Development of Soft Skills in Schoolchildren: Integrating Pedagogical Strategies, Digital Technologies, and Community Practices

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ABSTRACT

This review synthesizes empirical and conceptual evidence on methods and settings for developing soft skills in schoolchildren, mapping pedagogical strategies, digital tools, and implementation constraints. It organizes soft skills into interpersonal, interpersonal, and cognitive categories including communication, teamwork, creativity, critical thinking, emotional intelligence, adaptability, and digital literacies and shows that cooperative learning, project-based work, theatrical and arts activities, extracurricular programmes, and culturally grounded tasks tend to produce measurable gains. Digital didactic games, Bring-Your-Own-Device (BYOD) frameworks, and digital storytelling offer personalization and extended practice, while short private online courses (SPOCs) and blended modules support teacher upskilling. Across studies, emotional competence and teacher emotional culture emerge as proximal mediators of pupil outcomes, and family and community programmes amplify transfer and access. However, evidence is limited by short-term designs, regional samples, heterogeneous measures, and inconsistent reporting of effect sizes, and digital approaches raise equity and privacy concerns. The review therefore recommends policy levers—sustained practice-focused teacher development, curricular integration of soft-skill targets, equitable ICT investment, and validated assessment rubrics and identifies priorities for longitudinal, comparative, and equity-focused research to strengthen causal inference and scalable implementation.

INTRODUCTION

This review synthesizes empirical and conceptual evidence on methods and settings for developing soft skills in schoolchildren, mapping pedagogical strategies and digital tools, and identifying barriers and gaps (Baş et al., 2025; Chekour et al., 2023; Demchenko et al., 2022a, 2022b; Ilaeva, 2023; Olokunde, 2021; Petlina et al., 2023). Culturally relevant content makes soft-skill learning meaningful while strengthening identity; project learning with ethnocultural components, role play, and folk games are associated with gains in communication, emotional intelligence, and collaboration (Baş et al., 2025). Experimental and quasi-experimental designs show that structured cooperative learning and extracurricular programs produce measurable increases in creative and critical thinking among younger pupils (Ilaeva, 2023), while controlled teacher-training models increase classroom teamwork readiness (Yankovych et al., 2021). Digital tools enable personalization: digital didactic games support supra-professional competencies through adaptive elements (Petlina et al., 2023), BYOD and mobile devices foster creative outcomes and learner autonomy (Demchenko et al., 2022b), and SPOC-based blended courses structure teacher upskilling (Chekour et al., 2023). Practical tools like gamified live-action vocational scenarios and digital storytelling in informal STEM environments enhance engagement and expressive competence (Spirina & Makovkina, 2020; Olokunde, 2021). However, systemic constraints persist: insufficient teacher emotional culture, curricular misalignment, limited standardized assessment, and unequal digital access (Hrytsiuk et al., 2021; Kulsharipova, 2023; Sadykova & Atemova, 2024).

Definitions and Taxonomy of Soft Skills

Soft skills are operationalized as transferable interpersonal, intrapersonal, and cognitive competences that support learning, collaboration, and adaptation across contexts. Core categories include communication, teamwork, creativity and entrepreneurial attitudes, critical thinking, emotional intelligence, adaptability, leadership, and digital literacies as applied meta-competences (Baş et al., 2025; Chojak, 2024; Kulsharipova, 2023; Sadykova & Atemova, 2024; Vrapi et al., 2024). Emotional intelligence is treated as a cross-cutting domain underpinning self-knowledge and emotion regulation (Kulsharipova, 2023). Communication encompasses oral, written, and multimodal expression; drama activities, digital storytelling, and presentation-based projects target communicative fluency and audience awareness (Demchenko et al., 2022a; Hrytsiuk et al., 2021; Olokunde, 2021). Teamwork involves micro-group collaboration, role distribution, and collective problem solving, developed primarily through cooperative learning and project methods (Ilaeva, 2023; Yankovych et al., 2021). Creativity and early entrepreneurial attitudes are treated as both dispositions and practiced skills; project-based tasks, early childhood entrepreneurship projects, and maker-style extracurricular activities foster ideation, prototyping, and market-oriented communication (Chojak, 2024; Sudirman et al., 2023).

