

MAGDALENA KOLBER

Kazimierz Wielki University

<https://orcid.org/0000-0002-8227-5475>

## ACADEMIC RESILIENCE AS A MULTIDIMENSIONAL CONSTRUCT: A NARRATIVE REVIEW\*

**Introduction:** Resilience is increasingly recognised as a vital determinant of educational success, particularly in the face of adversity and systemic disruption. The COVID-19 pandemic highlighted the vulnerability of education systems worldwide and underscored the importance of resilience for both learners and institutions. In this context, resilience has become a key concept in understanding how students cope with challenges, maintain motivation, and achieve positive learning outcomes despite difficulties.

**Research Aim:** This article aims to explore the multifaceted nature of resilience in education, encompassing psychological, educational, and systemic dimensions. It examines how academic resilience is related to self-regulated learning, anxiety, self-efficacy, and growth mindset, and considers how educational environments can empower students to develop resilience and adapt to challenges.

**Evidence-based Facts:** The discussion draws on several foundational theoretical frameworks. These include Martin and Marsh's 5C model of academic resilience, which identifies confidence, coordination, control, composure, and commitment as key components of resilient learning; Bandura's theory of self-efficacy, which emphasises the role of belief in one's capabilities in achieving academic success; and Dweck's theory of growth mindset, which highlights the importance of viewing abilities as developable through effort and learning. Through a synthesis of empirical research, practical strategies for enhancing student resilience are identified, alongside a characterization of a highly resilient student.

**Summary:** Embedding resilience-building practices into pedagogy enables schools to equip learners with emotional, cognitive, and motivational resources needed to adapt to challenges and thrive in an unpredictable world.

**Keywords:** resilience, academic resilience, self-regulated learning, didactics

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## INTRODUCTION

The significance of noncognitive skills – such as resilience, grit, and self-regulation – in educational achievement has gained increasing attention in recent years. In *How Kids Learn Resilience* (2016), Tough argues that these qualities play a crucial role in student success, particularly for those from low-income backgrounds. Although widely recognized as important, effective pedagogical strategies for developing them remain limited. Tough notes that the achievement gap persists despite numerous educational interventions, suggesting that strengthening resilience and related character traits is essential for reducing disparities in academic performance. The author further emphasizes that these abilities develop both inside and outside the classroom and have lasting effects on personal and professional outcomes. This observation is supported by Masten (2001), whose research shows that resilient children are often raised by supportive parents who demonstrate good parenting skills. While Masten (2001) does not provide a specific checklist of these skills, the author emphasizes that effective parenting does not entail heroic or extraordinary actions; rather, it involves consistent provision of care, stability, and support.

The COVID-19 pandemic further underscored the critical role of resilience in education, particularly in the face of widespread disruptions. When schools were forced to close, move online, or change how they operated in 2020, it became clear that education systems need to be strong and flexible so that learning can continue even during crises. Kolber's (2022) research highlights how the shift to remote learning affected students' psychological health (cf. Southwick et al., 2016). The author's study revealed that the shift to online education contributed to learned helplessness and led to cognitive, motivational, and emotional deficits, particularly among young people facing isolation and uncertainty. These findings emphasize the need to cultivate resilience in educational contexts to support both academic performance and emotional well-being.

Kolber's (2022) findings align with broader research on system resilience in education, as highlighted in *COVID-19 and the System Resilience of Public Education: A View from North Carolina*. System resilience refers to the capacity of an entire educational system – not just individual schools or educators – to anticipate, adapt to, and recover from disruptions while continuing to serve students effectively. It includes coordinated leadership, equitable resource distribution, strong communication networks, and community partnerships that enable the system to function under stress.

The report emphasizes that while some districts effectively adapted to remote learning, others struggled due to disparities in leadership, community trust, and resource availability (Domina et al., 2022). Schools embedded within strong social infrastructures and guided by clear, transparent communication strategies were better equipped to maintain student engagement and support students' emotional

well-being (Domina et al., 2022). “To build a system that can better educate children through the next crisis, we need to do more than build programs to ameliorate COVID-19 skills gaps,” which points to the importance of strengthening system resilience in education (Domina et al., 2022, p. 10).

### Key Definitions

Etymologically, the word “resilience” derives from the Latin verb *resilire*, meaning “to leap back” or “to rebound” (Online Etymology Dictionary, n.d.). The term was introduced into ecological discourse by the Canadian ecologist Holling (1973), who defined resilience as the ability of ecosystems to absorb disturbances and persist despite them. In this context, resilience refers to the capacity of ecological systems to maintain their functions and structures in the face of environmental changes and external shocks.

