

THE IMPACT OF EXTRACURRICULAR ACTIVITIES ON STUDENTS' SKILLS AND SELF-DEVELOPMENT

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Abstract

Extracurricular activities (ECAs) are increasingly recognized for their role in enhancing students' academic, social, emotional, and leadership development. This narrative review synthesizes research published between 2019 and 2025 to examine how ECAs contribute to skill acquisition and self-development among adolescents. Literature was sourced from Google Scholar, ERIC, PubMed, DOAJ, and grey educational sources. Findings indicate that participation in ECAs is associated with improved academic performance, leadership skills, motivation, social competence, innovation, and civic engagement. However, disparities in access related to gender, socioeconomic background, and school resources remain evident. In some cases, participation driven primarily by university admission requirements may contribute to stress and burnout. Overall, ECAs support holistic development, though equity in access and standardized assessment tools are needed to maximize long-term benefits for diverse student groups.

Keywords: Extracurricular activities (ECAs), Development, Academic performance, Leadership, Well-roundedness

Introduction

Extracurricular activities (ECAs) have increasingly been recognized as crucial contributors to students' holistic development. These activities, occurring outside the formal academic curriculum, encompass sports, performing arts, academic clubs, research projects, volunteering, leadership roles, and innovation programs. As education systems worldwide move toward competency-based learning, ECAs are now viewed as a key mechanism for cultivating skills such as communication,

collaboration, self-management, and creativity-abilities often underdeveloped through classroom instruction alone.

Internationally, universities have integrated ECAs as part of holistic admission criteria. In the United States, top institutions such as Ivy League universities value non-academic achievements including leadership and community involvement (College Board, 2024; Quad Education, 2025). In Australia, while the ATAR is key, ECAs such as community service and leadership enhance applications for scholarships and special programs, as seen at UNSW and the University of Sydney (UNSW Sydney, 2025). UK institutions highlight “super-curriculars” and programs like the Duke of Edinburgh Award to evaluate readiness beyond academic grades (Crimson Education, 2023; Mackenzie, 2025). In Japan, universities-particularly international programs-consider ECAs as evidence of global mindset and social engagement (Immerse Education, 2025).

In Thailand, the role of ECAs is highly influenced by the Thai University Central Admission System (TCAS), particularly Round 1: Portfolio, which prioritizes personal achievements, skills, and project-based experiences. The number of seats offered in this round expanded rapidly during TCAS 64-67, increasing by nearly 42%, reflecting universities’ preference for students with demonstrable extracurricular engagement and outstanding portfolios. (Matichon, 2025; Eduzones, 2025). However, in TCAS 68, seats in Portfolio round were significantly reduced by approximately 31,301 positions, likely due to redistribution toward Quota and Admission rounds, as well as strategic intake control. Despite this reduction, TCAS 68 recorded 100,902 confirmed admissions, the highest in three years, indicating that Portfolio remains a primary entry point for a large proportion of students (Thairath, 2024; TCAS, n.d.). This expansion and subsequent adjustment in Portfolio allocation has driven students to pursue ECAs more actively-especially those aiming for competitive programs such as Medicine, Dentistry, Pharmacy, or Engineering. While ECAs can enhance academic motivation, leadership capacity, well-being, and identity formation, increasing competitiveness also raises concerns surrounding accessibility gaps between schools, socioeconomic inequality, and participation driven by university admission pressure rather than intrinsic development.

Although international research consistently highlights positive outcomes of ECA participation, studies focusing on Thai adolescents are still limited, particularly regarding equity of access, long-term benefits, and skill development evaluation mechanisms (Tienkhaw, 2020; Pitchayakan et al., 2023). Therefore, this review synthesizes literature from 2019-2025 to evaluate how extracurricular activities influence academic, social, emotional, leadership, and innovation-related competencies among high-school students, as well as to explore barriers and challenges that affect equitable access and participation. The analysis is further interpreted within the context of Thailand’s TCAS-driven educational environment and youth development ecosystem.