Target Populations and Settings

The taxonomy distinguishes target populations and settings to align models with developmental needs. Primary interventions focus on cooperative learning, play-based theatre, digital storytelling, and teacher-mediated extracurricular programmes to scaffold emergent collaboration, creativity, and basic emotional skills (Demchenko etve al., 2022b; Ilaeva, 2023; Olokunde, 2021). Secondary and vocationally oriented programmes emphasize project methods, gamified simulations, and career guidance that foreground leadership, adaptability, and profession-linked soft skills (Hrytsiuk et al., 2021; Spirina & Makovkina, 2020; Sadykova & Atemova, 2024). The literature separates subject-based development (integrating soft-skill practice into computing or labour lessons) from informal settings—clubs, after-school STEM, community craft, and family strengthening programmes—which extend practice and connect skills to real-world tasks (Hrytsiuk et al., 2021; Purnama Sari, 2024). Cross-cutting all settings is teacher capacity: pupil outcomes depend fundamentally on teacher readiness to design, scaffold, and assess soft-skill learning, creating a direct link between teacher training models and classroom efficacy (Chekour et al., 2023; Kulsharipova, 2023; Yankovych et al., 2021).

THE ORETICAL AND PEDAGOGICAL FOUNDATIONS

Socio-Emotional and Cognitive Models

Socio-emotional and cognitive models frame emotional intelligence and self-regulation as central mechanisms mediating broader soft-skill outcomes. A pedagogical model that explicitly trains emotional intelligence produces positive dynamics across evaluation criteria, showing links between emotional competence and cognitive development as well as improved capacities for self-regulation and interpersonal behavior (Kulsharipova, 2023). Under crisis or wartime conditions, emotional stability, stress-resistance, and adaptive communication predict psychological adaptation and the activation of internal resources for learning (Liashch & Voronyuk, 2024). Emotion-related competencies support attention, metacognition, and persistence, enabling the application of communication and problem-solving skills in challenging contexts. Teacher emotional culture and pedagogical ethos also act as proximal mediators. Training models using 'Pedagogy of the Heart' produce stronger outcomes in cooperative skills when teacher education includes modelling of socio-emotional practices and scaffolded group work (Yankovych et al., 2021). At the classroom level, subjects that deliberately incorporate perspective-taking, presentation, and group negotiation foster socio-emotional growth when teachers scaffold reflection and provide formative feedback (Hrytsiuk et al., 2021). Thus, individual emotional competencies, teacher emotional culture, and scaffolded processes jointly determine whether socio-emotional growth transfers into durable soft-skill gains (Liashch & Voronyuk, 2024; Yankovych et al., 2021).

Learning Theories and Pedagogical Rationales

The literature provides converging rationales for cooperative, project-based, problem-solving, and play-based methods as mechanisms for soft-skill acquisition. Cooperative learning and structured micro-group projects produce observable improvements in creativity, critical thinking, and collaborative problem-solving by creating repeated, scaffolded opportunities for peer interaction, role differentiation, and joint responsibility (Ilaeva, 2023). Project methods enable individualisation and transfer by situating tasks in complex, multi-step activities requiring planning, negotiation, and public presentation, which in turn develop leadership, communication, and creative thinking (Tereshchuk, 2024). Theatrical and arts-based approaches contribute via embodiment and perspective-taking: teacher-preparation programmes training future primary teachers to organise theatrical activities report increases in readiness to apply drama for expression, empathy, and communication skill-building in early years classrooms (Demchenko et al., 2022a). After-class and informal settings, including digital storytelling and STEM clubs, create low-stakes environments where learners practise narration, sequencing, and audience-awareness, strengthening both digital literacies and dispositional skills (Olokunde, 2021; Demchenko et al., 2022b). Key design principles include authentic and collaborative tasks, teacher scaffolding of reflection, and rubric-based assessment of process indicators (Hrytsiuk et al., 2021; Petlina et al., 2023).

Values-Based and Culturally Grounded Frameworks

Culturally-grounded frameworks embed national values, local traditions, and community practices within soft-skill development, arguing that relevance to students' lived contexts increases motivation and the meaningfulness of practice. Empirical work from Kazakhstan identifies national values—including language, traditions, family values, national games, and respect for nature—and links their explicit inclusion to gains in communicative competence, emotional intelligence, and civic identity when pedagogies use ethnocultural project work, role-play, and national literature as vehicles for soft-skill practice (Baş et al., 2025). Cultural approaches extend to community crafts and local economies: training programs combining traditional craft skills with information technology can preserve heritage and foster teamwork, communication, and entrepreneurial problem-solving (Sudirman et al., 2023). International project models designing entrepreneurship activities for young children show that framing tasks around local business concepts provides early, concrete opportunities to exercise initiative, planning, and collaboration (Chojak, 2024). These culturally situated activities increase intrinsic motivation by connecting learning to identity, and supply authentic tasks for practicing social, communicative, and problem-solving skills in locally relevant settings (Vrapi et al., 2024; Sadykova & Atemova, 2024). Curricula should integrate national games, crafts, and community projects rather than treating values as an add-on (Baş et al., 2025; Sudirman et al., 2023).

