

## The Case For Embedding Futures Thinking in University Teaching & Learning

John Hirst \*, Department of Management & Marketing, Durham University Business School, Durham, UK, [j.e.hirst@durham.ac.uk](mailto:j.e.hirst@durham.ac.uk)

Cat Spellman, Department of Management & Marketing, Durham University Business School, Durham, UK, [Catherine.spellman@durham.ac.uk](mailto:Catherine.spellman@durham.ac.uk)

### Abstract

This paper addresses the imperative for Higher Education to embrace Futures Thinking in order to prepare new generations of citizens and leaders for the radical changes that the world is now facing. Inspired by John Elkington, our paper emphasises the importance of Futures Thinking in confronting escalating global challenges, such as climate change and the Anthropocene extinction, endorsed both by the Royal Society of Arts and the United Nations. We approach this initially from a broader perspective within education, specifically drawing on Paulo Freire’s critical teaching and learning scholarship. Frameworks and methods available to inculcate and inspire Futures Thinking are introduced, in conjunction with Freire’s “conscientization” pedagogy. Finally, we present the rationale for an innovative module at Durham University Business School that engages final year undergraduates in Futures Thinking, embedded in the curriculum by integrating scenario exploration with gamification.

**Keywords:** Futures; Foresight; Anticipation; Sustainability; Gamification; Scenarios; Transformation.

\* Corresponding Author  
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## Why Futures Thinking is Imperative

John Elkington, dubbed the “Godfather of Sustainability”, argues that universities need to stop preparing students for a world that will soon no longer exist and instead focus on preparing them for sweeping disruptive environmental and social change in the wake of the accelerating Anthropocene extinction now threatening global economies, livelihoods and health. Hopes of achieving the internationally agreed United Nations Sustainable Development Goals (SDGs), aimed at transforming the socio-economic system to make it more equitable, inclusive, regenerative and sustainable, have all but evaporated. UN General-Secretary, Guterres, concludes that to deal with this dire situation requires deep reforms to our outdated, dysfunctional and unfair economic system and warns that “unless we act now, to tackle the triple crises of climate change, biodiversity loss and pollution, and eradicate poverty and reduce inequality, the 2030 Agenda will become an epitaph for a world that might have been” (UN, 2023). Chomsky & Pollin (2020) assert that “the race to self-destruction is now accelerating” (p.2), and cite climate scientists’ blunt prediction that “our children will have to adapt or become extinct” (p.8). The IPCC (2023) calls for “rapid and far-reaching transitions across all sectors and systems to secure a liveable and sustainable future for all.”

Elkington (2021) concludes that “we must completely rethink how we run our planet” (p.12) and is bewildered that “so many of us – individually and collectively – fail to imagine, let alone anticipate, the massive and disruptive changes that are unfolding” (p.237). The UN (2023) now partly attribute this failure to the education system, citing the research finding that “one in five youth feels unprepared for climate change based on their education and is asking for more information to grasp its complexities.” Confronting these crises requires fundamental changes in education, including clear guidelines and a systematic approach to thinking about the future, without which the threat of worsening disasters persists. So, the purpose of our paper is to contribute to addressing this. In it, we seek to reiterate the common historic mission of education: “to illuminate the human conscience and shape the minds of the future”. In doing so, we explicate and exemplify Freire’s scholarship of teaching and learning. He defines this as “conscientization”, the process of developing critical awareness of social reality

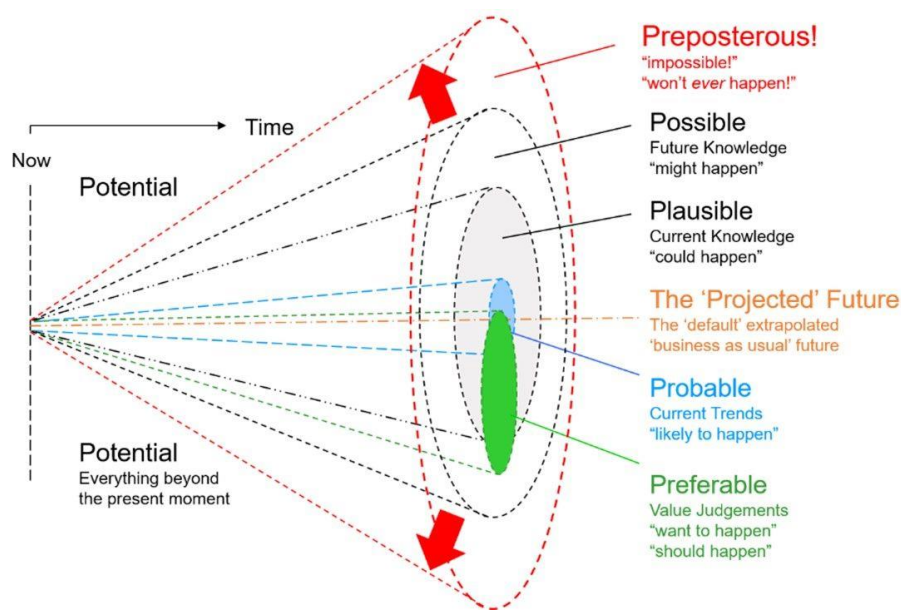
through reflection and action which equates to the concept of “meta-reflexivity”, now considered to be an essential element of pedagogic practice (Cramer et al., 2023). “In order to establish a truly sustainable society, a break with the existing conditions is needed—but this is impossible without meta-reflexivity” (Golob et al., 2022, p.12).

