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A WHOLE-SCHOOL APPROACH TO DEVELOPING RESILIENCE: RESOURCES AND SUGGESTIONS FOR NEW ZEALAND SCHOOLS

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Abstract

In learning and life, there will always be challenges, requiring resilience to overcome, adapt, and persist in the face of adversity. Resilience is a key aspect of mental health and lifelong learning, reflected in the vision, key competencies, and health-related elements of the New Zealand Curriculum (Ministry of Education, 2007). Working on the understanding that schools can and should help learners to develop resilience, this article shares a recent inquiry undertaken by a full primary school in New Zealand (NZ), as part of a Teacher-Led Innovation Fund (TLIF) project. The inquiry approach and main findings are outlined, along with resources, and suggestions for schools striving to build a shared understanding of resilience among teachers, students, and parents. Our inquiry attests to the power of a whole school approach to the learning of resilience, underpinned by relational connections, the language of resilience and cross-curricula integration, as well as informal learning.

Keywords

Resilience; New Zealand; primary school; mental health; TLIF

This article reports on a recent [Teacher-Led Innovation Fund \(TLIF\)](#) inquiry project at [Horsham Downs School](#) (HDS) in Hamilton, New Zealand. The TLIF supported teachers to develop innovative practices designed to improve learning, in collaboration with researchers serving as critical friends. In this case, the first author is the deputy principal of HDS, and leader of the project; while the second author is the critical friend. Our funded collaboration, over an 18 month period, enabled a focus on **resilience** as a key condition for lifelong learning. Resilience can be understood as the capacity to keep going even when faced with challenges, disappointment, anxiety and frustration. Resilience enables us to cope, bounce back, adapt and grow when faced with negative events, difficult situations and adversity (McGrath & Noble, 2018).

Our inquiry sought to identify and trial teaching strategies that enable learners to develop resilience. First and foremost, we set out to establish a shared understanding of resilience as a concept. From this shared understanding followed a shift in thinking and behaviour, including mindsets, pedagogies, actions and engagement. A variety of programmes were introduced at all levels of the school, as part of teacher inquiries. Data was collected at baseline and throughout the inquiry period, via a range of survey tools and qualitative methods including observations, critical friend journals and written reflections. Findings indicated success in the formation of a shared understanding of resilience among teachers and students, with early indications of uptake within the parent community. Impact on teaching practice, emphasis on classroom culture and relational connections and an enhanced criticality emerged in teacher-related data. Meanwhile, students showed greater perseverance, metacognition and reflection, and set higher expectations when goal-setting. Both students and teachers developed their use of language promoting resilience, and worked to think more critically about the application of key concepts to their everyday behaviours. Resilience is now an underpinning value at our school, firmly embedded in the school character, learner profile and teaching practices. Since the successful completion of this study has positioned us to share more widely, we view this article as an opportunity to outline our processes and to highlight some of the key resources and strategies that have proven successful for our school. While a selection of resources are shared and reviewed as part of our findings,

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it is vital to emphasise that the success of the project was due to a whole-school approach, where teachers co-constructed shared understandings of resilience and devoted significant time to unravelling the complexities of resilience.

What does the research literature say about resilience?

There is general agreement that resilience is the capacity to overcome significant adversity via positive adaptation (Amatea et al., 2006; Berridge, 2017; Lipscomb et al., 2019; Liu et al., 2017; Masten, 2018; Poulou, 2007). Psychological resilience refers to the ability to adapt to stress and adversity, while academic resilience looks specifically at the ability to persist with academic studies despite challenges, failures and setbacks, and is therefore closely linked to self-regulated learning (Howell et al., 2018; Masten, 2018; Poulou, 2007).

Generally, resilience is characterised by having a strong sense of purpose, a positive outlook and a high level of personal efficacy (Amatea et al., 2006). Looking at each of these aspects in turn, having a sense of purpose means being able to set goals and to take positive steps, while learning from setbacks. Perseverance, reflection and help-seeking are all part of resilience (Howell et al., 2018). Having a positive outlook means being optimistic and confident that odds can be overcome (Amatea et al., 2006; Brooks, 2001; Masten, 2018; Poulou, 2007). This is the opposite of feeling hopeless. Having a high level of personal efficacy means showing initiative and perseverance. This presents as a ‘can do’ attitude, where adversity is viewed as normal and as an opportunity to learn. It means being proactive and rising to the challenge (Amatea et al., 2006).

