

REBOOTING EDUCATION: NAVIGATING CHANGE AND BUILDING RESILIENCE



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Theme of the Article: Education

Research Objectives: This study investigates the importance of periodic adaptation in education, with a focus on sustainability and resilience.

Abstract

This research paper explores the critical need for rebooting the educational system, a process largely overlooked since the end of Covid-19 isolation. While many school systems resumed traditional operations, evolving global challenges demand a transformative re-evaluation of how education functions. This study investigates the importance of periodic adaptation in education, with a focus on sustainability and resilience.

We first explore the pandemic's role as a catalyst for change, as it forced educators to rethink teaching methods, technology integration, and student well-being. The lessons drawn from this disruption highlight the urgency of educational reform to meet the demands of an ever-evolving world.

Keywords: Educational Reboot, Post-Pandemic Education, Sustainability, Resilience, Stakeholder Collaboration

1. Introduction

Education is often seen as the cornerstone of any society and must thrive in the harshest of times. No longer is it enough to simply repeat history or traditions in schools and universities under the guise of a modern education, nor can technology alone sufficiently build the resilience of the learning ecosystem. Our socio-economic-technological world has become so complex; there is a need to reboot our systems alongside educating for resilience and adaptability (Shah et al.2020). This is particularly relevant if education is to recalibrate and reinvent itself for long-term growth, sustainable development, lifelong

BIO

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learning, and the benefits of innovation. One only has to witness the impacts of the pandemic to stress the importance of rebooting existing notions of education to help individuals and the institutions that support them become more resilient and adaptable throughout their learning landscape. For many, this is seen as painful; it signals the failure of traditional educational institutions and systems of education which have suddenly become increasingly irrelevant, fragile, and dysfunctional across the globe.

We consider the learning space as adaptive, introduce the meta-skill of resilience as a pivot point. The adaptive pathway is principles-based and founded upon identity construction. Learning is morphing into a form of 'antifragility' (Qadir & Al-Fuqaha, 2020). The role of the metamodern educator is foundational. Learning as adaptation pivots upon gaming strategies overtly teaching adaptability and risk-taking within the comfort zone of failing safely. Networking with feedback loops is construed as a learning lever. It's important the learning lever pivots on theory and the constructs of theory (Qadir & Al-Fuqaha, 2020). To enhance learning and to educate for resilience are complementary.

Industry 4.0 or the fourth industrial revolution created a scenario where humans have grown dependent on gadgets, machines, robots that can do everything (Surao, 2020)—from clinical trials to taking examinations and maintaining intelligence. Education is a foundation stone of society, and if it were well laid, everyone would benefit. The holistic role of this changing institution needs a focused approach to relook and redesign the way education is managed, imparted, and received. Schooling and teaching would thus become interesting, relevant, meaningful, and purposeful only when learning can be made enjoyable and rewarding (Germain, 2024). Going to schools leads to effective learning and education if learning becomes a delightful and surprising journey for children. Activities that are relevant, interest-based, and in the socio-cultural context of children would go a long way in making children love to learn, not vice versa.

Objectives

This research seeks to contribute to the understanding of how reform aimed at change in the real world can be achieved, and how those working to bring about this change can be supported. The focus is on the

weaknesses of current systems of education governance and the ways to address them. A guiding theme of this research is the unprecedented pace of change in the world today and the need to build resilience into any new systems. A second theme of this research is the focus on the reform of systems and not just on the reform of institutions. This has meant seeking new solutions that will serve learners and society in very diverse political and educational contexts.