### **Futures Thinking Education**

Freire’s theory of education situates learning as a transformative, emancipatory process through which students and teachers together explore how to impact the world to make it more equitable and sustainable, inspiring students to want to take part in shaping the future. Although the need for inclusion of future-orientated skills within education has been accepted at government, policy, and educational leadership levels (Salcito, 2019), it is currently insufficient. Future skills need to be deeply integrated into curricula and assessment in order to provide future leaders with a fundamentally different learning experience that will equip them with the necessary skills, strategies, and resilience to engage in futures thinking (The Economist Intelligence Unit, 2019). To date, there has been limited progress in translating policy on future-oriented skills into action (Wagenaar, 2019), with educators facing a multitude of barriers such as the lack of tools, methodologies, and guidance whilst also facing cultural resistance to unconventional, innovative teaching methods. To address this, the UN’s Summit of the Future in 2024 will endorse new guidance on “transforming education to ensure a future-oriented focus in education curricula and pedagogy.”

For graduates to be able to contribute to a socially just future, it is imperative for an education system to engage students in confronting both the injustices that the UN SDGs have so far failed to remedy, and the root causes of such justice failures. Freire’s (1973) radical approach to transformational education requires praxis, engaging students in progressive dialogue to stimulate rethinking, reflection and action, e.g. by critically exploring scenarios, for example those illustrated by the Futures Cone (Fig.1), and grappling with “justice failure approaches” (Singer, 2018) that challenge prevailing

norms and practices, e.g. business-as-usual market-failure approaches, that resist and obstruct changes to the *status quo*.



**Figure 1.** The Futures Cone (Source: Voros, 2017).

Futures thinking education encourages students to contemplate multiple possibilities, explore potential scenarios, and consider the impact of complex interconnected outcomes that different courses of action may have, and how they can contribute to creating more equitable and sustainable societies. Freire (1998) emphasises the importance of “contemplative dialogue” in which teachers and students become “co-investigators in problem-posing pedagogy”, by which they critically evaluate their worldviews, creatively imagine alternatives, and discover ways of participating in transformative action. Anticipation is the form that the future takes in the present, and both the Quality Assurance Agency (QAA) and AdvanceHE (2021) encourage universities to develop students’ “anticipatory competences”. This involves the development of frames, narratives and variables that shape imaginations, and also necessitates emotional intelligence, since imagining the future evokes hopes and fears resulting in cognitive biases such as over-optimism, the ostrich-effect, and intolerance of uncertainty.

## **Durham University Business School's Futures Thinking Development Project**

There are a number of different educational methods available to inspire and accommodate the development of future mindsets (See Appendix 1). Of the methods available, the Scenario Exploration System (SES) has been developed specifically for classroom use and successfully piloted in several universities. For that reason, we decided to integrate it into a new Durham University Business School final year undergraduate module, grounding it in Freire's radical, participative, empowering, and action-oriented praxis, and relating it to established models in business school teaching and learning scholarship, e.g. Deming's (1986) PDSA Cycle for Learning and Continuous Improvement, and Beech & MacIntosh's (2012) Processual Learning Framework. Our "Facing The Future" module introduces students to Futures Thinking concepts including transformational theories, e.g. Zohar's (2021) Quantum Management Theory; frameworks, e.g. Raworth's (2017) Doughnut Economics framework); toolkits, e.g. JISC's (2020) Vision & Strategy Toolkit; and policy initiatives, e.g. the UN SDGs and the European Green New Deal, as well as generic content, e.g. systems thinking, highlighting the need for systemic change, and addressing the root causes of injustice, inequality and unsustainability.

