Fostering Resilience in Educational Institutions
Strategies for Sustainable Growth

Rachna Jain* and Shikha Sharma**

Abstract

In today's dynamic and unpredictable environment, educational institutes face a myriad of challenges that can disrupt their operations and impact their ability to fulfil their core mission of educating students. From natural disasters and pandemics to economic downturns and social unrest, the need for resilience in educational settings has never been more evident. This paper explores the multifaceted nature of resilience in educational institutes, examining its theoretical foundations, practical implications and strategies for implementation. Drawing upon a review of relevant literature and case studies, the paper highlights the importance of adaptability, resourcefulness, collaboration and emotional intelligence in fostering resilience. It also discusses the role of leadership, organisational culture, community engagement and external support systems in enhancing resilience within educational institutes. By offering insights into the complexities of resilience and providing actionable strategies for building resilience in educational settings, this paper aims to empower educators, administrators and policymakers to navigate challenges effectively, and ensure the continuity of learning and achievement for all students.

Keywords: *Resilience, educational institutes, adaptability, collaborative network, crisis management, technology*

INTRODUCTION

Educational institutes play a vital role in shaping the future of society by providing students with knowledge, skills and values they need to succeed in an ever-changing world. However, these institutions are not immune to disruptions, ranging from natural disasters and pandemics to economic downturns and social unrest. In the face of such challenges, resilience emerges as a critical concept, encompassing the ability of educational institutes

*Associate Professor, Department of Commerce, Maharaja Agrasen Institute of Management Studies
**Assistant Professor, Maharaja Agrasen Institute of Management Studies, GGSIPU

to adapt, recover and thrive despite adversity.

The United Nations Educational, Scientific and Cultural Organization (UNESCO, 2021) has pushed for the institutionalisation of crisis and risk management in educational institutions utilising coordinating structures and policies aimed at building resilience against pandemics and health catastrophes. Resilience is the capacity of people, institutions and systems to deal with risks brought on by unforeseen outside circumstances (Campos, 2020). Resilience can be broadly defined as an ecosystem's, society's or individual's ability to recover from change and stress, whether the stress is minor for example, a reorganisation of the curriculum or faculty, or major like the COVID-19 pandemic, which has made resilience a household term (Ang et al., 2021; Bondeli and Havenvid, 2022). Educational institutions are compelled by altered environmental circumstances to modify their tactics and procedures by reallocating their resources (Conz and Magnani, 2020). If systems-level resilience techniques are implemented, institutionalising resilience may help companies recover more quickly.

In the context of education, resilience development is essential to enable stakeholders to maintain fair and appropriate learning opportunities and outcomes for every student. Resilience is the foundation for both career and academic success (Das, 2019; Cutter et al., 2008), as well as psychological well-being (Ang et al., 2022). The advantages of resilience are widely known but despite students' implicit training in this area, such as in the medical industry, it has seldom been an objective of education (Baik et al., 2019). According to Masten et al. (2008), education is the best environment for fostering resilience.

According to Bowen (2016), change in education and institutions necessitates considering as many variables as feasible. Complexity theory, described as "a theory of survival, evolution, development and adaptation", is a perspective to approach issues of change (Feder et al., 2010). The theory recognises that not all occurrences can be explained sequentially and that distinguished system components are always interacting with one another (Brewer et al., 2019). Therefore, to change an existing ethos in an educational setting, interventions from a variety of structures and agencies—including teachers, students, parents, community leaders, business organisations, states and education departments, are required (Friedlander et al., 2007).

This paper seeks to explore the multifaceted nature of resilience in educational settings, examining its theoretical underpinnings, practical implications and strategies for implementation. By drawing upon a review of relevant literature and real-world case studies, this paper aims to deepen our understanding

of resilience and provide actionable insights for educators, administrators and policymakers.

THEORETICAL UNDERPINNINGS OF RESILIENCE IN EDUCATIONAL SETTINGS

Resilience in educational settings can be understood through various theoretical frameworks, including ecological systems theory, social-ecological model and psychological resilience theories. Ecological systems theory highlights the interconnectedness of individuals, environments and systems, emphasising the importance of adapting to changing contexts and leveraging resources effectively (Dorrance et al., 2020). The social-ecological model emphasises the role of multiple levels of influence from individual characteristics to community and societal factors, in shaping resilience. Psychological resilience theories focus on individual traits and processes, such as coping strategies, self-efficacy and emotional regulation, that contribute to resilience (Feder et al., 2010).

Resilience in educational institutes encompasses a multifaceted set of capabilities and attributes that enable individuals, institutions and communities to navigate challenges effectively, while maintaining their core functions and achieving the desired outcomes.

