogy, andragogy, and heutagogy*. TeachThought. <https://www.teachthought.com/pedagogy/a-primer-in-heutagogy-and-self-directed-learning/>
- Henry, S., & Macpherson, M. (2019). Editorial: Capable NZ – Diversity in action. *Scope: Contemporary Research Topics (Flexible Learning)*, 5, 6–7. <https://doi.org/10.34074/scop.5005012>
- Hoidn, S., & Manja Klemenčič. (2020). *The Routledge international handbook of student-centered learning and teaching in higher education*. Routledge.
- Hoidn, S., & Reusser, K. (2020). *Foundations of student-centered learning and teaching*. In S. Hoidn & M. Klemenčič (Eds.), *The Routledge international handbook of student-centered learning and teaching in higher education* (pp. 17–46). Routledge New York.
- Hussin, A. A. (2018). Education 4.0 made simple: Ideas for teaching. *International Journal of Education and Literacy Studies*, 6(3), 92–98.
- Kerr, C. (2001). *The uses of the university*. Harvard University Press.
- Kim, J. (2022). The interconnectivity of heutagogy and education 4.0 in higher online education. *Canadian Journal of Learning and Technology*, 48(4), 1–17.
- Lawson, G. (2023). Foreword: With video editorial. *Landscape Review*, 19(2). <https://journals.lincoln.ac.nz/index.php/lr/article/download/1225/847>
- Leal Filho, W., Raath, S., Lazzarini, B., Vargas, V. R., de Souza, L., Anholon, R., Quelhas, O. L. G., Haddad, R., Klavins, M., & Orlovic, V. L. (2018). The role of transformation in learning and education for sustainability. *Journal of Cleaner Production*, 199, 286–295. <https://doi.org/10.1016/j.jclepro.2018.07.017>
- Lehtinen, P. (2015). *The advancement of electric vehicles-case: Tesla Motors. Disruptive technology requiring systemic innovating*. [Unpublished master's thesis]. Tampere University.
- Lynch, J. (2022). Challenging the primacy of writing. *Possibilities of decolonising post graduate professional practice* [Paper presentation]. Professional Practice Symposium CapableNZ, Dunedin and online, Otago Polytechnic
- Mishra, M. (2023, February 4). *As ChatGPT takes the internet by storm, here's what its rivals are up to*. The Economic Times. <https://economictimes.indiatimes.com/tech/te%20chnology/as-chatgpt-takes-the-internet-by-storm-heres-what-its-rivals-are-up-to/articleshow/97441789.cms>
- Mochizuki, Y., & Fadeeva, Z. (2010). Competences for sustainable development and sustainability: Significance and challenges for ESD. *International Journal of Sustainability in Higher Education*, 11(4), 391–403. <https://doi.org/10.1108/I4676371011077603>
- Moravec, J. (2008). *New paradigm model – Education 1.0-3.0 spectrum*. Presented in “Moving beyond Education 2.0” at Education Features 2008. [https://usergeneratededucation.files.wordpress.com/2013/03/6419005939\\_1057dda70e\\_b.jpg](https://usergeneratededucation.files.wordpress.com/2013/03/6419005939_1057dda70e_b.jpg)
- Oosterman, J., Sedgwick, C., & Grey, S. (2017). *Education under pressure: The 2016 New Zealand tertiary education state of the sector survey*. Tertiary Education Union. <http://media.nzherald.co.nz/webcontent/document/pdf/201713/Education%20Under%20Pressure%20Report.pdf>
- Penetito, W. (2010). *What's Māori about Māori education?* Victoria University Press.
- Peterson, J. F., Ka'ai, T., Smith, V., & McPherson, K. (2023). Re-imagining student success: Integrating strategy and action through an Indigenous lens. *Art, Design & Communication in Higher Education*, 22(2), 209–239.
- Quarchioni, S., Paternostro, S., & Trovarelli, F. (2020). Knowledge management in higher education: A literature review and further research avenues. *Knowledge Management Research & Practice*, 20(2), 1–16. <https://doi.org/10.1080/14778238.2020.1730717>
- Roodt, J. H., Henry, S., Iskov, T., Mones de Oca, L., Grant, G., & Kakkar, A. (2022). Learner agency: Investigating perspectives from New Zealand, Denmark and Canada. *Scope: Contemporary Research Topics (Work-based Learning)*, 3, 59–68.
- Salmon, G. (2019). May the fourth be with you: Creating education 4.0. *Journal of Learning for Development*, 6(2). <https://doi.org/10.56059/jl4d.v6i2.352>
- Schwartz, J. (2021). *Work disrupted: Opportunity, resilience, and growth in the accelerated future of work*. John Wiley & Sons.
- Smith, M. D. (2020, June 22). *Are universities going the way of CDs and cable TV?* The Atlantic. <https://www.theatlantic.com/ideas/archive/2020/06/university-like-cd-streaming-age/613291/>
- Styles, M. (2022). *Congratulations, you have dyslexia: Great minds think differently*. Independently Published.
- Te Maihāroa, K., Leonard, G., & Karena, T. (2021). Optimal learning conditions for masters and doctor of professional practice learners. *Scope: Contemporary Research Topics (Kaupapa Kai Tahu)*, 6, 92–106.
- Te Maihāroa, K., & Woodhouse. (2023). *Our sacred Māori voices*. Otago Polytechnic Press.

- Te Pūkenga. (2023). *2022 Te pūrongo-ō-tau: Annual Report*. <https://www.xn--tepkenga-szb.ac.nz/assets/Publications/Te-Pukenga-Annual-Report-2022.pdf>
- Tran, D. (2021). *Decolonizing university teaching and learning: An entry model for grappling with complexities*. Bloomsbury Publishing London.
- van Dis, E., Bollen, A., Zuidema, W., van Rooij, R., & Bockting, C. (2023). ChatGPT: Five priorities for research. *Nature*, *614*, 224–226. <https://doi.org/10.1038/d41586-023-00288-7>
- Walsh, J. D. (2020, May 11). *The coming disruption to college*. *Intelligencer*. <https://nymag.com/intelligencer/2020/05/scott-galloway-future-of-college.html>
- World Bank. (2018). *World development report 2019: The changing nature of work*. <https://doi.org/10.1596/978-1-4648-1328-3>
- World Economic Forum. (2015). *New vision for education – Unlocking the potential of technology*. *Weforum.org*. <https://widgets.weforum.org/nve-2015/>
- Zhai, X. (2022). *ChatGPT user experience: Implications for education*. SSRN. <http://dx.doi.org/10.2139/ssrn.4312418>
- Zervas, G., Proserpio, D., & Byers, J. W. (2017). The rise of the sharing economy: Estimating the impact of Airbnb on the hotel industry. *Journal of Marketing Research*, *54*, 687–705.