The SES component is delivered through interactive workshops throughout the module, involving immersive participation in several rounds of serious game-playing, facilitated by trained games masters. The SES gaming-platform introduces a range of future scenarios applicable to a series of future time periods, and students volunteer to play particular roles which they then act out. This immerses participating students, and teachers, in a range of plausible alternative futures that stimulates meta-reflexivity by repeatedly thinking, conversing, acting, and reflecting outside of their usual frames of reference "through which existing thoughts will change and new knowledge will be created" (Freire & Freire, 1994). The aim is not to play a game and win, but rather to stimulate "contemplative dialogue" (Freire, 1998) through futures thinking, and use of imagination, in a spirit of collaboration and respectful engagement, fostering constructive relationships between students, and teachers, particularly highlighting the

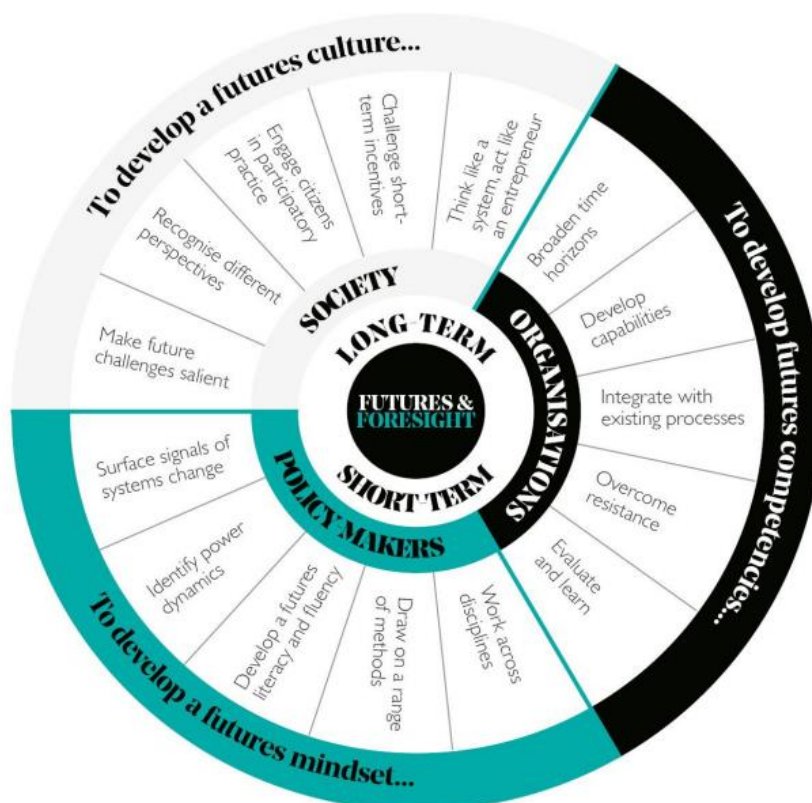
value of diversity and inclusion. Furthermore, students have the opportunity to train as games masters with a certificate of leadership competence. Time is allocated for participants to both prepare for and reflect on the experience, and the module assessment incorporates a reflective activity in addition to a more traditional written assignment. Ultimately, the SES aims to equip forward thinking leaders with a portfolio of future-orientated skills (“anticipatory competences”) that will inspire and empower them to contribute to creating a sustainable future.

The module aims to inspire students to explore potential futures, acquainting them with new, and in many cases radically alternative, perspectives that challenge established theories, frameworks and mindsets. It creates conditions favourable to mutual learning and networking and is sufficiently challenging to impel participants to think beyond their comfort zones. It stimulates dialogue about the future through the simulation of scenarios beyond modelling or forecasting. It also fulfils Freire’s condition that “conscientization” must go beyond dialogue, requiring participants to also act together in order critically to reflect upon their grasp of reality, and so transform it through meta-reflexivity. As Mason (2015) contends, “we lie at a moment of possibility: of a controlled transition beyond the free market, beyond carbon, beyond compulsory work” (p.290). The best prospect of seizing this “moment of possibility” and transforming the world order, without recourse to last resort “authoritarian environmentalism” (Li & Shapiro, 2020), rests on groups of young people working together, applying collaborative multidisciplinary thinking and networking. Understanding the interplay between networks, hierarchies, organizations and markets, and learning to model them in new ways, initiate and manage change, monitor and evaluate impacts, and adjust intentions and mindsets accordingly, which the SES facilitates, will be critical. As Parker (2018) concludes, it is imperative “to enable students to discover alternative responses to the pressing issues of inequality and sustainability faced by us all today.”



## Education For A Futures Thinking Society

Human evolution has always depended on thinking about the future and forward planning, albeit often more intuitively than systematically. How we think about change and view the future has a critical impact on the way we think and act in the present. In most cases, we rely on the past as a guide to the future, often feeling powerless to influence change and seeking certainty and incremental change. The volatile, uncertain, complex and ambiguous (VUCA) state of the world now, facing multiple crises and threats, means that the future is even more difficult to imagine, and even less possible to predict. The role of Futures Thinking education is not to predict the future, but to set the stage for a learning process that fosters adaptation and prepares students for future challenges. “Foresight approaches and techniques can facilitate and support the kind of multidisciplinary working, critical thinking and radical action that are necessary to effect change” (RSA, 2020, p.73).