Key components of resilience in educational settings include—

1. **Adaptability:** The ability to flexibly respond to changing circumstances, uncertainties and disruptions is essential for resilience. Educational institutes must be able to adjust their strategies, policies and practices in the face of evolving challenges to ensure continuity and effectiveness (Houghton and Anderson, 2017).

2. **Resourcefulness:** Resilient educational institutes leverage their resources effectively, solve problems creatively and find innovative solutions to overcome obstacles. They maximise the use of available assets, including human capital, financial resources, technology and community partnerships to address challenges and achieve their goals (Heckman et al., 2014).

3. **Collaboration:** Building strong collaborative networks and partnerships within and beyond the educational community is crucial for resilience. Collaborative approaches foster collective problem-solving, shared learning and mutual support, enabling stakeholders to pool their resources and expertise to address complex challenges more effectively (Borazon et al., 2023; Joyce et al., 2018).

4. **Emotional Intelligence**: Developing emotional intelligence among students, faculty and staff is essential for resilience. Emotional intelligence encompasses self-awareness, self-regulation,

empathy and interpersonal skills, which are critical for managing stress, navigating interpersonal conflicts and fostering positive relationships within the educational community (Avci et al., 2023).

Factors that Influence Resilience in Educational Institutes—

1. **Leadership**: Strong and visionary leadership plays a central role in fostering resilience within educational institutes. Effective leaders inspire confidence, provide direction and promote a culture of resilience through their actions, decisions and communication. They prioritise the well-being of their constituents, champion adaptive strategies and mobilise support to navigate challenges successfully (Chan et al., 2020).

2. **Organisational Culture**: The prevailing values, norms and beliefs within an educational institute shape its resilience capacity. Cultivating a culture of trust, transparency, collaboration and continuous learning fosters resilience among students, faculty and staff. An inclusive and supportive organisational culture encourages innovation, risk-taking and resilience-building behaviours (Dietrich et al., 2020).

3. **Community Engagement**: Engaging with the broader community—including students, families, alumni, local organisations and policymakers—is essential for resilience. Strong community connections provide additional resources, expertise and support networks that can bolster the resilience of educational institutes. Community engagement fosters a sense of belonging, shared ownership and collective responsibility for addressing challenges and promoting positive change (De los et al., 2022).

4. **External Support Systems**: Access to external support systems, including government agencies, non-profit organisations and philanthropic foundations can enhance the resilience of educational institutes. External support may take the form of financial assistance, technical expertise, professional development opportunities or crisis intervention services, augmenting the institute's capacity to withstand and rebound from adversity.

By nurturing adaptability, resourcefulness, collaboration and emotional intelligence within a supportive context of leadership, organisational culture, community engagement and external support systems, educational institutes can strengthen their resilience and better prepare themselves to thrive in the face of challenges.

CHALLENGES FACED BY EDUCATIONAL INSTITUTES

Educational institutes encounter a diverse array of challenges that can disrupt normal operations and impede their ability to fulfill their educational mission. This section identifies common challenges faced by educational institutions, including natural disasters, such as earthquakes and hurricanes, public health crises like the COVID-19 pandemic, economic recessions, technological disruptions and social unrest. Building resilience in educational institutes is essential to prepare for the challenges of future. However, several key challenges must be addressed to effectively cultivate resilience in these settings:

1. **Technological Infrastructure and Access Disparities:** Disparities in access to technology and reliable internet connectivity can hinder the implementation of online learning platforms and other digital resources, particularly for students from marginalised communities (Borazon et al., 2023).

2. **Mental Health and Well-being Concerns:** The increasing prevalence of mental health issues among students, faculty and staff poses a significant challenge for building resilience. Addressing stigma, increasing access to mental health resources and promoting self-care practices are critical components of resilience-building efforts (Hougton et al., 2017).

3. **Adapting to Rapid Technological Changes:** Educational institutions must continuously adapt to rapid technological advancements to remain relevant and effective. Integrating new technologies into teaching and learning practices requires ongoing training and support for educators (Chan et al., 2020).

4. **Financial Pressures and Resource Constraints:** Budgetary constraints and competing priorities can limit the resources available for resilience-building initiatives. Educational institutions must find creative solutions to address financial pressures while still prioritising the well-being and success of their communities (Wong, 2020).

5. **Social and Emotional Learning Needs:** Developing students' social and emotional skills is essential for building resilience. However, integrating Social and Emotional Learning (SEL) initiatives into the curriculum requires dedicated time, resources and support from educators and administrators (De los et al., 2021).