ACTIVE AND CLASSROOM-BASED PEDAGOGIES

Cooperative and Project-Based Methods

Cooperative and project-based approaches structure classroom activity around sustained peer interaction, shared responsibility, and problem resolution, creating repeated opportunities to practise communication, teamwork, and creative problem-solving (Ilaeva, 2023). In cooperative designs, teachers organise students into stable microgroups that take responsibility for phases of a joint project, alternating roles like facilitator, recorder, and presenter to rotate leadership and strengthen collaborative skills (Hrytsiuk et al., 2021). Experimental implementations of cooperative programmes report gains in creative and critical thinking, peer interaction, and situational problem-solving when extracurricular programs systematically apply cooperative structures and assess process indicators during implementation (Ilaeva, 2023). The project method offers a complementary macrostructure in which teachers scaffold learning through sequenced stages: problem identification, planning, research, production, presentation, and reflection (Tereshchuk, 2024). Teachers act as designers, mentors, and assessors, providing formative feedback and monitoring collaborative dynamics (Tereshchuk, 2024; Yankovych

et al., 2021). Project competitions and jury-style presentations deepen accountability and public communication skills by simulating external evaluation (Hrytsiuk et al., 2021). Teacher-preparation programmes combining interactive, game, and project methods increase teacher readiness to foster teamwork in classrooms, showing that preparation must include modelling of group work and assessment literacy for process indicators like contribution equality, quality of interaction, and reflective commentary adapted to developmental levels (Ilaeva, 2023; Budarina & Zelko, 2020).

Theatrical, Arts-Based, and Role-Playing Approaches

Theatrical and arts-based methods use role-play, drama tasks, and creative production to cultivate expressive communication, empathy, and collaborative planning. Programs preparing future primary teachers in theatrical activity increase readiness to design and moderate drama-based lessons as deliberate instruments for social and emotional learning (Demchenko et al., 2022a). Practical designs move from teacher-led modelling of short role-plays to student-authored scenes and finally to performances requiring group coordination, script negotiation, and audience reflection. Monitoring of teacher and student readiness typically includes diagnostics of theoretical awareness and practical readiness to organise activities (Demchenko et al., 2022a). Arts-based lessons enhance perspective-taking by assigning roles requiring students to argue from different viewpoints and improvise solutions under communicative constraints, supporting empathy and adaptive communication (Budarina & Zelko, 2020; Demchenko et al., 2022a). In informal STEM contexts, digital storytelling encourages narrative construction and multimodal expression, increasing both expressive confidence and computer science interest (Olokunde, 2021). Teacher facilitation must combine classroom management for collaborative enactment with techniques for reflective critique and audience feedback to consolidate communicative gains (Demchenko et al., 2022a).

Comparative Analysis of Soft-Skill Development Approaches

To synthesize the diverse body of empirical and conceptual research on soft-skill development, Table 1 provides a comprehensive, structured comparative overview of the major pedagogical interventions documented in the literature. It maps teaching approaches, participant characteristics, educational levels, and reported outcomes to show which methods align best with developmental and structural requirements.

Table 1. Comparative Analysis of Main Pedagogical Interventions and Reported Outcomes.