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**Figure 2.** Framework for Designing a Futures Thinking Society (RSA, 2020, p.17).

The RSA (2020) recognises “the value of these approaches for those trying to make the world a better place, to effect systems change, to open up our imaginations to the possibilities of what could be. Yet, there remains a shadow side to foresight. It can be easy to dismiss as irrelevant to the present and just another distraction. There is a danger it is seen as ‘just another tool’ to be added to all the other models that strategists, management consultants and CEOs advocate” (p.73). This shadow looms even greater if Futures Thinking is co-opted by powerful organizations whose self-serving objective is instrumentarian control and exploitation (Zuboff, 2019), e.g. by colonisation of imaginations, spreading misinformation (e.g. climate change denial), undermining democratic processes, or perpetuating unsustainable production and consumption. Future-orientated skills and competencies include critical thinking, ethical decision-making, creativity, communication, problem-solving, entrepreneurship and digital capabilities. The latter should not be confused with technological skills, but rather foster an understanding of how to deploy human skills for good in a world of technology increasingly dominated by powerful organizations intent on instrumentarian control and exploitation (Zuboff, 2019). As Elkington (2021, p.172) warns, “at least some - and probably most - of the technologies we are now developing with such enthusiasm and dedication will end up strangling key elements of our future.”

## Conclusion

In accordance with the RSA’s recommendation that universities should design and test new modules with future-orientated thinking at their core, with a longer-term goal to form new qualifications as well as making such skills fundamental in every degree course, integration of SES into our ‘Facing the Future’ undergraduate module exemplifies an innovative means of implementing this. Gamified curricula also enable educators to actualize Freire’s notion of “conscientization” in an engaging, impactful, meaningful way. The future and foresight skills, summarised in Fig.2, that we seek to inculcate through the module are constructively aligned with a range of intended



learning outcomes, e.g. development of integrative cognitions and values (Capra & Luisi, 2014), understanding the meaning of quantum management and a quantum society (Zohar, 2022), and applying principles of Doughnut Economics (Raworth, 2017). We hope that developing and showcasing this example, firmly rooted in Freire's teaching and learning scholarship, will inspire other institutions to implement the RSA's recommendations, now reinforced by the UN's commitment to "ensuring a future-oriented focus in education curricula and pedagogy."

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**Appendix 1 - Methodological Approaches for Futures Thinking Education**

<b>Copenhagen Institute for Future Studies (CIFS)</b>	<b>A global leader in applied Futures Thinking and foresight methodologies, CIFS developed the Copenhagen Method and initiated the IMAGINE Futures Festival to stimulate critical discussion and debate and develop “futures literacy” i.e. students’ capacity to know why and how futures are imagined.</b>
<b>GO-Science Futures Toolkit</b>	Created by Waverley Consulting and the Government Office for Science, the Futures Toolkit provides practical resources for practitioners to gather intelligence about the future, explore dynamics of change, describe potential futures, and develop and test policy and strategy.
<b>ABIS Scenario Exploration System (SES)</b>	Developed by the Academy of Business in Society (ABIS), originally for policy makers, SES is a gaming platform whereby participants engage in systemic thinking with a long-term perspective to explore alternative futures and develop skills in foresight and futures thinking.
<b>School of International Futures (SOIF)</b>	SOIF works with organizations and groups providing mentoring, learning and dialogue to build the capacity to apply future-facing perspectives to the questions that they face, and to implement applied and participatory futures in their own settings.
<b>Superflux</b>	Founded by Anab Jain and Jon Arden, Superflux converts future scenarios into futuristic experiential installations. Through understanding, foresight, and creativity, they create tools that not only allow insight into forces at play but also help shape democratic, positive and rewarding futures.
<b>Royal Society of Arts (RSA)</b>	The RSA initiated a programme around the idea of regenerative futures with a vision for humans to thrive as part of the earth’s ecosystems in perpetuity. It published a framework (Fig. 2) for designing a Futures Thinking Society and made subsequent recommendations about how to implement this.

<p><b>The Future-Fit Foundation</b></p>	<p>The Future Fit Business Benchmark is a free tool to help companies pursue the vision of a Future-Fit Society, one that becomes ever more socially just, economically inclusive, and environmentally restorative, ushering in a future that allows people and planet to thrive.</p>
<p><b>The European Sustainability Competences Framework (GreenComp)</b></p>	<p>Greencomp aims to foster a sustainability mindset by helping students to develop the foresight, knowledge, skills and attitude to think, plan and act with empathy, responsibility, and care for the planet. Its framework is used to design learning opportunities aimed at developing sustainability competences and support education and training for sustainability.</p>

(Drawn from a number of Secondary Sources)