6. **Navigating Uncertainty and Change:** Educational institutions must navigate an increasingly complex and uncertain landscape, including demographic shifts, policy changes and global crises, such as pandemics

and climate change. Building resilience involves developing adaptive strategies to respond effectively to these challenges (Cohrssen et al., 2022).

7. **Promoting Equity and Inclusion:** Ensuring equity and inclusion within educational settings is critical for building resilience among all members of the community. Addressing systemic barriers and fostering a sense of belonging for diverse populations requires intentional efforts and ongoing commitment (Kinchin, 2022).

8. **Engaging Stakeholders and Building Community Partnerships:** Building resilience requires collaboration and partnership among various stakeholders, including educators, students, families, community organisations and policymakers. Engaging these stakeholders effectively and building strong community networks is essential for resilience-building efforts (Mahat et al., 2022).

9. **Addressing Learning Loss and Academic Recovery:** Educational institutions must address the learning loss and academic challenges resulting from disruptions, such as school closures and remote learning. Implementing targeted interventions and support services to facilitate academic recovery is essential for building resilience and ensuring the success of students (Erikson et al., 2020).

10. **Preparing for Future Unknown Challenges:** While it is essential to address current challenges, educational institutions must also prepare for future unknown challenges. Building resilience involves fostering a culture of continuous learning, adaptation and innovation to respond effectively to emerging threats and opportunities (Kedraka and Kaltsidis, 2020).

By addressing these challenges proactively and implementing effective resilience-building strategies, educational institutes can better prepare themselves to navigate the uncertainties of tomorrow and support the well-being and success of their communities.

STRATEGIES FOR BUILDING RESILIENCE

Building resilience in educational institutes requires a multifaceted approach that encompasses leadership, governance, crisis management, adaptability, community engagement and psychological support (Marinoni et al., 2020; Peters et al., 2020; McGaughey et al., 2021; Watermeyer et al., 2021).

1. **Fostering a Resilient Culture through Effective Leadership and Governance**

   • **Leadership Development Programmes:** Implement training programmes for

school administrators and faculty members to enhance their leadership skills, including fostering resilience among their teams.

- **Transparent Communication:** Foster open and transparent communication channels between leadership, staff, students and parents to build trust and cohesion during challenging times.

- **Establish Clear Values and Mission:** Ensure that the school's values and mission prioritise resilience, adaptability and commitment to support, the well-being of all members of the educational community.

- **Encourage Feedback and Collaboration:** Create opprtunities for feedback and collaboration among stakeholders to continuously improve processes and responses to adversity.

2. **Developing Robust Crisis Management Plans and Protocols**

- **Risk Assessment and Planning:** Conduct thorough risk assessments to identify potential threats and vulnerabilities, and develop comprehensive crisis management plans to address various scenarios.

- **Regular Training and Drills:** Conduct regular training sessions and drills to ensure that faculty, staff and students are prepared to implement crisis management protocols effectively in real-world situations.

- **Clear Roles and Responsibilities:** Define clear roles and responsibilities for different stakeholders during a crisis, ensuring efficient coordination and decision-making.

- **Continuous Improvement:** Regularly review and update crisis management plans based on lessons learned from past experiences, feedback from stakeholders and changes in the educational environment.

3. **Embracing Adaptability and Innovation in Response to Change**

- **Promote a Culture of Innovation:** Encourage creativity and innovation among faculty, staff and students to develop new approaches and solutions to challenges.

- **Flexibility in Curriculum Delivery:** Embrace flexible teaching methods and educational technologies to accommodate changes in learning environments, such as hybrid or remote-learning models.

- **Adaptive Leadership:** Encourage leaders to adapt their

leadership styles and strategies in response to changing circumstances, demonstrating resilience and agility in navigating uncertainty.

- **Encourage Experimentation and Risk-taking:** Create a supportive environment where individuals feel empowered to experiment with new ideas and take calculated risks to drive innovation and adaptation.

4. **Building Collaborative Networks and Partnerships within the Community**

- **Engage with Community Stakeholders:** Forge partnerships with local organisations, businesses and community groups to leverage resources, expertise and support networks during times of need.

- **Mutual Aid and Support:** Establish reciprocal relationships with other educational institutions to provide mutual aid and support during crises, such as sharing resources and coordinating response efforts.

- **Community Engagement Events:** Organise community engagement events and initiatives to foster connections and collaboration among stakeholders, building a sense of solidarity and collective resilience.

5. **Providing Psychological and Emotional Support for Students, Faculty and Staff**

- **Access to Mental Health Resources:** Ensure that students, faculty and staff have access to mental health resources, such as counselling services, support groups and crisis hotlines.

- **Promote Self-care Practices:** Offer workshops and resources on stress management, mindfulness and self-care practices to help individuals cope with the psychological and emotional impacts of adversity.