2. The Need for Rebooting the Educational System

Discussions about the challenges facing the educational system are nothing new. However, the pace of societal and technological change makes these conversations particularly urgent. A key tenet of a high-performing educational system—whether one with already low achievement gaps fights complacency, or one with many low-achieving students leaps ahead—is a readiness to take stock, reimagine practices, and let go of the comfortable patterns of the past. There is little question that when a schooling system is not open to the kind of transformative change that will create a new equilibrium, it is unlikely to meet the expectations of

skills, knowledge, attitudes, and competencies one would have for youth. The world is connecting in ways that we have never seen before. Even though levels of interconnectedness are high, the consequences of this increased connectivity on businesses and people have been wildly divergent, depending on where you might sit in the world economy. However, educational practices are much like old rubber bands that have been stretched and have been slow to respond to these global changes (Ridgeway, 2023). Educators can get stuck using practices that are no longer effective and viewed as outdated, leaving many students feeling ill-prepared for the world they are competing in now, let alone one that doesn't exist yet. It's about a system that does not create opportunity for large portions of its own population (Allen, 2021). There have always been people who have struggled to be literate or gone off the rails in school, but with growing inequality, there is more at stake than ever before (Somani, 2021). The costs of leaving so many behind are too large.

Figure 1 illustrates the various ways the COVID-19 pandemic affected different stakeholders in the education system, including students, teachers, parents, and educational institutions.

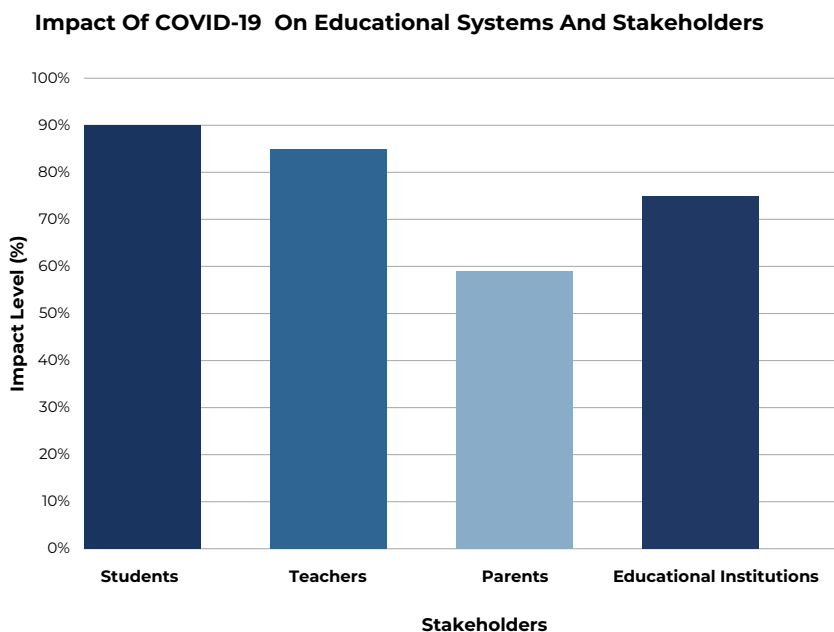


Figure 1 (Leichenko, Gram-Hanssen, O'Brien, 2022)

2.1. Importance of Periodic Re-evaluation and Adaptation

Educators and educational system developers need to regularly review, update, and adapt the learning environments they create or fund to account for societal change and the rapid cultural evolution of a global society, which will undoubtedly change in ways we are currently unable to foresee. It is a waste of time and resources to build schools, colleges, and universities that can only serve the generation that conceived them over an extended period of dormancy and utility (Cheung et al, 2021). As a result, societies, when they reconsider their educational framework, frequently undertake significant renovations and reaffiliate prior to setting

themselves on a new course for an extended period of time.

Approaches to educational rejuvenation are determined by understanding and demonstrated reality, but an effective system for reviewing and refining is critical to help educational institutions adopt contemporary skills, knowledge, and values. As a result, many alternative processes investigate deliberately structured time and techniques for collaboratively evaluating, learning about, adapting, and changing one's behaviour or procedures that are intentionally crafted as an element (Goss, 2022). They assist learning communities in understanding the implications of specific circumstances of the people experiencing that phenomenon, adopt or adapt

them, and in a more general context, they have a sturdy approach to support continual development or adaptability. Resilient societies flourish by shifting their priorities, learning, and rejuvenating what is critical about themselves and their culture as a result of their capacity to undergo reforms that are likely to have long-term benefits.