Pedagogical Approach	Participant Characteristics	Educational Level	Reported Outcomes & Key Findings	Key Citations
Cooperative Learning & Structured Micro-groups	Schoolchildren, younger cohorts, stable microgroups	Primary Education (Ages 6–11)	Measurable increases in creative and critical thinking, active peer interaction, and situational, collaborative problem-solving. Structured microgroups with rotated roles (facilitator, recorder, presenter) ensure task equality.	Ilaeva (2023); Hrytsiuk et al. (2021)
Project-Based Learning (PBL) & Ethnocultural Projects	Primary to secondary students, children in local craft settings	Primary, Secondary, & Informal/Vocational Education	Develops leadership, public communication, creative thinking, initiative, planning, and collaborative problem-solving. Framing tasks around local traditions (e.g., national games, traditional crafts) increases intrinsic motivation.	Tereshchuk (2024); Chojak (2024); Sudirman et al. (2023); Baş et al. (2025)

Theatrical, Arts-Based & Role-Playing Pedagogies	Primary students, pre-service primary educators	Primary & Higher Education (Teacher Training)	Cultivates expressive oral/multimodal communication, empathy, and perspective-taking. Pre-service teachers show significantly increased readiness to design and moderate drama-based lessons for social-emotional learning.	Demchenko et al. (2022a); Budarina & Zelko (2020)
Digital Didactic Games & Gamified Simulations	General schoolchildren, students in professional/career tracks	Primary, Secondary, & Vocational Orientation	Enables personalized skill-practice pathways with adaptive difficulty. Fosters communication, decision-making, creative problem-solving, collaboration, and occupational self-efficacy in immersive vocational scenarios.	Petlina et al. (2023); Spirina & Makovkina (2020)
BYOD & Digital Storytelling Frameworks	Elementary learners, primary school cohorts	Primary & Informal STEM Environments	Fosters creative outcomes, learner autonomy, and digital literacy. Shifting device usage from passive consumption to multimedia composition increases expressive confidence and subject-matter engagement (e.g., computer science).	Demchenko et al. (2022b); Olokunde (2021)
Blended Learning & SPOC-based Teacher TPD	Pre-service and in-service educators	Higher Education & Professional Development (TPD)	Significantly increases educator readiness to structure, facilitate, and assess collaborative learning and soft skills. Enhances teacher emotional culture, pedagogical ethos, and assessment literacy for process indicators.	Chekour et al. (2023); Yankovych et al. (2021); Kulsharipova (2023)
Socio-Cultural & Crisis Adaptation Programs	Wartime-displaced and crisis-affected schoolchildren	Primary & Secondary Education in Emergency Settings	Activates internal resilience and supports psychological adaptation. Enhances emotional stability, stress-resistance, and adaptive communication through low-bandwidth collaborative tasks and structured peer-support systems.	Liashch & Voronyuk (2024)
Community & Family-Mediated Initiatives	Adolescents, parents, and community participants	Primary, Secondary, & Community-Based Informal	Strengthens home-school coordination and digital skill transfer. Parent-mediated device routines and structured community programs (e.g., NGO mentoring, craft-based digital marketing) improve long-term vocational readiness.	Caceres & Figueredo (2023); Purnama Sari (2024); Sauqi & Dimyati (2022)

Digital Interventions and Educator Development

Didactic Games, Gamification, and Live-Action Simulations

Digital didactic games serve as a structured pedagogical instrument for cultivating supra-professional

competencies by combining game mechanics with explicit learning objectives and personalization features. A semantic model mapping didactic game elements to specific soft skills highlights the potential to personalise game segments (Petlina et al., 2023). This model frames games as environments where scaffolding, adaptive difficulty, and targeted feedback create individualised pathways for practicing communication, creativity, problem-solving, and collaboration (Petlina et al., 2023). Design principles emphasize clear learning objectives, appropriate challenges, role rotation, and formative feedback. Gamification in career orientation increases engagement and motivation; live-action scenarios allow learners to 'test' professions and practice soft skills in immersive settings (Spirina & Makovkina, 2020). For skill transfer, game mechanics must align with real-world demands: collaborative puzzles simulate coordination, while scoring systems reward peer support. Replayability supports iterative improvement, and personalization enables scaffolding that matches developmental zones (Petlina et al., 2023). Assessment should combine in-game metrics (task completion, collaboration events logged) with external process indicators (teacher observations, reflective self-reports) (Petlina et al., 2023; Spirina & Makovkina, 2020).

BYOD, Digital Storytelling, and Mobile-Supported Creativity

BYOD and digital storytelling appear as complementary routes to mobilise creative expression and digital literacies. Classroom use of smartphones shifts learning from reproductive tasks toward creative understanding, fostering student-led inquiry and independent research (Demchenko et al., 2022b). Implementation requires teacher-guided task design that leverages device affordances for multimedia composition and iterative revision, rather than sporadic drill-and-practice tasks (Demchenko et al., 2022b). Digital storytelling in informal STEM settings enables learners to represent computational thinking through multimodal narratives, increasing expressive confidence and computer science relevance (Olokunde, 2021). Facilitation requires clear task framing, story planning scaffolds, and teacher mediation of editing and sharing to convert creations into collaborative critique and peer feedback opportunities (Olokunde, 2021). Device-management strategies combine predictable routines for safe use, moderated sharing channels, and defined artifact-creation milestones to keep projects focused and equitable (Demchenko et al., 2022b; Olokunde, 2021).