From disruptions while maintaining essential functions. Hollnagel (2024), a prominent figure in this field, emphasizes that resilience engineering is about understanding and enhancing a system’s capacity to adjust its functioning before, during, or after changes and disturbances, enabling it to sustain required operations under both expected and unexpected conditions. In engineering, the concept refers to a system’s ability to anticipate, absorb, adapt to, and recover from disruptions while maintaining its essential functions.

From a psychological standpoint, resilience is understood as a dynamic process that enables individuals to withstand stress and adversity while preserving mental well-being. This foundational definition of resilience stems from Masten’s work (2001), who conceptualised it as a general capacity for endurance in the face of hardship. The American Psychological Association (APA, n.d.) offers a more detailed and elaborated perspective, defining resilience as “the process and outcome of successfully adapting to difficult or challenging life experiences, especially through mental, emotional, and behavioral flexibility and adjustment to external and internal demands” (APA, n.d., para. 4). Unlike Masten’s broader view, APA’s definition specifies both the means (flexibility across multiple domains) and the scope (internal and external challenges) through which resilience operates, as well as its adaptive success as a key outcome. Several factors contribute to how well people adapt to adversity, chief among them: (a) the ways in which individuals view and engage with the world, (b) the availability and quality of social resources, and (c) specific coping strategies.

Earlier developmental research by Garmezy (1983, as cited in Peterson, 2006, p. 239) laid important groundwork for this perspective by demonstrating that some children exposed to high levels of risk nonetheless exhibited positive adaptation, introducing the notion of the “invulnerable child.” Similarly, longitudinal studies conducted by Werner (1982, as cited in Peterson, 2006, p. 239) found that a subset of children growing up in adverse environments developed into competent

and well-functioning adults, reinforcing the idea that resilience is a relatively common and observable phenomenon rather than a rare trait. Benard (1991) extended Werner's findings by arguing that every young person has the capacity to develop resilience. Benard proposed that resilience consists of a cluster of adaptive patterns that can be learned and strengthened throughout life. These components include persistence, hardiness, goal-directedness, a healthy orientation toward success, achievement motivation, educational aspirations, belief in the future, a sense of anticipation, purpose, and coherence (as cited in Peterson, 2006, pp. 239–240).

Within the framework of positive psychology, resilience is increasingly interpreted as an indicator of psychological health and positive functioning rather than merely a response to adversity (Peterson, 2006, p. 240). A closely related perspective is offered by Wysocka (2012), who conceptualizes creative rehabilitation as an approach reflecting key assumptions of positive psychology. According to Wysocka (2012), this approach focuses on discovering and developing individuals' creative potential, including those who exhibit maladaptive or socially undesirable behaviours. Rather than eliminating deficits, it emphasizes strengthening existing resources and treating them as the primary mechanism of change.

While resilience is a key focus in psychology, related concepts like hardiness and mental toughness provide additional insight into the mechanisms of psychological strength. One such concept is hardiness, which was defined by Kobasa (1979) as "the ability to bear difficult conditions (as cited in Clough et al., 2015, p. 11). Research suggests that hardy individuals mentally transform stressors into something less threatening, demonstrating a proactive rather than passive approach to adversity. Moreover, Kobasa (1979) speculated that hardiness could be cultivated through carefully directed training, making it a dynamic and trainable characteristic. Unlike resilience, which generally denotes the capacity to endure and recover from adversity, hardiness represents an active response to challenges, emphasizing cognitive reframing and personal control.

Similarly, mental toughness is a personality trait that describes how individuals cope with pressure, stress, and challenges, regardless of the situation. While its theoretical roots lie in resilience, mental toughness has evolved into a broader and potentially more practical framework for understanding human performance under stress. An early definition by Clough and Earle (2002) describes mental toughness as "the capacity for an individual to deal effectively with stressors, pressures, and challenges and perform to the best of their abilities, irrespective of the circumstances in which they find themselves" (as cited in Clough et al., 2015, p. 9). This definition highlights the consistency and stability of mental toughness across different situations, distinguishing it from resilience, which is often considered more situationally dependent. Consequently, mental toughness not only encompasses resilience but also extends beyond it, incorporating attributes such as confidence, commitment, and challenge-seeking behaviour. In summary, while

resilience emphasizes adaptation and recovery, hardiness focuses on reframing adversity as growth, and mental toughness centres on consistent performance under stress (Clough et al., 2015).

The importance of resilience has been widely recognized in policy documents, institutional frameworks, and international strategies, including those from key organizations such as the World Health Organization (WHO). In its 2017 report, the organization positions resilience as a strategic imperative in an era characterized by escalating social, economic, and environmental uncertainties. Such recognition underscores that resilience is not confined to a single domain but manifests itself at multiple interconnected levels.