As mentioned, the opposite of resilience is a condition characterised by feelings of low self-worth, incompetence, pessimism and a sense of hopelessness. This kind of despair can lead to self-defeating behaviours, such as quitting, avoidance, blame and anger; and in turn to a negative cycle where feelings of despair and defeat are intensified (Brooks, 2001).

Systematic theory and research on human resilience has existed for at least 50 years, and over time, understandings of resilience as a concept have developed to view it as a complex, multi-dimensional construct that goes beyond individual traits or invulnerability. Being resilient does not mean being indestructible, but being able to deal with challenges (Tempiski et al., 2012). While resilience is linked to agency, hope and motivation in individuals, it is also dependent upon access to resources within a community or environment (Berridge, 2017; Brooks, 2001; Masten, 2018; Poulou, 2007). As such, resilience has individual, relational and community components (Lipscomb et al., 2019; Liu et al., 2017; Poulou, 2007). These three layers of wellbeing, comprising an holistic process, are compatible with the socio-ecological perspective on mental health that underpins health and physical education in the New Zealand curriculum (Ministry of Education, 2007; Robertson, 2018). Resilience is dynamic, in that it is a changeable process, not static or stable over time or across contexts (Berridge, 2017; Lipscomb et al., 2019; Liu et al., 2017; Masten, 2018; Poulou, 2007).

Importantly, resilience can be built, and this is a key task for schools (Brooks, 2001; Poulou, 2007). As Brooks (2001) asserts, attention to the social-emotional lives of students is as important as academic content and skills. Crucially,

strengthening a student’s self-worth is not an “extra” curriculum; if anything, a student’s sense of belonging, security, and self-confidence in a classroom provides the scaffolding that supports the foundation for increased learning, motivation, self-discipline, responsibility, and the ability to deal more effectively with mistakes. (Brooks, 2001, p.11)

Resilience is nurtured over time through supportive relationships and environments that help children to feel safe and valued, while supporting problem solving and learning (Lipscomb et al., 2019). School experiences provide many opportunities to cultivate resilience, and teachers can strengthen resilience through responsive interactions during everyday moments (Lipscomb et al., 2019; Poulou, 2007). As well as through incidental teachable moments, resilience can be developed via educational programmes, typically premised on a strengths-building approach. Fundamentally, the emphasis on building strengths is a profound shift away from deficit models. Instead, the focus is on education, positive goals, resources, processes and outcomes (Masten, 2018; Poulou, 2007). Resilience can be promoted by building capacity for responding positively to challenges (Masten, 2018).

In summary, the research literature views resilience as the capacity to adapt positively when faced with life's challenges, big and small. Resilience enables us to move forward, past feeling hopeless or defeatist. Far from being simple, however, resilience is a complex and dynamic cluster of abilities and habits that are fundamental to personal growth. Neither is resilience an individual psychological matter, as it is promoted by the wider social environment, and is a key concern for teachers and curriculum.

How does resilience relate to the New Zealand Curriculum and to children's learning?

Recognition of the importance of resilience permeates the vision, key competencies and health-related elements of the New Zealand Curriculum (Ministry of Education, 2007). Articulating "what we want for our young people", the vision's emphasis on confident learners specifically lists "resilient" as a descriptor (Ministry of Education, 2007, p. 10). This emphasis follows through to managing self as a key competency, whereby "students who manage themselves are enterprising, resourceful, reliable, and resilient" (Ministry of Education, 2007, p. 14). Importantly, resilient learners have a "can-do" attitude and "strategies for meeting challenges" (Ministry of Education, 2007, p. 14). Further to this, students are encouraged to "develop resilience and a sense of personal and social responsibility" in health and physical education as they learn about mental health and wellbeing and develop competencies for mental wellness (Ministry of Education, 2007, pp. 24–25).