Blended Learning, SPOCs, and Teacher Professional Development

Blended and SPOC-based models preparing teachers to integrate soft-skill pedagogy combine online resources with face-to-face practice, problem-based tasks, and collaborative project work. A SPOC-based blended course integrates online pedagogical materials, micro-assignments, and in-person sessions focused on facilitation and assessment (Chekour et al., 2023). Effective course elements include annotated video exemplars, rubric calibration, and peer-coaching cycles where teachers observe and reflect on microteaching sessions (Chekour et al., 2023). Empirical testing of training models shows positive impacts on readiness: future teachers' readiness to form students' teamwork skills significantly increases after interactive, game- and project-based training modules (Yankovych et al., 2021). Training must explicitly address teacher emotional culture and assessment literacy through reflective modules and sustained coaching (Kulsharipova, 2023; Yankovych et al., 2021). Monitoring readiness combines pre/post diagnostics, lesson ratings, and self-reported confidence (Chekour et al., 2023).

Digital Career Guidance and ICT for Professional Orientation

Digital tools for career guidance foreground soft skills by enabling personalised guidance, simulated work tasks, and information-rich matches between student profiles and labour-market requirements. Digital resources make career guidance accessible and personalised, and soft skills like communication, adaptability, and leadership are frequently identified as decisive for employability (Sadykova & Atemova, 2024). Gamified simulations allow students to 'test' professions in immersive contexts, cultivating decision-making and self-efficacy (Spirina & Makovkina, 2020). Family-mediated digitalisation and community ICT training further influence outcomes: parental support shapes how children transfer home-learned digital practices into school tasks, affecting

demonstration of soft skills in class (Caceres & Jimenez Figueredo, 2023). Community ICT training programs combining technical and entrepreneurial modules report improvements in both hard and soft skills, creating pathways for market-oriented practice (Sauqi & Dimyati, 2022).

Socio-Cultural, Family, and Crisis Contexts

Family Involvement and Home-School Interactions

Parents act as gatekeepers and facilitators of children's digital access and soft-skill learning, and family-school coordination is a key mechanism for productive outcomes. Children's classroom performance reflects what they learn at home, and the role of parents in mediating technology use is decisive for positive outcomes; teacher-family cooperation is essential because schools cannot fully achieve digitalisation goals without parental support (Caceres & Jimenez Figueredo, 2023). Community initiatives building household-level ICT fluency create conditions for children to practice digital literacies and related soft skills like communication and autonomous learning (Sauqi & Dimyati, 2022). Parental mediation shapes the quality of practice: guidance regarding hours of device use and the kinds of digital activity influences whether exposure supports academic gains and soft-skill development (Caceres & Jimenez Figueredo, 2023). Coordinated school-family relations multiply program effects, especially for digital and communication skills.

Community-Based and Vocational Programs

Community and vocational programs combine craft, entrepreneurship education, and digital marketing to develop hard and soft skills together. A community macramé initiative integrated craft training with website development and social media promotion, strengthening teamwork, communication, and marketing, and anticipating socio-economic outcomes like increased income (Sudirman et al., 2023). An NGO family-strengthening programme combined basic literacy and targeted soft-skill training for adolescents and younger children, using mentoring to address variable learner engagement; persistent mentoring and motivational strategies helped overcome uneven absorption and improved participant readiness for vocational pathways (Purnama Sari, 2024).

Entrepreneurship projects for young children embed soft-skill objectives—creativity, initiative, cooperation—into child-friendly business tasks, serving as supplement to school curricula (Chojak, 2024). Community health and behaviour-change projects illustrate measurable soft-skill gains: a mask-education programme for primary-school children produced an 86.5% increase in knowledge and correct mask usage, demonstrating how structured interventions with clear practice and follow-up produce rapid competency shifts (Antikasari et al., 2025).