Individual resilience focuses on personal capacity to adapt to stress or adversity, while community resilience emphasizes collective recovery through social connections and local resources. System-level resilience involves institutions and structures adapting, transforming, and recovering to maintain essential functions during disturbances. These levels are supported by four key dimensions: absorptive, adaptive, anticipatory, and transformative capacity.

Absorptive capacity refers to the ability to cope with immediate disturbances and recover using available resources. In the educational context, this involves schools maintaining instructional delivery during disruptions. For example, they do so by shifting to online learning platforms during school closures or implementing mental health support systems to help students manage stress.

Adaptive capacity describes the flexibility to adjust policies and practices in response to emerging challenges. Some schools adopt blended learning models, modify assessment methods, or integrate digital technologies to enhance student engagement. They thus demonstrate adaptive responses to evolving educational needs.

This may include establishing early warning systems for at-risk students, investing in digital infrastructure to prevent access disparities, and providing preparedness training for educators to manage emergency transitions effectively. Anticipatory capacity involves the ability to identify potential risks and take proactive measures to minimize disruptions. It includes establishing early warning systems to identify students at risk and investing in digital infrastructure to reduce disparities in access. It also involves providing preparedness training for educators to help them manage emergency transitions effectively.

Finally, resilience extends beyond anticipation and adjustment to deeper systemic change. Transformative capacity refers to the ability to redesign educational systems to align with long-term structural changes and uncertainties. When existing models become inadequate due to technological, demographic, or societal shifts, transformative action ensures sustainability. Examples include policy reforms promoting digital inclusion, restructuring curricula to emphasize lifelong learning competencies, and embedding equity-focused education policies within institutional frameworks (WHO, 2017).

These interconnected dimensions of resilience – absorptive, adaptive, anticipatory, and transformative – offer a comprehensive framework for understanding how educational systems can remain responsive amid ongoing disruptions.

## RESEARCH PROBLEM AND AIM

While much of the existing literature examines resilience from a psychological perspective, this article situates resilience within the educational context by exploring how it manifests in didactic practices and learning environments. In particular, the study focuses on academic resilience and the ways students adapt to educational challenges. The aim of the review was to analyse theoretical models and empirical studies concerning psychological resilience, academic resilience, self-regulated learning, self-efficacy, and anxiety, as well as their relevance for educational practice. Drawing on the 5C model of academic resilience developed by Martin and Marsh (2006), together with existing literature, the article synthesises these insights into practical strategies applicable in educational settings.

## METHODOLOGY

The article is a narrative literature review focused on the concept of resilience in the educational context. The literature was identified using academic databases and search tools such as Google Scholar, Scopus, and ERIC, as well as printed monographs published by Polish and international organizations and obtained from university libraries. The following keywords were used during the search process: resilience, academic resilience, self-regulated learning, self-efficacy, growth mindset, learning strategies, and system resilience. Publications in both Polish and English were included in the review. A total of 37 sources were analysed, consisting primarily of peer-reviewed journal articles ( $n = 16$ ) and academic books/monographs ( $n = 11$ ). Additionally, the review included book chapters ( $n = 4$ ), online reference sources and dictionary entries ( $n = 4$ ), one institutional research report ( $n = 1$ ), and one popular science magazine article ( $n = 1$ ). Grey literature, including interview transcripts, theses, and dissertations, was excluded from the present narrative review. Artificial intelligence tools, including ChatGPT, were used solely for language editing purposes. The aim of the review was to analyse theoretical models and empirical studies concerning psychological resilience, academic resilience, self-regulated learning, self-efficacy, and anxiety, as well as their relevance for educational practice.

## EVIDENCE-BASED FACTS

Having defined resilience from psychological, ecological, and systemic perspectives, the following section presents a theoretical overview of a selected resilience model. This model provides a framework for understanding the key dimensions of resilience. Its components will serve as the foundation for the subsequent theoretical exploration and literature review.

In their 2006 study, *Academic Resilience and Its Psychological and Educational Correlates: A Construct Validity Approach*, Martin and Marsh conducted research to explore the concept of academic resilience among 402 Australian high school students. They aimed to identify psychological factors that contribute to students' ability to cope with academic challenges and setbacks. Based on their findings, the authors proposed the "5C Model" of academic resilience, which encompasses five key factors: Confidence, reflecting self-efficacy; Control, the sense of agency over learning; Coordination, planning; Composure, ability to manage anxiety; and Commitment, persistence in the face of challenges. In a 2009 study, they further examined the effects of academic resilience on students' psychological well-being and educational outcomes, demonstrating that it serves as a strong predictor of several positive consequences, including increased joy of study, heightened academic engagement, and improved self-esteem. These results highlight the broader benefits of fostering resilience in students, as it not only helps them navigate academic challenges but also enhances their overall learning experience and personal development (cf. Oszwa, 2023, p. 54).