- **Peer Support Networks:** Facilitate peer support networks where students, faculty and staff can connect with others who may be experiencing similar challenges, providing a sense of belonging and understanding.

6. **Leveraging Technology for Continuity of Learning and Operations**

- **Infrastructure and Connectivity:** Invest in robust technology infrastructure and ensure equitable access to devices and internet connectivity for all students, faculty and staff.

- **Online Learning Platforms:** Utilise online learning platforms and educational technology tools to facilitate continuity of learning during disruptions to in-person instructions.

- **Virtual Communication Tools:** Leverage virtual communication tools, such as video conferencing and messaging platforms to facilitate collaboration, communication and information sharing among stakeholders.

By implementing these strategies, educational institutions can cultivate resilience among their communities, enabling them to navigate challenges effectively and thrive in an ever-changing environment.

Table 1: Policy reforms for educational institutions

Aspects	Policy Reforms	Strategies	Challenges	Solutions
Access and Equity	Right to Education Act (2009), Sarva Shiksha Abhiyan	Targeted interventions for marginalised communities, and inclusive policies	Disparities in rural vs urban education, socio-economic disparities, and gender gaps	Improve infrastructure in rural areas, enhance scholarships and subsidies for marginalised groups, and enforce gender-sensitive policies
Quality of Education	National Education Policy 2020, Quality Improvement Programmes	Teacher training and capacity building, curriculum reforms, and technology integration	Teacher shortages, outdated curricula, and lack of resources	Invest in teacher training, curriculum reforms, technology integration and resource allocation
Skill Development	Skill India Mission, Vocational Education Programmes	Strengthen vocational training, and industry-academia collaborations	Mismatch between industry requirements and academic curriculum, and lack of infrastructure for vocational training	Modernise vocational education infrastructure, align curriculum with industry needs, and expand apprenticeship programmes

Digital Learning	Digital India Initiative, Digital Education Platforms	Expand digital infrastructure, provide digital literacy programmes	Digital divide, lack of access to devices and internet connectivity, and affordability	Provide affordable access to devices and internet, promote digital literacy and ensure equitable access to digital resources
Inclusive Education	Inclusive Education Policy, Disability Rights Legislation	Specialised training for teachers, and accessible infrastructure	Lack of awareness, stigma, and inaccessible infrastructure	Raise awareness, provide training and ensure accessibility
Governance and Funding	National Education Policy 2020, Funding Reforms	Improve governance structures, and increase transparency and accountability	Bureaucratic hurdles, corruption, and insufficient funding	Strengthen oversight mechanisms, enhance transparency and allocate adequate funds for educational initiatives
Assessment and Evaluation	Continuous Comprehensive Evaluation (CCE), National Testing Agency (NTA)	Implement holistic assessment methods, and reduce emphasis on standardised testing	Exam pressure, rote-learning culture, and lack of feedback	Shift focus from exams to holistic assessment, promote critical thinking and problem-solving skills

Source: Author

CASE STUDIES AND BEST PRACTICES

To illustrate the implementation of resilience strategies in educational institutes, this section presents case studies and best practices from resilient institutions around the world. These case studies highlight successful resilience initiatives undertaken during crises, such as natural disasters, public health emergencies and economic downturns. By examining real-world examples of resilience in action, educational leaders can gain valuable insights and inspiration for their resilience-building efforts.

1. Singapore Management University (SMU)

Case Study: In 2003, the Severe Acute Respiratory Syndrome (SARS) outbreak posed significant challenges to educational institutions worldwide. Singapore Management University (SMU), despite being a young institution, demonstrated remarkable resilience during this crisis (Lim, 2005).

Best Practices

- **Effective Crisis Communication:** SMU prioritised transparent and timely communication with stakeholders, including students, faculty, staff and parents to provide accurate information and alleviate anxiety.
- **Flexible Learning Approaches:** The university swiftly transitioned to online learning platforms and leveraged technology to ensure continuity of education, enabling students to continue their studies without significant disruption.
- **Emphasis on Student Well-being:** SMU implemented support measures to address the mental and emotional well-being of students, including counselling services, virtual support groups and wellness resources.

2. University of Canterbury, New Zealand

Case Study: In 2010 and 2011, the University of Canterbury faced a series of devastating earthquakes that significantly disrupted campus infrastructure and operations (Johnston et al., 2012).