Conceptual Framework

This review is grounded in Vygotsky's Social Development Theory and Bronfenbrenner's Ecological Systems Theory. Vygotsky emphasizes the importance of social interaction in learning through the Zone of Proximal Development (ZPD) (Vygotsky, 1978; Teach Kloud, 2021) while Bronfenbrenner situates development within layered environmental contexts (Bronfenbrenner, 1979). These frameworks highlight how ECAs, as socially embedded experiences, support skill acquisition and psychosocial growth.

Study Methods

This review employed a narrative approach with systematic elements in literature selection. Academic databases Google Scholar, ERIC, PubMed, and DOAJ were searched using keywords related to *extracurricular activities, student development, soft skills, and adolescents* (2019–2025). To broaden educational context, grey literature was also included, such as educational websites, policy documents, university admission guidelines, and organizational reports relevant to ECA participation.

Inclusion criteria:

- Peer-reviewed articles or credible grey literature (education/organization/policy/websites)
- Published 2019-2025 in English or Thai
- Focus on adolescents or high-school students
- Report outcomes linked to academic, social, emotional, leadership, or skill development

Exclusion criteria:

- Theses/dissertations
- Pre-2020 publications
- Sources unrelated to ECAs or without student development outcomes

The search yielded 342 academic records and 41 grey literature sources. After screening, 54 articles were reviewed in full text, and 32 academic studies + 15 grey literature sources were included for synthesis. Findings were narratively grouped into six themes: academic performance, leadership/responsibility, motivation and well-being, social skills, innovation/soft skills, and civic engagement.

Theoretical Framework for Understanding Skill Development through ECAs

This review is guided by Vygotsky's Social Development Theory and Bronfenbrenner's Ecological Systems Theory, both of which explain how extracurricular activities contribute to holistic student development.

Vygotsky's Social Development Theory suggests that learning occurs through social interaction, scaffolding, and collaboration within the Zone of Proximal Development (ZPD). ECAs such as debate, student council, or research groups provide opportunities for peer collaboration, mentorship, and guided skill practice. This interaction supports growth in academic performance, leadership, communication, social skills, and innovation competencies through experiential learning and shared problem-solving.

Bronfenbrenner's Ecological Systems Theory views student development as shaped by multiple environmental layers-from microsystem interactions with peers and teachers to macrosystem influences like educational policy and cultural expectations. ECAs operate across these systems (e.g., school clubs, community volunteering, national competitions), influencing motivation, well-being, civic engagement, responsibility, and accessibility outcomes. Thai context factors such as TCAS portfolio requirements, socioeconomic status, and school resources also interact across these layers, shaping participation opportunities and developmental results.

Together, these theories explain how ECAs foster academic + personal + social + emotional growth, and how contextual variables influence the extent of benefit students receive.

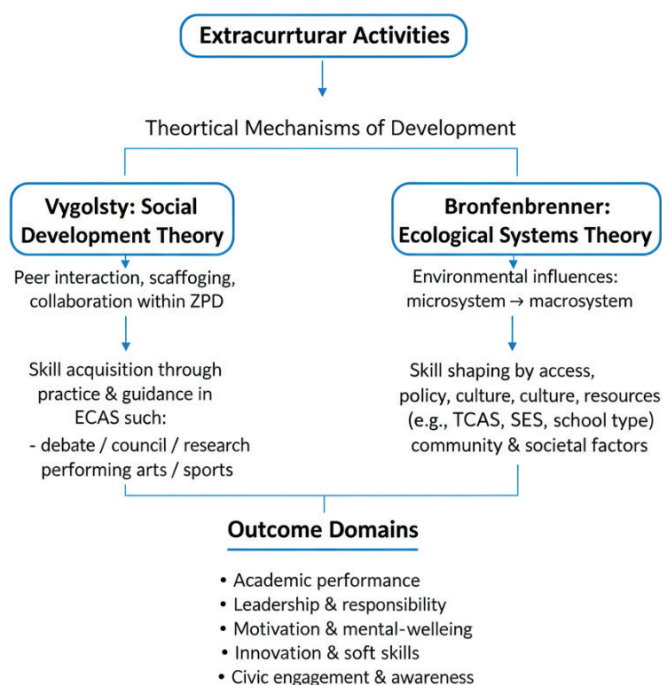


Figure 1 Conceptual Framework Linking Extracurricular Activities to Student Development Outcomes.