The first element of the 5C Model, Confidence, emphasizes the importance of self-efficacy, a concept central to Bandura's social cognitive theory (SCT). According to the scholar (1982, 1997, 2000, 2006), self-efficacy is defined as an individual's belief in their ability to successfully perform the actions required to achieve specific goals. Within this theoretical framework, self-efficacy plays a critical role in guiding motivation, goal-setting, and persistence, shaping how individuals approach challenges and regulate their own behaviour. Individuals with high self-efficacy are more likely to set ambitious goals, remain committed to them, and maintain a strong sense of personal agency. Furthermore, they tend to view difficult tasks as opportunities to learn rather than as threats to be avoided. By contrast, individuals with low self-efficacy may doubt their abilities, avoid challenging situations, and become easily discouraged by setbacks (Bandura, 1997). Bandura (1982) noted that those with strong self-efficacy beliefs interpret failures as temporary and instructive, which enhances their resilience. In later works, Bandura (2000, 2006) further asserted that self-efficacy serves as a buffer against stress and demoralization. High self-efficacy enables individuals to approach obstacles with confidence, employ effective coping strategies, and sustain effort over time.

Beyond beliefs about the capability to succeed, resilient students must also manage their learning processes effectively. In the 5C model, this strategic dimen-



sion is reflected in Coordination and Control – two components closely related to the concept of self-regulated learning, which refers to the process by which “learners personally activate and sustain cognition, affect, and behaviours that are systematically oriented toward the attainment of learning goals” (Schunk & Zimmerman, 2012, p. vii). Early research on self-regulation in education focused primarily on learning strategies. In recent years, researchers have increasingly addressed the role of motivational processes, including emotions, values, self-efficacy, and resilience, in sustaining effective self-regulation. A multi-case study by Oxford et al. (2007) showed that self-regulated language learners use learning strategies in ways that foster resilience, enabling them to adapt to difficulties and persist in the foreign language learning process. These learners use various strategies that support resilience both as a capacity – an inherent ability to cope with difficulties – and as a process, involving active efforts to adapt and recover from challenges. Among the strategies that support the development of such resilience are emotional regulation, monitoring progress, and goal setting (cf. Oxford, 2011). Oxford (1990) outlines several strategies that learners can use to regulate their emotions, such as using relaxation techniques, deep breathing, laughter, or self-encouragement (e.g., making positive statements or rewarding oneself). Additionally, learners may regulate their emotions by listening to their bodies or discussing their feelings with others. Monitoring progress, on the other hand, can be achieved by tracking the sources of recurring errors and attempting to eliminate them, or through the use of checklists to evaluate one’s learning process (Oxford, 1990, pp. 140–141).

In this context, goal setting can be understood as an integral element of self-regulated learning that not only structures learning activities but also contributes to the development of resilience. Clough et al. (2015) emphasise that goal setting is a powerful means of developing resilience. For instance, “setting milestones can help [students] be realistic – ‘eating the elephant a slice at a time’ – and achieve the right balance” (p. 36).

Goals define the purpose of students’ endeavours, providing a clear direction for action and fuelling motivation to move forward. They serve as a roadmap, guiding individuals toward meaningful achievements, and to ensure their effectiveness, they must follow the SMARTER framework – a seven-letter acronym representing the key stages of successful goal setting: Specific, Measurable, Achievable, Relevant, Time-bound, Exciting, and Reviewable. By following these principles, individuals can maintain focus, track progress, and make necessary adjustments, leading to clarity, motivation, and continuous progress toward success (Strycharczyk & Clough, 2017, pp. 317–318).

However, despite well-formulated goals, numerous obstacles may impede their attainment. Physical barriers – such as the lack of essential learning materials or financial constraints – can significantly undermine academic efforts. Contextual changes, like the unexpected replacement of a teacher during a semester, may dis-

rupt continuity and hinder progress. Additionally, external distractions, whether environmental or digital, can fragment attention and reduce task efficiency. Finally, overload – having too many responsibilities or assignments – can overwhelm students and dilute their ability to concentrate on individual goals (Łukaszewski, 2023, pp. 211–215). These challenges highlight the importance of adaptive strategies and support systems to help learners stay on track and remain resilient in the face of difficulties.

While Coordination and Control reflect the strategic and cognitive dimensions of resilience, the next component of the 5C Model – Commitment – addresses its motivational aspect. Commitment refers to a student's willingness to persevere through challenges and remain engaged despite difficulties. This perspective resonates with Dweck's (2017) growth mindset theory, which views abilities as malleable rather than fixed and emphasizes that effort and persistence enable learners to embrace challenges.