Best Practices

- **Resilient Infrastructure:** Following the earthquakes, the university invested in rebuilding and retrofitting campus buildings to higher seismic standards, ensuring the safety and resilience of its physical infrastructure against future disasters.
- **Community Engagement:** The university actively engaged with the local community, including businesses, government agencies and non-profit organisations, to coordinate recovery efforts and support the broader community's resilience.
- **Student Support Services:** Recognising the impact of earthquakes on student well-being, the university expanded its student support services, including counselling, accommodation assistance and financial aid to help students cope with the challenges they face.

3. Massachusetts Institute of Technology (MIT), United States

Case Study: In 2013, the city of Boston experienced a terrorist attack during the Boston Marathon, raising security concerns and disrupting normal operations for educational institutions in the area, including MIT (Goodwin and Harvard, 2013).

Best Practices

- **Proactive Security Measures:** MIT implemented proactive security measures, including increased police presence, enhanced surveillance and emergency preparedness drills to ensure the safety and security of its campus community.

- **Crisis Response Protocols:** The university had well-defined crisis response protocols in place, enabling rapid mobilisation of resources and effective coordination of emergency response efforts in collaboration with local authorities.

- **Support for Affected Individuals:** MIT provided comprehensive support services for individuals affected by the incident, including counselling, medical assistance and financial support, demonstrating its commitment to the well-being of its community members.

4. University of Cape Town (UCT), South Africa

Case Study: In 2015 and 2017, the University of Cape Town faced widespread protests and social unrest over issues related to tuition fees, institutional governance and social justice (Abrahams and Laher, 2019).

Best Practices

- **Dialogue and Engagement:** UCT prioritised open dialogue and engagement with student groups, faculty, staff and other stakeholders to address grievances, foster understanding and find mutually acceptable solutions to the underlying issues.

- **Conflict Resolution Mechanisms:** The university established conflict resolution mechanisms, including mediation and arbitration processes to peacefully resolve disputes and prevent escalation into violence or prolonged disruptions.

- **Commitment to Transformation:** UCT reaffirmed its commitment to transformation and social justice, undertaking initiatives to address systemic inequalities within the institution and promote diversity, equity and inclusion across all aspects of campus life.

5. University of Tokyo, Japan

Case Study: In 2011, Japan experienced a devastating earthquake and tsunami, followed by a nuclear disaster at the Fukushima Daiichi Nuclear Power Plant. The University of Tokyo, located near the affected areas, faced significant challenges in ensuring the safety and well-being of its students, faculty and staff (Izumi and Shaw, 2012).

Best Practices

- **Disaster Preparedness and Response:** The University of Tokyo had comprehensive disaster preparedness and response plans in place, including evacuation procedures, emergency communication protocols and

crisis management teams, enabling swift and coordinated action in the aftermath of the disaster.

- **Collaboration with External Agencies:** The university collaborated closely with government agencies, relief organisations and other educational institutions to coordinate emergency response efforts, share resources and provide support to affected communities.

- **Recovery and Reconstruction**: Following the disaster, the University of Tokyo actively contributed to the recovery and reconstruction efforts in the affected areas, mobilising its expertise, resources and research capabilities to address the complex challenges facing the region.

These case studies highlight the diverse challenges faced by educational institutions worldwide and the innovative resilience strategies they have implemented to overcome adversity. By learning from these best practices and adapting them to their unique contexts, educational leaders can enhance the resilience of their institutions and ensure continuity of education in the face of future challenges. Through effective crisis communication, proactive planning, community engagement and a commitment to student well-being, educational institutions can emerge stronger from crises and fulfill their mission of providing high-quality education to students.

FUTURE DIRECTIONS AND RECOMMENDATIONS

Future research and practice in building resilience in educational institutes should focus on addressing gaps in understanding, exploring innovative approaches and fostering collaboration among stakeholders. Here are some recommendations for future research and practice in this area:

1. **Longitudinal Studies:** Conduct longitudinal studies to track the effectiveness of resilience-building interventions over time. This research can provide insights into the long-term impact of various strategies and identify factors that contribute to sustained resilience in educational institutes (Bustamante et al., 2023).

2. **Contextualised Research:** Explore resilience within diverse cultural, social and economic contexts. Research should consider the unique challenges faced by different educational institutes and communities, and identify context-specific resilience-building strategies (Banihashem et al., 2022).

3. **Intersectionality:** Investigate how intersecting factors, such as gender, ethnicity, socio-economic status and geographic location influence resilience in educational

settings. Understanding how multiple identities intersect to shape resilience can inform more inclusive and targeted interventions (Houghton and Anderson, 2017).

4. **Technology and Innovation**: Explore the role of technology and innovation in building resilience in educational institutions. Research should examine how digital platforms, artificial intelligence, virtual reality and other technological tools can support resilience-building efforts and improve learning outcomes (Johnson et al., 2012).