Key Themes from the Literature

1. Academic Performance

Numerous studies affirm that involvement in ECAs is positively associated with academic outcomes. Students who regularly participate in such activities often demonstrate higher grades, improved test scores, and stronger motivation for academic success. This is attributed to improved time management, goal-setting, and persistence (Christison, 2013). Mixed activities-such as a combination of academic, athletic, and artistic ECAs-tend to have the strongest academic impact (Collings, 2020; Villaverde, M. A. et al., 2024).

2. Leadership and Responsibility

Many ECAs promote the development of leadership qualities, initiative, and a sense of responsibility. Roles in student government, clubs, and volunteer programs allow adolescents to manage projects and teams, helping them build character and ethical decision-making skills (Hancock et al., 2012; Yousry, 2022; Samuel, J. K., 2024). In religious and community-based schools, leadership is often tied to moral and spiritual development (Munadi, M, 2023).

3. Motivation and Psychological Well-being

Self-determination and intrinsic motivation are strongly linked to ECA participation. Adolescents who choose activities aligned with their interests often report greater psychological well-being and commitment (Chorosiewski, 2015; Denault et al., 2022). Programs that support autonomy, competence, and relatedness-core components of self-determination theory-promote sustained participation and personal growth (Denault et al., 2022).

4. Social Skills Development

ECAs are critical for developing social competencies, including communication, collaboration, and conflict resolution. These skills are cultivated through group activities such as sports, performing arts, and debate clubs (Turner, 2010; Javaid et al., 2020; Wu & Fernando, 2023). Students learn to work cooperatively with peers and form supportive relationships with mentors and adults (Iso, A. D. et al., 2020).

5. Innovation and Soft Skills

Participation in ECAs enhances essential 21st-century skills such as creativity, critical thinking, and problem-solving. Innovation-related skills are particularly fostered through debate, creative writing, and science clubs (Wu & Fernando, 2023). These soft skills translate into improved adaptability and preparedness for both higher education and the workforce.

6. Civic Engagement and Social Awareness

Volunteer-based ECAs cultivate empathy, social responsibility, and a broader awareness of community issues. Students involved in international service projects or local outreach programs often report a deeper understanding of global inequities and a stronger desire to contribute to a sustainable society. (Iso, A. D. et al., 2020; Jahan, 2024).

Table 1 Summary of review studies

Author/Year	Country	Participants	Type of ECA	Key Outcomes
Collings (2020)	USA	High school	Mixed academic/sport	Higher GPA, improved motivation
Alvariñas-Villaverde et al. (2024)	Spain	Rural primary	Academic & arts	Improved test performance
Hancock et al. (2012)	USA	Adolescents	Leadership roles	Responsibility, ethical decisions
Munadi & Khuriyah (2023)	Indonesia	Secondary	Religious/ community ECAs	Leadership + moral development
Denault et al. (2022)	Canada	Low-SES high school	Interest-based ECAs	Improved well-being & motivation
Javaid et al. (2020)	Pakistan	Secondary	Co-curricular	Social communication bonds
Wu & Fernando (2023)	China	Secondary	Innovation ECAs	Creativity, innovation skills
Díaz-Iso et al. (2020)	Spain	University volunteer	Volunteering	Civic responsibility
Jahan (2024)	Bangladesh	Govt. college	Service ECAs	Social/civic awareness

7. Contextual Insights: Thailand

In Thailand, ECAs have become increasingly important due to changes in the university admission system, particularly with the introduction of the Thai University Central Admission System (TCAS). Under TCAS Round 1 (Portfolio Round), students are evaluated based on their talents, achievements, and extracurricular engagement, prompting many to actively build their portfolios beyond classroom learning (Faculty of Medicine, Chulalongkorn University, 2025; Mahidol University, 2024; Westminster College Bangkok, 2025). This is especially evident among students

preparing for competitive fields such as medicine, dentistry, and pharmacy, who often participate in hospital volunteering, public health campaigns, research and innovation projects, and science-focused leadership roles (Department of Biotechnology, 2025; CAMPHUB, 2024; Million Creation Company, 2025; ONCEs, 2025).