The practical implications of this theory are evident in research on the effects of adult feedback. Mueller and Dweck's (1998, as cited in Yeager & Dweck, 2012) research reveals that even well-meaning praise from adults can influence students' mindsets and resilience in unexpected ways. They found that praising students for being "smart" inadvertently promoted a fixed mindset. This kind of praise led to decreased resilience when students faced setbacks. Specifically, students who were praised for being smart tended to avoid challenges and performed worse on subsequent tasks. They preferred easy problems to more difficult ones and were more likely to overestimate their performance.

In contrast, students who were praised for the effort they invested in their work (process praise) adopted a growth mindset, believing that their abilities could improve through practice. These students demonstrated greater resilience following failure, showing a stronger willingness to engage with more challenging problems and performing better on the third trial. As the authors note, adults "should not praise children for being 'smart' when they do well, but rather, to promote resilience, praise them for the process they engaged in – their effort, their strategies, their focus, or their persistence" (Yeager & Dweck, 2012, p. 311).

This finding is particularly noteworthy because many parents and educators assume that praising intelligence is inherently beneficial, believing that it enhances children's self-esteem and motivation. However, the research suggests the opposite: ability-based praise may foster anxiety, fear of failure, and avoidance of challenging tasks. In contrast, praise that emphasizes effort and persistence encourages a mindset in which challenges are viewed as opportunities for growth. Collectively, the evidence points to the importance of teachers' understanding of the entity theory of intelligence and the need to disseminate this knowledge in educational contexts. By recognizing how different forms of praise shape students' motivation

and resilience, educators can foster more adaptive learning environments (Yeager & Dweck, 2012).

Anxiety, understood within the broader construct of Composure, as defined by Martin and Marsh (2006), is a fundamental psychological factor underlying resilience. It represents a biological response to perceived threats rather than an indication of actual danger. During heightened anxiety, rational thinking is often reduced, making it difficult to respond logically to situations and increasing emotional vulnerability. However, by learning to regulate anxiety responses, individuals can develop greater emotional control, enhance their confidence, and ultimately strengthen their resilience in the face of challenges (Elliott, 2023).

In a counselling context, working with anxiety is a complex and multidimensional process that extends beyond psychoeducation, as it often involves addressing underlying personality factors, such as self-esteem. Improving self-esteem is particularly important, because it can reduce vulnerability to anxiety and support more adaptive coping strategies; therefore, it becomes a crucial component of anxiety-focused interventions (Wojciszke, 2010). Comparable assumptions can be found in the model proposed by Rutter (2006, as cited in Borucka & Ostaszewski, 2008, p. 11), who identified self-esteem and self-efficacy as key mechanisms that modify the impact of risk. What an individual thinks about themselves, the emotions that accompany these thoughts, how they perceive their environment, and how they evaluate their own abilities may influence whether they activate the resources available to them to cope with adversity. High and adequate self-esteem, as well as the belief that one can successfully cope with new tasks, constitute important protective processes. These develop through secure, harmonious, and close relationships with significant others, as well as through experiences of success in achieving goals that are important to the individual. The Martin and Marsh model provides a theoretically informed basis for didactic practice. It aligns with contemporary conceptualizations of learning that move beyond the objectivist paradigm, in which learning is primarily understood as a change in behavior. Instead, it reflects the interpretative-constructivist paradigm, rooted in early twentieth-century progressive education, where the learner and their needs are placed at the center of the educational process (Klus-Stańska, 2018).

According to Ileris (2006), learning within this paradigm can be understood in two complementary ways. First, it is conceptualised as an emotional or psychodynamic process encompassing psychological energy shaped by learners' emotions, beliefs, mindsets, and motivation. This perspective originates in the work of Freud, who emphasised the role of unconscious and emotional processes. From this standpoint, learning is not merely cognitive but is profoundly influenced by internal psychological dynamics.

Second, learning is understood as a social process that unfolds through interactions between the learner and their environment. This approach is represent-

ed by theorists such as Piaget, Vygotsky, Bandura, and Bruner, who emphasised the importance of interaction, observation, and active engagement in the learning process. Within this framework, the teacher provides subtle and responsive guidance (“hot” feedback), while the learner engages in independent cognitive activity, developing an understanding of why they learn (internal motivation and goals), how to learn (construction and application of learning strategies), and with whom they learn (the social context of learning). Consequently, self-directed learning, learner autonomy, dialogic engagement, the joy of learning, goal setting, and the holistic development of the individual are foregrounded within this pedagogical orientation (Klus-Stańska, 2018, p. 143).