5. **Teacher Training and Support:** Investigate the impact of teacher training and support programmes on building resilience among educators and students. Research should evaluate the effectiveness of professional development initiatives, mentoring programmes and well-being interventions for educators (Banihashem et al., 2022).

6. **Communal Engagement:** Explore the role of community engagement in building resilience in educational institutes. Research should examine how partnerships with parents, families, local organisations and other stakeholders can strengthen support networks and enhance resilience among students and educators (Cutter et al., 2008).

7. **Policy Evaluation:** Evaluate the implementation and impact of policy reforms to build resilience in educational institutes. Research should assess the effectiveness of policy initiatives, identify implementation barriers and recommend policy adjustments based on empirical evidence (De los et al., 2021).

8. **Promoting Student Voice:** Investigate strategies for promoting student voice and agency in resilience-building efforts. Research should explore how involving students in decision-making processes, peer support networks and leadership opportunities can empower them to develop resilience skills (Kedraka and Kaltsidis, 2020).

9. **Cross-sector Collaboration:** Foster cross-sector collaboration between educational institutes, government agencies, non-profit organisations and the private sector. Research should explore innovative models of collaboration and examine their impact on resilience outcomes (Avci et al., 2023).

10. **Capacity Building:** Develop capacity-building initiatives to support educators, administrators and policymakers in implementing resilience-building strategies. Research should identify best practices in training, professional

development and knowledge exchange to build expertise and strengthen resilience efforts (Joyce et al., 2008).

By addressing these research priorities and implementing evidence-based practices, educational institutes can enhance their capacity to build resilience and support the well-being and success of their communities.

Conclusion

In conclusion, resilience emerges as a vital attribute for educational institutes to thrive amid the complexities of the 21st century. Proactive leadership sets the tone, guiding institutions through challenges with vision and strategic foresight. Collaborative efforts harness the collective strength of diverse stakeholders, fostering unity and resilience within the educational community. Adaptability ensures institutions remain agile, ready to pivot strategies in response to evolving circumstances. Community engagement builds a robust support network, empowering stakeholders to weather storms together. By embodying these principles, educational institutes can fulfill their mission of nurturing future generations and advancing societal well-being, emerging stronger from adversity and poised for continued success in an ever-changing world.

References

Abrahams, L. and F. Laher. 2019. Social Movements in Higher Education: The Case of Rhodes Must Fall and the University of Cape Town. *Journal of Student Affairs in Africa.* 7(1). pp. 1–15.

Ang, W. H. D., S. Shorey, M. X. Y. Hoo, H. S. J. Chew and Y. Lau. 2021. The Role of Resilience in Higher Education: A Meta-ethnographic Analysis of Students' Experiences. *Journal of Professional Nursing.* 37(6). pp. 1092–1109.

———. V. Lopez, H. S. J. Chew and Y. Lau. 2022. Generation Z Undergraduate Students' Resilience During the COVID-19 Pandemic: A Qualitative Study. *Current Psychology.* 41(11). pp. 8132–8146.

Avci, D. and M. Ataç-Öksüz. 2023. The Relationship Between Resilience and Solution-oriented Thinking in Nursing Students. *Nurse Education in Practice.* 73. 103–813.

Baik, C., W. Larcombe and A. Brooker. 2019. How Universities can Enhance Student Mental Wellbeing: The Student Perspective. *Higher Education Research and Development.* 38(4). 674–687.

Banihashem, S. K., O. Noroozi, S. Van Ginkel, L. P. Macfadyen and H. J. Biemans. 2022. A Systematic Review of the Role of Learning Analytics in Enhancing Feedback Practices in Higher Education. *Educational Research Review.* 37. pp. 100–489.

Bondeli, J. V. and M. I. Havenvid. 2022. Bouncing Back in Turbulent Business Environments: Exploring Resilience in Business Networks. *Industrial Marketing Management.* 107. pp. 383–395.

BORAZON, E.Q. AND H.H. CHUANG. 2023. Resilience in Educational System: A Systematic Review and Directions for Future Research. *International Journal of Educational Development*. 99. pp. 102–761.

BOWEN, J. 2016. A Qualitative Case Study of Educational Resilience in At-Risk Inner City College Graduates. *ProQuest LLC*.

BREWER, M. L., G. VAN KESSEL, B. SANDERSON, F. NAUMANN, M. LANE, A. REUBENSON AND A. CARTER. 2019. Resilience in Higher Education Students: A Scoping Review. *Higher Education Research and Development*. 38(6). pp. 1105–1120.