Crisis, Wartime, and Displacement Contexts

Wartime and displacement fundamentally alter how soft skills manifest and how programmes must be designed. In wartime conditions, soft skills like emotional stability, adaptability, stress resistance, creative problem-solving, and communication become critical for psychological adaptation and social integration; the social environment, family support, and the educational setting strongly influence the activation of internal resilience (Liashch & Voronyuk, 2024).

Under these conditions, programmes must emphasize psychosocial support, remote and blended modalities to maintain continuity, and activities explicitly designed to enhance coping skills and peer support. Implementation under crisis needs to account for disrupted infrastructure and heightened family stress, recommending simple, low-bandwidth remote learning tasks that encourage collaborative problem-solving and peer support, together with teacher and parent guidance to monitor emotional well-being (Liashch & Voronyuk, 2024).

Policy Recommendations and Scalable Design

Policy and System-Level Recommendations

Coordinated policy, funding, and teacher-development pathways are required to translate pilot successes into sustained system change (Petlina et al., 2023). Actions include: (1) Invest in continuous, practice-focused in-service teacher programmes combining online modules, supervised classroom practica, and coaching to build emotional culture, assessment literacy, and digital facilitation skills (Chekour et al., 2023; Yankovych et al., 2021). (2) Explicitly include soft-skill targets in national curricular standards and inspection frameworks, linking them to assessment rubrics and teacher appraisal so that schools have incentives and time allocations to implement project and theatre-based activities (Kulsharipova, 2023; Baş et al., 2025). (3) Allocate funding for ICT infrastructure and equitable device programs while developing BYOD policies protecting disadvantaged learners (Sauqi & Dimyati, 2022; Demchenko et al., 2022b). (4) Integrate validated assessment rubrics for collaboration, emotional regulation, and creativity into national assessment mosaics and vocational guidance systems (Sadykova & Atemova, 2024; Spirina & Makovkina, 2020). (5) Issue clear guidelines for family engagement and culturally grounded curricula embedding national values, supporting culturally relevant pedagogy and increasing programme meaningfulness (Baş et al., 2025).

Program Design Elements for Scalable Interventions

Program design should begin with explicit target-skill mapping by age and context, specifying developmental targets for each grade band. For early primary grades (ages 6–8), emphasis should prioritize basic communication, turn-taking, cooperation, and emotional-regulation tasks embedded in play, while upper primary grades (ages 9–11) should extend to complex collaboration, project planning, critical thinking, and digital literacies (Ilaeva, 2023). Blended delivery templates should combine concise online modules with regular face-to-face practice sessions that operationalise skills through collaborative projects, theatre, and game-based tasks (Chekour et al., 2023). Modular lesson sequences should follow a clear rhythm: launch (motivation and target skill statement), scaffolded practice (teacher modelling and microtasks), collaborative enactment (project work, role-play, or simulation), and reflection and transfer (metacognitive debrief and homework linking skills to daily life) (Demchenko et al., 2022a; Spirina & Makovkina, 2020). Teacher-training pipelines must be multi-stage and sustained: introductory online course, blended practicum, mentoring during initial implementation, and periodic advanced modules (Chekour et al., 2023; Yankovych et al., 2021). Family engagement modules should include short guided activities families can do at home, explicit guidance on device management, and channels for two-way reporting (Caceres & Jimenez Figueredo, 2023).

Future Research Agenda and Checklists

Future Research Agenda

While the existing literature demonstrates encouraging immediate outcomes, several critical gaps must be addressed to build a robust, scalable, and globally relevant evidence base. Priority areas for the future research agenda include:

1. Long-Term Longitudinal Impact and Real-Life Transfer

First, there is an urgent need for longitudinal studies with extended follow-up windows. While current research frequently reports positive immediate gains following short-term interventions (Ilaeva, 2023; Kulsharipova, 2023), evidence regarding whether these soft skills are maintained over time is exceedingly sparse. Future research must track students over multiple academic years and transition phases (e.g., from primary to secondary school, and secondary to higher education or employment) to assess skill retention. Crucially, studies should investigate the real-life transfer of soft skills—examining how interpersonal, intrapersonal, and cognitive

competencies learned in structured school contexts manifest in unstructured, real-life family, community, and vocational settings (Kulsharipova, 2023; Ilaeva, 2023). Assessing persistence and real-world applicability is essential to ensure that soft-skill interventions translate into long-term personal and occupational success.