In keeping with these curriculum aims, we embarked on our inquiry in mid-2018, generating data and establishing programmes to promote resilience.

Inquiry project design: What we did

The whole school was involved in the inquiry. HDS is a full primary school (Years 0–8), organised into four teaching teams, with a roll of approximately 400 pupils and 20 classroom teachers. In brief, a range of tools were used to generate baseline and continuous data. These included surveys about staff confidence in relation to resilience. We identified a set of inventories by McGrath and Noble (2018) to help with monitoring shifts in practice in the first instance. These inventories enabled us to explore classroom connectedness from the perspectives of students and teachers, and to assess resilient behaviour. We also administered the Me and My School survey (NZCER, n.d.) at the beginning and end of the project. Having applied these inventories, we then developed our own matrix, tailored to local conditions, for future application, evaluation and sharing.

Alongside surveys, we generated qualitative data via critical friend journals and invited reflections from students and teachers throughout the project. In order to generate journal entries, the critical friend (second author) emailed prompts in the form of open questions to classroom teachers (n=18) throughout the project. Seven prompts were sent in the 18-month period, generating qualitative insights from teachers' perspectives.

As part of the inquiry process, teachers worked in teams to co-construct understandings of resilience and to collaboratively plan and reflect on the integration of resilience teaching. This process was supported by the TLIF funding, enabling teacher release time, workshop days with guest speakers, and classroom observations (where teachers observed each other's practice for mutual benefit and discussion). TLIF funding also enabled purchase of a variety of quality assured resources for trialling in classrooms, in accordance with student needs.

Analysis

Quantitative data from surveys were analysed using spreadsheets to display key patterns, including anomalies. Data from observations and journals were subject to inductive analysis, where key themes were derived organically from the data, in order to note emerging themes and patterns of agreement and divergence. The critical friend and project leaders shared and discussed key data as part of the analytical process.

Ethics

The ethical conduct of this project was governed by TLIF administration processes, including moderation via MoE workshops, a memorandum of understanding between the university and school and a series of milestone reports to the funding body at six-monthly intervals. The project team ensured the wellbeing of students and staff has been at the heart of this inquiry. At all times, individual confidentiality has been safeguarded, as part of professional ethics. Critical Friend Journals were designed to allow teachers to report challenges and insights to the critical friend (second author), without disclosure of identifying characteristics to the senior management team. The timing of critical friend prompts was carefully designed to minimise pressure on teachers, and those who did not find time to respond were not harassed in any way. The school community were informed throughout the inquiry, via newsletters and similar communications. It is not the aim of this article to share specific data relating to students or staff, but rather to share some of our inquiry processes, the resources we discovered, along with insights and suggestions for other schools and colleagues who would like to promote resilience in learning.

Key findings: What we found

Findings suggest that teachers, students and at least some community members have developed greater confidence in a shared understanding of resilience. Throughout the inquiry period, teachers have developed shared language and common use of metaphors, such as the learning pit, the taurapa of a waka, and the analogy of filling buckets with positive thoughts. The notion of emptying the tank has been popular, corresponding to giving 100% effort to any task. Shared understanding is also indicated by the language of “yet”—when students say “I can’t do this”, a teacher or peer responding with “yet” signals the possibility of growth.

In addition to shared understanding and language, our findings suggest that teachers are more regularly and purposefully integrating resilience concepts and strategies in teaching practice, across all learning contexts and environments, and through classroom displays at all levels of the school (Year 0–8). For example, teachers included a learning intention related to resilience alongside task outcomes in a technology unit where students were challenged to work in groups to build a marble run. This unit integrated growth mindset principles such as problem solving and learning from mistakes. Teachers have deliberately instigated regular discussions about emotions, and strategies that can be used in unexpected or challenging situations. There have been regular planned opportunities to practice resilience and to reflect on the approaches used. Overall, at various levels of the school, teachers have found that as their own awareness of resilience has developed, so has the integration of resilience via discussions and explicit goals alongside all curriculum areas.