BUSTAMANTE-MORA, A., M. DIÉGUEZ-REBOLLEDO, Y. HORMAZÁBAL, Y. VALDÉS AND R. CADENA. 2023. Learning Models for Higher Education in Engineering: Motivation, Self-Determination and the Role of Information and Communication Technologies. *Sustainability*. 15(17). 12869.

CAMPOS, P. 2020. Resilience, Education and Architecture: The Proactive and Educational Dimensions of the Spaces of Formation. *International Journal of Disaster Risk Reduction*. 43. pp. 101–391.

CHAN, H., T.G. MAZZUCCHELLI AND C.S. REES. 2020. The Battlehardened Academic: An Exploration of the Resilience of University Academics in the Face of Ongoing Criticism and Rejection of their Research. *Higher Education Research and Development*. 40. pp. 1–15.

COHRSSEN, C., J. BLANNIN, M. MAHAT AND E.J. DE LOS REYES. 2022. Academic Resilience: An Uncharted Terrain. In M. Mahat, J. Blannin, C. Cohrssen and E.J. da Reyes (Eds.), *Academic resilience (Surviving and Thriving in Academia)*. pp. 3–22. Emerald Publishing Limited.

CONZ, E. AND G. MAGNANI. 2020. A Dynamic Perspective on the Resilience of Firms: A Systematic Literature Review and a Framework for Future Research. *European Management Journal*. 38(3). 400–412.

CUTTER, S.L., L. BARNES, M. BERRY, C. BURTON, E. EVANS, E. TATE AND J. WEBB. 2008. A Place-based Model for Understanding Community Resilience to Natural Disasters. *Global Environmental Change*. 18(4). pp. 598–606.

DAS, D. 2019. Academic Resilience Among Children from Disadvantaged Social Groups in India. *Social Indicators Research*. 145(2). pp. 719–739.

DE LOS REYES, E.J., J. BLANNIN, AND M. MAHAT. 2022. Building Academic Resilience: Lessons for Academics and Institutions. In M. Mahat, J. Blannin, C. Cohrssen and E. J. de los Reyes (Eds.), *Academic Resilience Surviving and Thriving in Academia*. pp. 123–135. Emerald Publishing Limited.

DE LOS REYES, E., J. BLANNIN, C. COHRSSEN AND M. MAHAT. 2021. The Resilience of Higher Education Academics in the Time of 21st century Pandemics: A Narrative Review. *Journal of Higher Education Policy and Management*.

DIETRICH, N., K. KENTHESWARAN, A. AHMADI, J. TEYCHENÉ, Y. BESSIÈRE, S. ALFENORE, S. LABORIE, D. BASTOUL, K. LOUBIÈRE, C. GUIGUI, M. SPERANDIO, L. BARNA, E. PAUL, C. CABASSUD, A. LINÉ AND G. HEBRARD. 2020. Attempts, Successes and Failures of Distance Learning in the Time of COVID-19. *Journal of Chemical Education*. 97(9). pp. 2448–2457.

DORRANCE HALL, E., K.M. SCHARP, M. SANDERS AND L. BEATY. 2020. Family Communication Patterns and the Mediating Effects of Support and Resilience on Students' Concerns about College. *Family Relations*. 69(2). pp. 276–291.

ERIKSON, M., C. WALKER AND P. HANNA. 2020. Survey of Academics Finds Widespread Feelings of Stress and Overwork. The Conversation. https://theconversation.com/survey-of-academics-fnds-widespread-feelings-of-stress-and-overwork-130715.

FEDER, A., E.J. NESTLER, M. WESTPHAL AND D.S. CHARNEY. 2010. Psychobiological Mechanisms of Resilience to Stress. *Handbook of Adult Resilience*. pp. 35–54.

FRIEDLANDER, L.J., G.J. REID, N. SHUPAK AND R. CRIBBIE. 2007. Social Support, Self-esteem and Stress as Predictors of Adjustment to University Among First-year Undergraduates. *Journal of College Student Development*. 48(3). pp. 259–274.

GOODWIN, J. AND J. HARVARD. 2013. Public Response to Crisis: MIT and the Boston Marathon Bombing. MIT Sloan School of Management Case Study. pp. 1–7.

GOVERNMENT OF INDIA. 2009. Right to Education Act. http://www.educationforallinindia.com/Right-to-Education-Act-2009.html

———. Digital India Initiative. https://www.digitalindia.gov.in/

———. Sarva Shiksha Abhiyan. https://ssa.gov.in/

———. Skill India Mission. https://www.skillindia.gov.in/

HAMDAN-MANSOUR, A.M. AND H.A. DAWANI. 2008. Social Support and Stress Among University Students in Jordan. *International Journal of Mental Health and Addiction*. 6. pp. 442–450.