2.2. Challenges Posed by an Ever-Changing World

Together, the technical and managerial revolutions are transforming societies and economies, relationships and interactions. They are generating tremendous opportunities, raising daunting challenges, and producing more than a little uncertainty. Technological change means that skills are becoming obsolete much faster, or at least do not hold their value for as long, proving the conventional route from education to work to retirement that much more precarious (McGuinness et al., 2023). In addition, global demographic trends and globalization are magnifying labour market and economic uncertainties. These shifts imply that securities once associated with education for the future are today an artifact of the past.

The question of relevance

is crucial for a number of reasons. For three or four decades now, and against the backdrop of globalization, in terms of opportunity and risk, people have increasingly been asked to move across sectors, enterprises, and jurisdictions in search of work; skills and competencies deemed transferable and applicable irrespective of the place. As a result, from the individual's point of view, local economic context, enterprise characteristics, sectoral requirements, and jurisdictional rules retain less relevance. The continued decline, therefore, in the value of education and qualifications which have a "strong" local institutional embedding results in increasing labor market risk and social uncertainty. In the face of rapid and unpredictable change, the challenge for us all is to rethink, design, and construct education frameworks which might finally match people's real rather than merely imagined and assumed needs. If we are to believe the prophets of decline, sluggish demand for education related to youth unemployment is but one side of the iceberg. It represents a combined consequence of policy limitations and the attributes of practice and their interconnected failures to lead to sustainable employment. Educational institutions that do not adapt

to this new environment risk losing their relevance and legitimacy. How to approach the change challenges and the policy measures proposed constitutes a separate section. Our starting point, the "last" relevant point, highlights the current framework of education and qualifications (Izumi et al., 2021).

3. The Pandemic as a Catalyst: Surviving the Reboot

Throughout the covid-19 pandemic, educational systems have had a trying and transformative experience. Teachers operated in a constant state of burned-out hyperdrive, public health workers had to address the discrepancies and inequities faced in the home. Leaders from all sectors had to learn how to work together to ensure that money, resources, and aid were properly allocated to the students, their families, and the schools and universities that serve them (Leichenko et al., 2022).

The pandemic has accelerated the automation and elimination of jobs, companies, and industries. It also exposed underlying weaknesses and disruptions faced by education systems around the world. Now, after more than a year of implementation

and adaptation, we can use these lessons to understand the characteristics of a more adaptable, resilient educational system in the future. The pandemic also exposed the best and worst in everyone. It shone a light on some of the struggles of the field, but also showed the incredible dedication, creativity, and passion of educators (Meinck et al., 2022). Most notably, the solution wasn't a culprit but an advance in innovation and technology, which finally revolutionized the education framework. All of these changes provide invaluable systemic information to help improve, build, and support a more adaptable and responsive educational system in the years ahead.

3.1. Practical Strategies for Navigating Change

In curriculum development, modules and learning outcomes should be framed with learning culture in mind rather than as a prescription of content, as open as possible and with the ability to be tweaked. Curriculum mapping should be prioritized rather than listing prescriptive existing content or knowledge. Create teams of scholars and faculty to be the project leads for embedding employability in modules and for developing a 1-5 year walk-off for a program

of study that includes real-world footprints, employer footprints, and literate alumni. Staff and professional development should also be a priority for the sector to allow staff to build resilience: a deep understanding of doctoral education, scholarly practice, undergraduate education, emotional intelligence, and agile thinking (Onyura et al., 2022). Adaptation requires program leaders and faculty to develop, share, and re-evaluate learning and teaching practices with peer observation, shadowing, mentoring, etc., and to change educational delivery methods and pedagogical approaches.

To do so, institutions need effective teaching and learning strategies and deep and authentic partnerships. Education can involve institutions and their local communities or organizations in their strategies of teaching and learning systematically (Maki, 2023).