Importantly, findings show that teachers have adopted a questioning stance and critical discernment in relation to teaching practices for resilience. This is indicative of a new phase, incorporating deeper understanding of the complexities of resilience and the associated challenges. For example, teachers in the senior school have adjusted the depth of explanation and evidence shared with students in order to cater for age-appropriate understanding.

Fundamentally, teachers are giving more attention than ever to the salience of classroom culture and the vital importance of relational connections with students. Teachers have enhanced their emphasis on generating a positive and inclusive culture in their learning environments, helping students to feel supported and comfortable around their teachers and peers. The realisation that student wellbeing is as vital as literacy and numeracy has established a supportive foundation for student learning.

While much of the above has focused on teacher understandings and practices, our findings also clearly show evidence of shifts in student attitudes and behaviours. Firstly, students’ perseverance with challenging tasks has improved during the inquiry timeframe. Students have taken more ownership of learning attitudes and behaviours and have become more realistic in their self-assessments of learning. Findings show that students are setting higher expectations and are more astute at noticing their learning patterns. Overall, students have become more reflective and more able to manage emotions independently. There have been significant improvements in coping skills, such as recovering quickly

and moving on when something goes wrong or after being upset. Overall, students have reported an improved sense of belonging.

Accompanying the shifts in student attitudes and learning behaviours is the students' ability to communicate using the language of resilience. Findings indicate that students are more readily able to express their feelings about learning and wellbeing. Students find it easier to admit difficulty and to accept that being challenged and making mistakes are a normal part of learning and growing. Importantly, parents have reported that their children are now more able to talk about how they are feeling and to use conversation as a stimulus to reflect and move on from difficult experiences. Parents have been receptive to resources and newsletter articles shared by the school and are keen to join the conversations about resilience and to learn more about how to support their child by reinforcing the messages in wider contexts outside of school.

Resources: Useful tools to share

An important part of this project was the way teacher inquiries incorporated trials of resources and reflections. Teachers identified aspects of resilience to focus on with their classes, by considering their students' needs, and trialled age-appropriate resources to strengthen resilience in the focus areas. Teachers met frequently to compare notes about the resources and to reflect on their integration. A selection of resources that proved helpful at each level of the school are shared here, with the proviso that the resources do not in themselves constitute the complete answer to building resilience. Rather, selected resources were used as part of a whole-school inquiry into the complexities of resilience, leading to shared understandings, shared language and a reflective approach to teaching for resilience.

Junior resources

In the junior school (New entrants–Year 2), strategies have coalesced around the **Feel Brave** programme (McDonald, 2011). Feel Brave, a series of picture books featuring a main character named Wolfgang, is designed to help children deal with anxiety, fears, change, loss, and grief. A teaching guide highlights the themes addressed in each book, along with guidance on how to explore issues in the classroom. Activities include visualisations, physical exercises, drama games, crafts and card games.

Teachers found it helpful to integrate Feel Brave throughout the curriculum, in order to make the instruction regular and sustainable. For example, when posing a problem in mathematics, teachers would accompany the challenge with a reminder about Feel Brave strategies. When all of the junior school classes read the same book and focused on it for a term, they were able to maintain consistency by talking about Feel Brave concepts in class, in assemblies and in the playground in order to continually reinforce key messages about resilience in a range of learning contexts. The junior school teachers found that this approach was effective and ensured that both teachers and students would refer back to Feel Brave ideas regularly. Gradually, students who were initially anxious about trying to solve problems showed more willingness to have a go, explicitly taking their lead from Wolfgang.