The 5C model demonstrates that teaching is not merely the application of methods or the execution of a predetermined instructional sequence. Rather, didactics involves intentional and context-sensitive decisions about content, pedagogy, interaction, and the language of instruction. Importantly, resilience is also shaped through the hidden curriculum – implicit norms, expectations, and values conveyed through classroom practices, teacher-student interactions, and institutional structures (Jackson, 1968). Feedback on students’ effort, failure, autonomy, and support, even when not explicitly taught, influence how they perceive their own capabilities and respond to challenges. Teachers therefore foster resilience not only through explicit instruction and the promotion of self-regulated learning, but also through the learning environment they create, the expectations they communicate, and the ways in which they respond to students’ successes and setbacks. In this sense, teaching is a dynamic and reflective practice that extends beyond scripted procedures, encompassing both visible and invisible dimensions of learning.

Building on this perspective, important implications emerge for teacher education. In particular, courses such as: *Methodology of Teaching* and *Foundations of Didactics* should explicitly incorporate what may be termed didactic resilience. In the context of the above consideration, this term refers to the capacity of teaching to flexibly respond to students’ needs, create supportive learning environments, and integrate both explicit instruction and the hidden curriculum in ways that foster resilience, self-efficacy, and self-regulation. Embedding this component in teacher education would encourage future teachers to move beyond procedural or method-driven approaches and instead develop adaptive, reflective, and context-responsive practices.

The model, however, has several limitations. First, it relies heavily on self-report questionnaires. Such measures capture students’ subjective perceptions rather than their actual behaviour, and responses may be influenced by social desirability bias, mood, or limited self-awareness. Second, the model focuses primarily on individual student characteristics while paying relatively little attention to broader contextual factors, such as family background, school practices, and structural educational inequalities (cf. Smulczyk, 2019). Boczowska (2019, p. 136) notes that in recent years,

the research interest has shifted toward family resilience or community resilience. Therefore, although the model constitutes a useful analytical framework for educational practice, it does not fully capture the complexity of educational pathways or wider social and institutional context. In addition, some of its constructs partially overlap, which may blur conceptual distinctions and lead to a degree of redundancy. To reduce this conceptual overlap and provide greater clarity, the present review supplements the 5C Model with broader theoretical foundations derived from social cognitive theory, self-regulated learning research, growth mindset theory, and constructivist approaches to learning. Integrating these perspectives allows for a more nuanced understanding of resilience as a multidimensional construct shaped by cognitive, emotional, motivational, and social factors. Finally, the empirical studies conducted by Martin and Marsh (2006) were based predominantly on high school students, which limits the generalisability of the model to other age groups. Further, the manifestation of resilience may differ considerably across developmental stages, as younger children, high school students, emerging adults, and adults face distinct cognitive, emotional, and environmental demands (cf. Arnett, 2000).

Another important area of study, although not addressed in this article, is teacher resilience. Exploring this topic could provide a better understanding of why teachers remain resilient despite increasing professional demands. It could also help explain how many teachers are able to continue supporting education effectively under these challenging conditions (Konaszewski et al., 2025).

As a final reflection, the increasing digitalization of education introduces new dimensions of challenge, broadening the scope of academic resilience to include digital contexts. As digital environments shape students' cognitive, emotional, and social experiences, resilience must also encompass the ability to adapt to online contexts. However, despite growing scholarly interest, research on digital resilience remains fragmented, with inconsistent definitions, measurement approaches, and limited evidence-based interventions (cf. Öztürk et al., 2025). Additionally, Sun et al. (2022) highlight the scarcity of longitudinal research examining how digital resilience develops over time, as well as the limited exploration of effective interventions supporting students in digital environments. They also acknowledge potential language bias resulting from the inclusion of English-language publications only. Together, these limitations point to the need for more systematic, cross-cultural, and empirically grounded research in this area.

## SUMMARY

### Practical Implication Based on Literature Review

As discussed throughout this article, the challenges facing education are not isolated events, but evolving pressures. Addressing them requires educators, policymak-

ers, and institutions to deepen their understanding and continuously develop their knowledge and skills. This reflection encourages a shift from reactive responses toward a more holistic, future-oriented mindset. The previous section reviewed the literature on academic resilience and its key contributing factors. Building on this theoretical foundation, the following section outlines practical implications for educational practice, presenting strategies that educators, teachers, and school psychologists can apply when working with students.

### **Engaging Students in Dialogue and Reflection**

By encouraging open communication and self-reflection, educators can help students develop a deeper understanding of challenging school tasks and build the confidence to tackle them. Researchers in New Zealand have developed specific questions aimed at exploring students' responses to challenges, their perceptions of mathematical proficiency, their attitudes toward improvement, their dislikes within mathematics, and their comfort with asking questions. By analysing students' responses, educators can identify patterns in behaviours and attitudes, allowing them to tailor their teaching strategies to better support each student's learning process (Moala-Tupouniua & Hunter, 2019).