4. Creating Sustainable and Resilient Systems

In its traditional environmental sense, sustainability references ongoing viability and resilience. It is increasingly clear, however, that while an institution must be ecologically efficient and effective in its use of resources, it must also be viable in economic terms, embodying these two concepts: efficiency and resilience. To be sustainable, as we see it, also

implies being economically viable; it is efficient, yet must also be resilient, which is a positive term for change. This definition of sustainability encompasses both internal and external factors that affect the system. The cultural dimension of sustainability in higher education is described in terms of the organization having good stewardship of its staff, respecting its employees and management, and fostering respectful relations with local and regional communities. Education is no exception to these rules. Educational reform is, however, less about fundamental change than about the establishment of a robust, sustainable, and self-perpetuating change dynamic. By adopting strategies that support the institution and create a culture over time, education can be transformed, changed, repositioned, reorganized, or reformatted, and the change will replace the status quo and become the dominant paradigms that are defended. Changing the culture will allow change to happen, rather than reform of existing systems and reshaping old models. There are three important practices that can be used to promote change. Internal sustainability is crucial. To develop an effective organization, we need both good leadership and personnel who are motivated, committed, and professional. A key requirement of an

effective organization is its autonomy and internal sustainability: the ability to preserve its dual teaching and research functions and recreate continually in the face of changing staff, student, and community expectations. Any future change that universities might contemplate needs to maintain this internal sustainability – that is, the legitimacy of the core function of the university and the continuing relevance of that function to the broader society. For most of the first one hundred and seventy years of its existence, it remained a remote cultural island, separate from the complex societies that surrounded it. Developing human and material resources has been a challenge and may well enhance the adaptive capacity, or more plainly stated, the sustainability of the region through the development and application of sustainability as one of the defining attributes of education will be vital in ensuring the future of the institution (Budihardjo et al.2021). Extra-institutional changes can also be brought about, as has been discussed, inward looking and by positive role modeling, in such a way as to reprioritize and adapt the activities of an entire region. Enhancement of the adaptive capacity of a region often means examining the region's ability to continue operating as it is. Of exploitation of human and natural resources

and the validity of the social, economic, and political systems in which a region is immersed, and then making decisions about whether or not that sustainability is desirable or whether it can be manipulated in such a way to build or reform the system (Leal et al.2020). These are two potentially conflicting statements: knowingly maximize community capacity and resilience in the face of transition; and making transition as an agent of positive change, proactively affecting and manipulating the nature of the changes that will occur. Whether these two can co-exist is central to the development of an approach to external sustainability and analysis.

The pie chart in figure 2 illustrates the distribution of key areas essential for creating sustainable and resilient education systems post-reboot.

4.1. Fostering Internal Sustainability

For an institution to become truly sustainable, it must fully integrate environmental, social, and economic sustainability into all of its operations and models of education. This requires the development of a consensus vision and clear leadership to promote this across the institution. It also requires appropriate mechanisms and professional development to achieve practice among all staff.

Building Operational Capacity:

- Sustainable leadership is a necessary requirement to change organizational culture. Decisions informed by sustainability values are needed.
- Professional development: Equipping staff with the skills and professional development opportunities to embed sustainability thinking and learning in their practice.
- Working in silos: Staff should

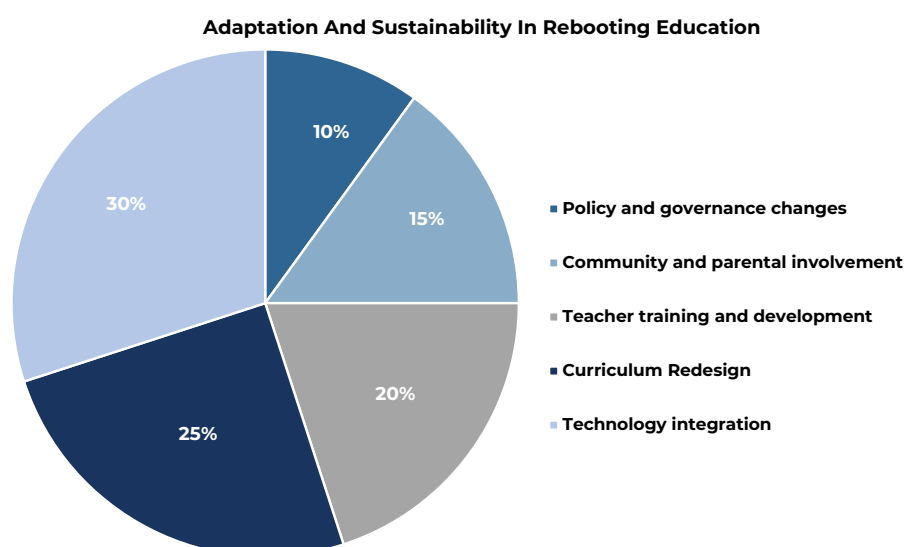


Fig. 2

be supported in networking and working across faculties and professional areas.