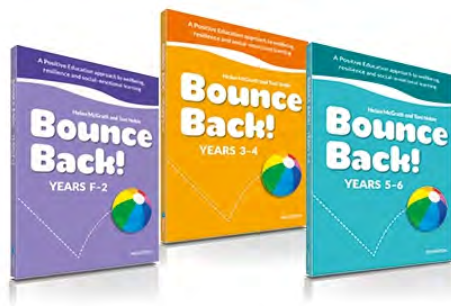
THE FEEL BRAVE SERIES OF BOOKS

Available to purchase in all bookstores worldwide or order online from your favourite online bookseller



Middle school resources

In the middle primary years (3–4), the **Bounce Back** programme (McGrath & Noble, 2018) provided a child-friendly framework of strategies to refer back to when facing challenges. This resource provided a wealth of evidence-based information which we used across the school in developing our shared understanding, including units, lesson plans and activities, as well as surveys/inventories which were used to help teachers develop a better understanding of the needs within their classes. Teachers were able to select units in accordance with the needs of the children. The resource includes a section for parents, and we shared some of the ideas via our community newsletter.

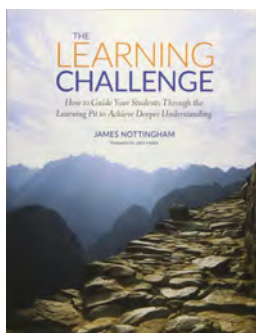


Alongside this resource, teachers accessed picture books to reinforce the messages. One particularly useful series was the Behaviour Matters stories by Sue Graves (2016), which deal with many related issues such as worry, fear and anger.



Senior primary resources

In Years 5–6, the use of Bounce Back persisted, and teaching practice also harnessed the concept of the **Learning Pit** (Nottingham, 2010, 2017). Teachers discovered that students found it more palatable to admit “I’m in the pit” when expressing difficulty with a task. Importantly, being in the pit isn’t the final destination in the journey, and does not entail admission of ultimate defeat. Students learned not to panic when they felt confused because it is just one step on the road to understanding. Teachers found that using STEM challenges in their classes gave students a context in which to experience being in the Pit and to explore strategies for getting out of it. These strategies could then be applied across the curriculum.



Intermediate resources

Finally, in the senior classes of this full primary school, Years 7–8 integrated **Growth Mindset** principles (Dweck, 2006) with Anderson’s (2017) **Agile Learner** concept. Examples of successful strategies included celebrating mistakes as a class, reading books with a resilient theme, writing stories about resilient characters, promoting effort over outcome, and developing positive attitudes towards feedback and feedforward. Relevant texts were shared with the school community.

Across the age groups, some children benefitted particularly from writing in gratitude journals (<https://www.awesomeendsin.me/>). We gifted journals to families who considered their child would benefit from practising gratitude and focusing on the positive.



Key lessons and suggestions for schools

Our whole school focus on resilience has emphasised collaborative professional learning and teacher inquiry. Each team, at each level of the school, selected and trialled age-appropriate resources and strategies. Our findings have highlighted the specific programmes used by each team. In each case, teachers found various elements worked for their students in context, while others were less useful. This led to teachers drawing upon the published programmes in order to tailor instruction to their own classes, and to individual children. Key strategies across the school included the importance of teacher modelling, of integrating opportunities to practice resilience and to use the language of resilience across the curriculum and in informal learning outside of class. For example, sports and performances, as well as playground interactions, were useful occasions for practising relevant strategies and language. Teachers found that strategies did transfer across multiple contexts, from classroom to playground, to homework and beyond.

Overall, key lessons learned through this inquiry include the power of a whole school community approach for culture change, leading to the formation of an environment that promotes the learning of resilience in a variety of ways. Central to the whole-school efforts is collaborative professional learning, where teachers learn as a team. We are convinced of the value of integrating resilience throughout all curriculum areas, and informal learning opportunities, within and outside of the classroom. Teachable everyday moments have been pivotal to the integration of resilience-related understandings, language and actions, cementing the importance of interactive formative assessment, where teachers notice and act during learning. As part of our inquiries, we have explored a plethora of tools and resources related to resilience, trialling and reflecting upon the variable quality of these, giving critical consideration and making discerning choices to suit children’s needs. Over time, as a result of a continued focus and sustained whole-school effort, shared understanding has emerged.