To gain deeper insights into students' experiences and perceptions of mathematics, several key questions may be posed. For example, the question "What do you do when you get stuck?" explores how students respond to setbacks and challenges. To understand students' perceptions of proficiency, educators may ask, "What makes someone good at maths?" Similarly, "What makes someone better at maths?" examines attitudes toward improvement. To identify aspects of mathematics that students find unappealing or difficult, the question "What parts of maths do you not like?" can be used. Finally, recognizing the importance of inquiry in learning, "How do you feel about asking questions?" explores students' views on questioning within the mathematics classroom (Oszwa, 2023, p. 197).

### **Teaching Students How to Change Their Perspective**

**Cognitive Reframing.** Cognitive reframing is the practice of consciously changing the way a situation is interpreted to influence one's emotional response. Rather than emphasizing negative aspects, it involves seeking more constructive or positive perspectives. By altering the "frame" through which an event is viewed, individuals can change how they experience and respond to it (Caunt, 2002, pp. 77–78).

Drawing on the concept of the growth mindset, reframing becomes a tool for developing resilience, motivation, and a more adaptive approach to learning (Yeager & Dweck, 2012). For instance, a student who performs poorly on a test might initially think, "I'm just not good at this subject," but through reframing may instead view it as, "This result shows me what I need to focus on – improvement is still possible." Similarly, when comparing themselves to more skilled peers, stu-

dents may reframe thoughts such as “I’ll never be that good” into “They have likely invested time and effort – I can do the same.”

**Visualization.** Visualization is a mental process that engages all five senses – sight, sound, smell, touch, and taste – to create a vivid inner image of a desired outcome. It emphasizes positive emotional states, while consciously replacing negative thoughts with constructive ones and affirmations. Because the mind responds more strongly to images than to words alone, visualization acts as a combination of inner speech and imagery, reinforcing belief and building confidence. Imagining an action activates the brain in ways similar to actually performing it; thus, the mind often responds as if the experience were real. This makes visualization a powerful strategy for training the subconscious and maintaining focus on goals (Clough & Strycharczyk, 2017, pp. 277–278).

**Teaching students metacognition.** Another important strategy that can strengthen academic resilience is the development of metacognitive skills. The term was first introduced by Flavell (1976), who defined it as “active monitoring and consequent regulation and orchestration of these processes in relation to the cognitive objects or data on which they bear, usually in the service of some concrete goal or objective” (p. 232). In his subsequent work, Flavell (1979) further elaborated the concept and distinguished several components, including metacognitive knowledge, metacognitive experiences, tasks and goals, as well as strategies. Metacognitive knowledge is stored in long-term memory and does not differ from other types of knowledge; it “has to do with people as cognitive features and with their diverse cognitive tasks” (Flavell, 1979, p. 906). By contrast, metacognitive experiences are more fleeting and situation-dependent, as they involve feelings such as confusion, familiarity, confidence, or perceived difficulty. They occur during cognitive activity, when a person notices that something is difficult, feels confident or unsure about an answer, or realizes that they do not understand something. In educational practice, metacognition can be developed by explicitly modelling thinking processes, encouraging self-questioning, and guiding students through the stages of planning, monitoring, and evaluating their work. Teachers may ask students to consider what they already know about a task, which strategies they intend to use, whether their approach is working, and what could be improved after completion. Such reflective activities help students avoid the illusion of competence, in which familiarity with material is mistaken for real understanding. Regular use of metacognitive instruction has been shown to support deeper learning, improve problem-solving skills, and increase students’ sense of agency over their academic performance, which in turn contributes to greater resilience in the face of difficulty (Myers et al., 2020).

**Supporting Students in Developing Healthy Relationships.** Last but not least, Elliott (2023) asserts that research consistently demonstrates the crucial role of relationships in shaping resilience. The author distinguishes between healthy re-



lationships and toxic relationships, emphasizing that the former are characterized by mutual respect, balance, and emotional safety, whereas the latter often involve imbalance, discomfort, and a negative effect on self-esteem. To address this issue, the author provides several practical recommendations for fostering healthier interpersonal connections. Firstly, individuals are encouraged to pay attention to how they feel around others. A simple yet effective strategy is to reflect on one's emotional state following social interactions. For instance, one may consider whether they feel energized, valued, and look forward to meeting again, or, conversely, whether they feel drained, anxious, or insecure. Such emotional responses serve as important indicators of whether a relationship enhances or undermines one's well-being (Elliott, 2023). Secondly, it is essential to set boundaries and maintain them consistently. Healthy relationships depend on balance, which is achieved through communicating one's emotional limits. Importantly, individuals should not feel guilty for protecting their well-being. When boundaries are respected, relationships are more likely to be characterized by mutual respect and stability; however, their violation may signal a toxic dynamic (Elliott, 2023).