Common ECAs offered in Thai schools include academic clubs (e.g., math, science, language), sports (football, volleyball), performing arts (Thai dance, music, drama), community service (e.g., Youth Red Cross), Buddhist and cultural clubs, and leadership positions such as student council (KIS International School, 2025). However, access and quality vary significantly. Well-funded urban or international schools tend to offer a broader range of options, while rural schools often face limited resources and fewer extracurricular opportunities (Tienkhaw, 2020; Pitchayakan et al., 2023).

Furthermore, many students seek out-of-school ECAs, such as music training, private research mentorship, or academic workshops, as these are often perceived as more prestigious and better aligned with university expectations. These opportunities, typically run by experts, provide more structured and portfolio-worthy experiences. However, this growing emphasis has also raised concerns. Students increasingly invest significant financial resources, time, and energy into building competitive extracurricular profiles. As a result, some experience burnout and emotional exhaustion, highlighting the need for better balance, equitable access, and policy-level support to ensure ECAs remain enriching and developmentally appropriate.

Barriers and Challenges in Accessing Extracurricular Activities

Despite the growing emphasis on extracurricular activities (ECAs) in student development and college admissions, several key barriers hinder equitable participation among Thai students. One major challenge is the inequity in access between urban and rural areas. While schools in Bangkok and other major cities often offer a wide range of high-quality ECAs—such as science camps, innovation programs, and leadership workshops—students in remote or rural areas face limited options. Although some programs are now offered online through platforms like Zoom or Microsoft Teams, many impactful activities (e.g., lab-based research, performing arts, or medical volunteering) still require in-person participation, thus favoring urban students (Tienkhaw, 2020).

Socioeconomic status also significantly influences participation. Students from higher-income families are more likely to engage in ECAs due to their ability to afford associated costs, such as fees for private camps, music lessons, or specialized equipment (e.g., musical instruments or lab kits) (CAMPHUB, 2024). In contrast, students from low-income families may lack financial resources or parental support to pursue these opportunities.

Gender disparities are evident, especially in sports-related ECAs. Activities like football, rugby, and motorsports tend to be male-dominated, with limited infrastructure or cultural support for female participation. This often results in unequal opportunities for students who do not conform to traditional gender norms.

Academic pressure represents another critical barrier. High-stakes exams such as A-Levels and TCAS drive students to invest significant time in exam preparation, often through intensive tutoring. This can lead to limited time and energy for ECAs, especially among students who struggle with time management or face pressure to prioritize academics above holistic development.

Lastly, there is a lack of standardized tools to assess non-academic skill gains from ECAs (Donnelly et al., 2019). Without validated frameworks to measure soft skills, schools and policymakers may undervalue ECAs, further limiting institutional support and investment in their development.

Discussion and Critical Analysis

The findings of this review reinforce that extracurricular activities play an essential role in adolescent development across academic, social, emotional, and leadership domains. This aligns with Vygotsky's Social Development Theory, which emphasizes learning through social interaction and scaffolding, and Bronfenbrenner's Ecological Systems Theory, which frames development as an outcome of interactions across multiple environmental layers. While global research consistently highlights the positive developmental outcomes of ECAs, differences emerge when applying these findings to the Thai context, particularly in relation to educational structure, motivation patterns, and accessibility. International studies show that structured ECAs correlate with higher academic performance, stronger motivation, and improved psychological well-being (Collings, 2020; Villaverde, M. A. et al., 2024; Denault et al., 2022). In Western systems, ECAs are integrated into school culture with dedicated resources, trained mentors, and curricular alignment, allowing sustained participation over long periods. In contrast, Thai students often participate strategically in ECAs to strengthen TCAS Round 1 (Portfolio) applications rather than out of intrinsic interest. The surge in participation during TCAS 64–67, in many cases, resulted in short-term, certificate-focused involvement rather than deep skill acquisition, differing from Western contexts where long-term engagement is linked with stronger developmental outcomes.