2. Cross-Country and Cross-System Comparative Trials

Second, comparative research across different countries and educational systems must be prioritized. Current studies are largely regional and context-specific, which limits their global generalizability. By conducting head-to-head comparative research internationally, scholars can improve our understanding of how diverse socio-cultural structures, national values, and distinct educational systems influence soft-skill development (Ilaeva, 2023; Vrapi et al., 2024). This comparative approach will unpack the specific ways cultural and social factors (e.g., individualistic versus collectivistic societal norms, varying degrees of family-school cohesion, and localized community traditions) shape how students perceive, absorb, and practice skills like collaboration, leadership, and emotional intelligence (Baş et al., 2025; Vrapi et al., 2024).

3. Methodological Comparison and Standardized Measurement

Third, comparative trials should test competing pedagogical methods (e.g., structured cooperative learning versus project-based or drama-based approaches) using identical, standardized outcome measures (Ilaeva, 2023; Tereshchuk, 2024). Translating and validating age-appropriate socio-emotional learning (SEL) rubrics and instruments across local languages and cultural contexts will prevent measurement heterogeneity from obscuring actual developmental trends (Kulsharipova, 2023; Yankovych et al., 2021).

4. Equity-Focused Evaluations of Digital Models

Fourth, equity-focused evaluations must study how BYOD (Bring Your Own Device) and blended learning models impact different socioeconomic and displacement-status groups. As mobile technologies can both enhance student autonomy and widen the digital divide, researcher efforts should isolate the conditions under which digital pedagogies support equitable access and outcomes (Demchenko et al., 2022b; Sauqi & Dimyati, 2022). This includes evaluating the long-term cognitive and motivational effects of gamified learning and personalized digital didactic tools (Petlina et al., 2023).

5. Implementation Science and Teacher-Change Mechanisms

Finally, researchers must examine the mechanisms of teacher development. Longitudinal inquiries should investigate which specific configurations of training pipelines (e.g., SPOCs, face-to-face coaching, peer-coaching, or lesson-study cycles) lead to permanent shifts in classroom facilitation, emotional culture, and process-based assessment practices (Chekour et al., 2023; Yankovych et al., 2021).

Monitoring Checklists and Implementation Checklists

A starter set of monitoring indicators should combine participation metrics, process-quality measures, and outcome scores. Participation metrics include enrolment and session-attendance rates, percent of teachers completing pipeline stages, and family-engagement contacts logged. Process-quality measures should capture collaboration quality (observational rubric mean scores), facilitation fidelity (checklist of critical teacher behaviours), and exposure to active modalities (number of sessions per term). Outcome indicators should include emotional-regulation scores from validated short scales, pre/post changes in creative and critical-thinking tasks, project-artefact quality scores, and digital-literacy metrics such as independent use of a storytelling tool (Olokunde, 2021; Ilaeva, 2023; Kulsharipova, 2023). Data-collection methods should mix direct observation, brief validated questionnaires (teacher and student), artefact sampling, teacher logs, and parent reports. The programme should specify measurement cadence: baseline, immediately post-module, and

three- to six-month follow-up, using the mask-education pre/post-test as a model for simple metrics (Antikasari et al., 2025; Kulsharipova, 2023).

CONCLUSION

The evidence reviewed shows a consistent pattern: active, collaborative, and culturally relevant pedagogies create repeated, scaffolded opportunities supporting communication, teamwork, creativity, and problem-solving in primary and secondary settings. Theatrical and arts methods, project-based sequences, and structured cooperative microgroups build expressive and perspective-taking capacities, while digital didactic games and BYOD-facilitated projects can personalise practice and increase engagement. Emotional intelligence functions as a cross-cutting mechanism, and teacher emotional culture and facilitation skills appear to determine whether classroom processes translate into durable soft-skill gains (Kulsharipova, 2023; Yankovych et al., 2021). For practitioners and policymakers, these findings imply concrete priorities. Teacher professional development must be sustained, practice-oriented, and multimodal, combining online modules, supervised practica, and coaching to strengthen modelling, assessment literacy, and digital facilitation. Curricula and accountability systems should embed explicit soft-skill targets and feasible rubrics. Investments in equitable ICT infrastructure, clear BYOD policies, and family-engagement modules can reduce access gaps and support transfer. Ethical safeguards, including data-privacy protocols and culturally appropriate content, should accompany digital deployments (Petlina et al., 2023; Sadykova & Atemova, 2024).

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