HECKMAN, S., H. LIM AND C. MONTALTO. 2014. Factors Related to Financial Stress Among College Students. *Journal of Financial Therapy*. 5(1). pp. 3.

HOUGHTON, A.M. AND J. ANDERSON. 2017. Embedding Mental Wellbeing in the Curriculum: Maximising Success in Higher Education. *Higher Education Academy*. 68. pp. 1–44.

IZUMI, T. AND R. SHAW. 2012. Resilience and Disaster Trends in Japan: A Review of the Literature. *International Journal of Disaster Risk Reduction*. 1. pp. 28–36.

JOHNSTON, D.M., D. PATON, B.F. HOUGHTON AND M.S. BEBBINGTON. 2014. Reconstructing the Evacuation Dynamics of a Natural Disaster Using Simulation Modelling: QuakeCity, Christchurch, New Zealand. *International Journal of Disaster Risk Reduction.* 10. pp. 328–339.

JOYCE, S., F. SHAND, J. TIGHE, S.J. LAURENT, R.A. BRYANT AND S.B. HARVEY. 2018. Road to Resilience: A Systematic Review and Meta-analysis of Resilience Training Programmes and Interventions. *BMJ open*. 8(6). e017858.

KEDRAKA, K. AND C. KALTSIDIS 2020. Effects of the COVID-19 Pandemic on University Pedagogy: Students' Experiences and Considerations. *European Journal of Education Studies*. 7(8). pp. 17–30.

KINCHIN, I.M. 2022. An Ecological Lens on the Professional Development of University Teachers. *Teaching in Higher Education*. 27(6). pp. 831–839.

LIM, M.K. 2005. Severe Acute Respiratory Syndrome (SARS): Lessons Learned and Future Directions. *Travel Medicine and Infectious Disease*. 3(1). pp. 15–25.

MAHAT, M., J. BLANNIN, C. COHRSSEN AND E.J. DA REYES. 2022. Academic Resilience: Thriving in Times of Adversity. In M. Mahat, J. Blannin, C. Cohrssen and E.J. da Reyes (Eds.), *Academic Resilience*: *Surviving and Thriving in Academia.* pp. 139–152. Emerald Publishing Limited.

MARINONI, G., H. VAN'T LAND, T. JENSEN. 2020. The Impact of COVID-19 on Higher Education Around the World. IAU Global Survey Report. *International Association of Universities.* pp. 50. https://www.unibasq.eus/ wp- conte nt/upload ds/ 2020b/ 06/ iau_ covid 19_ and_ he_ survey_report_ final_ may_ 2020b.pdf

McGAUGHEY, F., R. WATERMEYER, K. SHANKAR, V. RATNADEEP-SURI, C. KNIGHT, T. CRICK, J. HARDMAN, D. PHELAN AND R. CHUNG. 2021. This Can't Be the New Norm. Academics Perspectives on the COVID-19 Crisis for the Australian University Sector. *Higher Education Research and Development.* 41. pp. 2231.

MINISTRY OF EDUCATION, GOVERNMENT OF INDIA. 2020. National Education Policy 2020. https://www.education.gov.in/en/nep-new

———. (n.d.). Continuous Comprehensive Evaluation. https://mhrd.gov.in/cce

NATIONAL TESTING AGENCY. (n.d.). About Us. https://nta.ac.in/AboutUs

PETERS, M., F. RIZVI, G. McCULLOCH, P. GIBBS, R. GORUR, M. HONG, Y. HWANG, L. ZIPIN, M. BRENNAN, S. ROBERTSON, J. QUAY, J. MALBON, D. TAGLIETTI, R. BARNETT, W. CHENGBING, P. McLAREN, R. APPLE, M. PAPASTEPHANOU, N. BURBULES, L. MISIASZEK. 2020. Reimagining the New Pedagogical Possibilities for Universities Post-COVID-19: An EPAT Collective Project. *Educational Philosophy and Theory.* pp. 1–44.

UNITED NATIONS EDUCATIONAL, SCIENTIFIC AND CULTURAL ORGANIZATION (UNESCO). (N.D.). Inclusive Education Policy. https://en.unesco.org/themes/inclusive-education/policy

WATERMEYER, R., K. SHANKER. T. CRICK, C. KNIGHT, F. McGAUGHEY, J. HARDMAN, V. RATNADEEP SURI, R. CHUNG AND D. PHELAN. 2021. 'Pandemia': A Reckoning of UK Universities Corporate Response to COVID-19 and its Academic Fallout. *British Journal of Sociology of Education.* 42(5–6). pp. 651–666.

WONG, J. 2020. How Will the Pandemic Change Higher Education? *The Chronicle of Higher Education.* 66. pp. 20.