Thai educational inequality further influences the impact of ECAs. Urban and private or international schools typically offer extensive opportunities such as MUN, STEM camps, research programs, music ensembles, and innovation competitions, while schools in rural provinces frequently lack staff, facilities, and funding. This discrepancy reflects Bronfenbrenner's macrosystem perspective

that socioeconomic status, school type, and policy structures shape opportunity access, resulting in unequal developmental benefits, with high-income students receiving disproportional advantages. Another notable distinction involves student well-being. Western literature suggests ECAs improve self-esteem and reduce stress (Chorosiewski, 2015), yet in Thailand, intense competition for medical and high-demand university programs has led some students to accumulate activities excessively, contributing to burnout and diminished intrinsic motivation. This shift indicates that ECAs risk becoming performance-oriented credentials rather than environments designed for experiential growth and exploration.

Despite the evident benefits, current research presents limitations, especially within Thailand. Most Thai studies are descriptive rather than experimental, making causal interpretations limited. Longitudinal research tracking long-term effects into higher education and career outcomes is lacking, and few studies explore disparities across socioeconomic or rural-urban contexts. Additionally, Thailand has no standardized tools for assessing soft-skill development, resulting in inconsistent measurement. Research also seldom distinguishes between portfolio-driven and interest-driven participation, despite evidence suggesting that motivation type may influence developmental outcomes. These gaps highlight the need for Thai-specific evaluation frameworks that consider equity, student well-being, and authentic skill growth.

Moving forward, policy and practice in Thailand would benefit from structured ECA programs supported by mentorship, reflection-based learning processes, and increased access for underserved regions. Government-funded ECA infrastructure, encouragement of long-term engagement, and reduced competition-driven pressure could foster more equitable outcomes. Developing standardized assessment tools tailored to Thai cultural and educational contexts would also enhance the validity of future research. While global evidence confirms the wide-ranging benefits of ECAs, their impact in Thailand is shaped by cultural norms, systemic constraints, and socioeconomic factors, making context-sensitive and data-driven approaches essential. Future research should therefore aim to establish equitable and sustainable ECA models that genuinely support student development rather than merely serving as a credential for university admission.

Conclusion and Recommendation

This review concludes that extracurricular activities contribute significantly to students' holistic development, supporting academic performance, social interaction, emotional well-being, leadership capacity, creativity, and civic responsibility. Insights aligned with Vygotsky's and Bronfenbrenner's frameworks highlight that such development emerges through social interaction, collaboration, and exposure to diverse learning environments. Importantly, ECAs were

found to be powerful generators of transversal skills-including communication, teamwork, problem-solving, creativity, and self-management-which are transferable across academic, personal, and future professional contexts. However, while international evidence consistently reports positive outcomes, Thai-specific findings reveal varying levels of benefit due to structural inequalities, pressure from TCAS Portfolio requirements, and resource gaps between urban and rural schools. These differences may lead some students to experience stress or engage in activities superficially rather than for genuine skill growth.

Given these findings, recommendations should be context-sensitive. Schools and policymakers in Thailand could enhance ECA effectiveness by creating structured programs that emphasize meaningful participation and transversal skill development, rather than activity accumulation for portfolio purposes. Expanding equitable access through school-community partnerships, provincial activity development, and financial support for under-resourced schools may reduce participation gaps. The development of standardized assessment tools tailored to Thai cultural and educational settings would enable more accurate evaluation of soft-skill outcomes. Future research should consider longitudinal and mixed-method approaches, compare participation experiences across socioeconomic groups, and differentiate between interest-driven and portfolio-driven involvement. Ultimately, while ECAs hold strong potential to enrich youth development, maximizing their long-term value in Thailand requires thoughtful design, equitable access, and evidence-based evaluation.

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