## CONCLUSIONS

Resilience is a vital competency for thriving in the 21st century, enabling students to engage in learning, sustain long-term effort, adopt a growth mindset, and develop greater self-efficacy. Research by Martin and Marsh (2006) shows that academically resilient students demonstrate key characteristics such as confidence, coordination, control, composure, and commitment. Resilience can be understood as a capacity that is both supported by self-efficacy and enacted through self-regulated learning. Students with higher self-efficacy are more likely to persist in the face of difficulties such as socioeconomic disadvantage, disruptions to schooling (e.g., during the COVID-19 pandemic), or prior academic failure, and to adopt coping strategies, thereby strengthening their resilience. At the same time, self-regulated learning (SRL) provides the mechanisms through which resilience is expressed in learning situations, including goal setting, monitoring progress, and adjusting strategies. In this way, resilience is not only a dispositional tendency but also a dynamic process that operates through self-efficacy beliefs and self-regulatory practices, all of which are directed toward sustained, *goal-oriented* engagement in learning.

In this context, teachers play a crucial role in fostering these capacities. Therefore, effective, contemporary teaching requires not only subject-matter expertise but also psychological knowledge that enables teachers to understand how students think, learn, and respond to challenges, and to support the development of their resilience. These considerations may be concluded with the following quotation from Kozielcki:

"If individuals want to solve the gigantic ecological, demographic, educational, and political problems that stand before them, if they want to adapt modern civilization to their needs and aspirations, they must act rationally, they must be able to use the most effective tools for achieving goals, they must – as someone aptly said – act from a position of strength. Such strength is undoubtedly also psychological knowledge; it is an important means by which people with humanistic horizons can do so much for the individual, for society, and for culture. Concern for the development of science is at the same time concern for the human being". (Kozielecki, 2000, p. 260)

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## REZYLIENCJA W SZKOLE JAKO KONSTRUKT WIELOWYMIAROWY. PRZEGLĄD BADAŃ

**Wprowadzenie:** Rezyliencja jest coraz częściej uznawana za kluczowy czynnik sukcesu edukacyjnego, zwłaszcza w obliczu przeciwności losu i zakłóceń systemowych. Pandemia COVID-19 szczególnie wyraźnie uwidoczniła potrzebę jej wzmacniania zarówno na poziomie indywidualnym, jak i instytucjonalnym, wskazując na konieczność przygotowania uczniów oraz systemów edukacyjnych do funkcjonowania w warunkach niepewności i dynamicznych zmian.

**Cel badań:** Celem artykułu jest analiza wielowymiarowego charakteru rezyliencji szkolnej (*academic resilience*), obejmującego aspekty psychologiczne, edukacyjne i systemowe. W pracy



podjęto próbę ukazania jej związków z takimi czynnikami jak samoregulacja w uczeniu się, lęk, poczucie własnej skuteczności oraz nastawienie na rozwój, a także roli środowiska szkolnego i domowego w jej kształtowaniu.

**Stan wiedzy:** Dyskusja opiera się na określonych ramach teoretycznych. Należy do nich model rezyliencji szkolnej 5C autorstwa Martina i Marsha wyróżniający pięć kluczowych komponentów: pewność siebie, koordynację, poczucie kontroli, opanowanie oraz zaangażowanie. Uwzględniono również teorię poczucia własnej skuteczności Bandury, podkreślającą znaczenie wiary we własne możliwości w osiąganiu sukcesów edukacyjnych, a także koncepcję nastawienia na rozwój Dweck, zakładającą, że zdolności mogą być rozwijane dzięki wysiłkowi i procesowi uczenia się. W oparciu o syntezę badań empirycznych zidentyfikowano praktyczne strategie sprzyjające rozwijaniu rezyliencji uczniów w środowisku edukacyjnym, a także określono profil ucznia charakteryzującego się wysokim poziomem rezyliencji.

**Podsumowanie:** Wprowadzanie do praktyki pedagogicznej strategii ukierunkowanych na rozwijanie rezyliencji szkolnej pozwala szkołom wyposażać uczniów w zasoby emocjonalne, poznawcze i motywacyjne niezbędne do radzenia sobie z trudnościami oraz skutecznego funkcjonowania w nieprzewidywalnym świecie.

**Słowa kluczowe:** rezyliencja, rezyliencja szkolna, uczenie się samoregulowane, dydaktyka