Systems and Accountability:

- Processes: Sustainability principles and practices should be integrated into transparent processes for recruitment, new courses, buildings, and awards.
- Sharing/celebrating: Case studies show that staff and student morale increases when their efforts are celebrated. Internal communication strategies can also assist in integrating sustainability.

Shared Vision:

- Mission: Sustainability should be embedded in the strategic plans and central to everyday practice.
- Operations: The praxis of the institution integrates internal and operational sustainability. Internationally, guidance encouraged institutions to minimize side effects associated with operations and actively protect the environment as part of educational practices. This guidance can assist in 'normalising' sustainability.
- Business as usual: It was highlighted that to be part of everyday activity, sustainability should be measured across management practices, balanced scorecards, management systems, financial, and resource management criteria.

Internal Curriculum and Assessment:

- Education for all: A shared commitment to fostering an education for sustainability for all staff and students.

5. Conclusion

It is clear that education continually has to respond to having the goalposts moved and can never be a system that rests on its laurels. Institutions, stakeholders and policymaking bodies all have to be ever watchful for the flags of change and wave upon wave of new challenges and work out how to respond to them. Perhaps above all, the stakeholders we prepare for the future must be ready for whatever may be heading their way (Kurian, 2024). Change and adaptability must factor highly in their life-skill arsenal and we owe it to them as educators to equip them well. When we talk about transformative teaching we aren't only discussing exciting pedagogies or deliverable practices, but we are actually discussing something which is crucial. We are talking about real change, about how change hits our institutions and how we can respond effectively to that change.

Perhaps the single recurring strand through all the strategies we have looked at in this information rich context is resilience and adaptability. The current educational climate thrives on specialisation and a rather narrow viewpoint. The preference for this isn't going to disappear. However there are a number of recommendations

here that offer some hope. Perhaps there's a framework for future policy and practice that focuses as much, or indeed more, on adaptability and generalisation as it does on specialisation. The notion of on the job learning has been piloted, so might networking our degree courses to give students a broader view of the subject and of higher education (Kholiavko et al. 2021). There could treat employability and transferable skills as inherent within the degree subject, with no separate micro-accrediting course required. PhD programmes at universities are not isolated entities or indeed the chief element: increasingly, PhDs cross with appointments as guest lecturers and include teaching, either as a module of a wider masters or as a stand-alone series.

Following this analytical process, findings regarding the negative and positive pandemic impact, the strategies that can be adopted to ameliorate these challenges and maximise newfound opportunities, as well as the support needed to implement new strategies are discussed. As a final and related emergent theme, we resurfaced the persistent goal for professional educator development to manage and cope with the relentless need for change. Individual country authors reported all of these

5.2. Implications and Recommendations for Future Research

The findings have implications for those schools, policymakers, and practitioners considering their educational practice and their policies. The key challenges reflect areas that will need to be resolved for schools to engage and navigate change—potentially influencing and informing national policy changes. However, the strategies also included a number of practice areas that do not necessarily relate to policy change, such as explicit teaching and student participation. Moreover, the strategies regarding changes to the broader education system were all framed in terms of ‘adopting’ schools rather than adapting the system. The strategies, therefore, imply potential future changes to educational systems if they become adopted and embedded within practice.

The future research should: explore specific responses to these challenges. Future research should further explore how schools have been implementing curriculum changes and how competing time pressures are negotiable. Future research could explore how autonomy is perceived, enacted, and negotiated in remote and discrete settings. Investigate the extent to which the strategies proposed have

caused policy changes.

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