In conclusion, we have successfully cultivated a shared understanding of resilience among teachers and students, with early indications of uptake within the parent community. Impact on teaching practice, emphasis on classroom culture and relational connections, and an enhanced criticality are evident in teacher-related data. Meanwhile, there is evidence in student data of increased perseverance, metacognition, reflection and higher expectations when goal-setting. Students have demonstrated an improved willingness to accept responsibility for actions and to commit to moving on, beyond feelings of hopelessness. Students and teachers alike are able to use the language of resilience and to think more

critically about the application of key concepts to their everyday behaviours. As such, this study positions us to share resources and strategies with new staff at our school, as well as with other schools. While the lessons learned may apply differently to diverse contexts, the educational community may learn from the questions posed and suggestions offered in the sharing of this study.

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References

- Amatea, E.S., Smith-Adcock, S., & Villares, E. (2006). From family deficit to family strength: Viewing families' contributions to children's learning from a family resilience perspective. *Professional School Counseling, 9*(3), 177–189. <https://doi.org/10.1177/2156759X0500900305>
- Anderson, J. (2017). *The agile learner*. Hawker Brownlow.
- Berridge, D. (2017). The education of children in care: Agency and resilience. *Children and Youth Services Review, 77*, 86–93. <http://dx.doi.org/10.1016/j.chilyouth.2017.04.004>
- Brooks, R. B. (2001). Fostering motivation, hope, and resilience in children with learning disorders. *Annals of Dyslexia, 51*, 9–20. <https://doi.org/10.1007/s11881-001-0003-4>
- Dweck, C. S. (2006). *Mindset: The new psychology of success*. Random House.
- Graves, S. (2016). *Behaviour matters series*. Hatchett Children's Group.
- Howell, J.A., Roberts, L. D., & Mancini, V. O. (2018). Learning analytics messages: Impact of grade, sender, comparative information and message style on student affect and academic resilience. *Computers in Human Behaviour, 89*, 8–15. <https://doi.org/10.1016/j.chb.2018.07.021>
- Lipscomb, S. T., Hatfield, B., Lewis, H., Goka-Dubose, E., & Fisher, P.A. (2019). Strengthening children's roots of resilience: Trauma-responsive early learning. *Children and Youth Services Review, 107*, 1–10. <https://doi.org/10.1016/j.chilyouth.2019.104510>
- Liu, J. J. W., Reed, M., & Girard, T.A. (2017). Advancing resilience: An integrative, multi-system model of resilience. *Personality and Individual Differences, 111*, 111–118. <http://dx.doi.org/10.1016/j.paid.2017.02.007>
- McDonald, A. (2011). *Feel brave*. <https://www.feelbrave.com/>
- McGrath, H., & Noble, T. (2018). Bounce back! A positive education approach to wellbeing, resilience and social-emotional learning. Lower Primary, F–Year 2; Middle Primary, Years 3–4; Upper Primary, Years 5–6 (3rd ed.). Pearson Education.
- Masten, A. S. (2018). Resilience theory and research on children and families: Past, present, and promise. *Journal of Family Theory and Review, 10*, 12–31. <https://doi.org/10.1111/jftr.12255>
- Ministry of Education. (2007). *The New Zealand Curriculum*. Learning Media. <http://nzcurriculum.tki.org.nz/The-New-Zealand-Curriculum>
- New Zealand Council for Educational Research (NZCER). (n.d.). *Me and my school survey*. <https://www.nzcer.org.nz/tests/me-and-my-school>
- Nottingham, J. A. (2010). *Challenging learning*. JN Publishing.
- Nottingham, J. A. (2017). *The learning challenge: Guiding students through the learning pit*. Corwin.
- Poulou, M. (2007). Social resilience within a social and emotional learning framework: The perceptions of teachers in Greece. *Emotional and Behavioural Difficulties, 12*(2), 91–104. <https://doi.org/10.1080/13632750701315482>
- Robertson, J. (2018). *Mental health and resilience: Teaching and learning activities for NZC levels 6–8*. New Zealand Health Education Association. <https://healtheducation.org.nz/resources/>
- Tempiski, P., Martins, M. A., & Paro, H. B. M. S. (2012). Teaching and learning resilience: A new agenda in medical education. *Medical Education, 46*, 343–348. <https://doi.org/10.1111/j.1365-2923.2011.04207.x>