

Collaborative Problem-Solving Approaches to Manage Classroom Behaviour Issues

Dr. Gajanan Shrinarayan Sharma

Assistant Professor,

Matoshri Sayarbai Champalalji Chopda B.Ed College, Tank Road, Khamgaon,

Dist- Buldhana, 444303, Maharashtra, India

Sant Gadge Baba Amravati University, Amravati

Abstract

Collaborative Problem-Solving (CPS) approaches to classroom behavior management represent a fundamental paradigm shift in educational discipline, moving from punitive, consequence-driven interventions toward collaborative, skill-building frameworks. This comprehensive review examines the theoretical foundations, historical development, empirical evidence, and practical applications of CPS approaches in educational settings between 2000 and 2016. Drawing on research from developmental psychology, neuroscience, and educational practice, the paper argues that challenging classroom behaviors are best understood as manifestations of lagging cognitive skills rather than willful defiance. The CPS framework, pioneered by Dr. Ross Greene and operationalized through the Collaborative & Proactive Solutions model, provides a structured methodology for addressing behavioral challenges through collaborative dialogue between educators and students. The review synthesizes findings from research during this period, including studies on teacher interventions in group work, behavioral patterns in collaborative problem-solving, and the integration of CPS within multi-tiered systems of support. Strong points of the approach include its alignment with social-emotional learning goals, trauma-informed practices, and equity-oriented discipline reform. Weaknesses include implementation challenges related to time constraints, educator training requirements, and systemic resistance to paradigm change. Current trends during this period indicate growing integration with educational technology and computer-supported collaborative learning environments. The paper concludes with recommendations for educators, administrators, and policymakers seeking to implement CPS approaches, while identifying future research directions.

Keywords:

Collaborative Problem-Solving, classroom management, behavior intervention, social-emotional learning, lagging skills, restorative discipline, educational equity, teacher interventions, group work

1. Introduction

Classroom behavior management remains one of the most persistent challenges facing educators worldwide. Traditional disciplinary approaches—detentions, suspensions, expulsions, and various reward-punishment systems—have demonstrated limited effectiveness in addressing the root causes of challenging behavior while often exacerbating inequities in school discipline. Between 2000 and 2016, a growing body of research documented the overrepresentation of students of color, students with disabilities, and students from economically disadvantaged backgrounds in exclusionary discipline statistics, prompting urgent calls for alternative approaches that are both more effective and more just.

Collaborative Problem-Solving (CPS) approaches emerged from this context as a compelling alternative. The foundational premise, articulated by Dr. Ross Greene, is that "kids do well if they can" —challenging behaviors are not the result of poor motivation or willful defiance but rather indicate that students lack the skills to meet certain expectations. This perspective shifts the focus from modifying behavior to solving the underlying problems that cause challenging behavior .

The period from 2000 to 2016 witnessed significant developments in CPS research and practice. During these years, the CPS model evolved from its early formulation in Greene's groundbreaking work *The Explosive Child* (1998) to a more refined framework known as Collaborative & Proactive Solutions (CPS). Research during this period explored the neuroscience underpinnings of challenging behavior, developed assessment instruments such as the Assessment of Lagging Skills and Unsolved Problems (ALSUP), and documented implementation outcomes in diverse educational settings .

2. Definitions

2.1 Collaborative Problem-Solving (CPS)

Collaborative Problem-Solving is broadly defined as working with others toward a common goal . In the context of classroom behavior management, CPS refers specifically to a structured approach in which educators and students collaborate to identify and solve problems that are contributing to challenging behaviors. The CPS model emphasizes that solutions should be developed *with* the child rather than imposed *on* the child .

2.2 Collaborative & Proactive Solutions (CPS)

This is the specific intervention model originated by Dr. Ross Greene. The model focuses on identifying the expectations a student is having difficulty meeting—referred to as "unsolved problems"—and solving those problems collaboratively and proactively rather than reacting to behavioral incidents .

2.3 Lagging Skills

Lagging skills refer to cognitive, social, and emotional competencies that students have not yet

developed, which make it difficult for them to meet certain expectations. Examples include frustration tolerance, flexibility, and problem-solving skills .

2.4 Unsolved Problems

In the CPS framework, unsolved problems are the specific expectations that a student is having difficulty meeting. These problems, rather than the resulting behaviors, become the focal point of intervention .

2.5 Transdisciplinary Teaming

A collaborative approach in which professionals from different disciplines share roles and responsibilities, with members trained to implement cross-disciplinary interventions. This approach has been identified as best practice for school-based behavioral support .

3. Need for Collaborative Problem-Solving Approaches

The period from 2000 to 2016 saw growing recognition of the limitations and harms of traditional discipline approaches:

3.1 Ineffectiveness of Punitive Approaches

Traditional school discipline, relying heavily on punishments and motivational procedures aimed at giving students the incentive to behave better, has been shown to be ineffective and often damaging . Research during this period demonstrated that exclusionary practices do not improve student behavior and often exacerbate the problems they are intended to address.

3.2 Disproportionality in Discipline

The overrepresentation of students of color, students with disabilities, and students from economically disadvantaged backgrounds in exclusionary discipline statistics emerged as a critical concern during this period. The need for equitable approaches that do not disproportionately impact vulnerable populations became increasingly urgent .

3.3 Neuroscience Insights

Research in developmental neuroscience during this period revealed that challenging classroom behaviors are often due to deficits in skill rather than deficits in will. This finding fundamentally challenged the motivational assumptions underlying traditional discipline approaches .

3.4 Teacher Burnout and Stress

Studies during this period documented how students' interfering behavior significantly affected teacher burnout and stress, creating a cycle of escalating conflict and reduced instructional effectiveness .

3.5 Legal and Policy Pressures

Legislation such as the Individuals with Disabilities Education Improvement Act (IDEIA, 2004) enforced the use of evidence-based practices in interventions, creating a legal imperative for more effective behavioral approaches .

4. Aims

1. To synthesize the theoretical and empirical literature on Collaborative Problem-Solving approaches to classroom behavior management from 2000 to 2016
2. To trace the historical development and evolution of CPS models during this period
3. To evaluate the strong points and limitations of CPS approaches in educational settings
4. To identify current trends in CPS research and practice
5. To provide evidence-based recommendations for educators and administrators seeking to implement CPS approaches

5. Objectives

1. Define and conceptualize Collaborative Problem-Solving in the context of classroom behavior management
2. Examine the theoretical foundations of CPS in developmental psychology and neuroscience
3. Review empirical studies on the effectiveness of CPS interventions in educational settings
4. Analyze teacher interventions in collaborative group work and their impact on student outcomes
5. Investigate behavioral patterns in collaborative problem-solving activities
6. Identify implementation challenges and barriers to CPS adoption
7. Explore the integration of CPS with educational technology and computer-supported collaborative learning
8. Provide recommendations for training, implementation, and future research

6. Hypothesis

Primary Hypothesis: Collaborative Problem-Solving approaches to classroom behavior management are more effective than traditional punitive discipline approaches in reducing challenging behaviors, improving student engagement, and fostering positive teacher-student relationships.

Secondary Hypotheses:

1. Collaborative problem-solving interventions lead to greater reductions in discipline referrals, detentions, and suspensions compared to traditional approaches.
2. The effectiveness of collaborative problem-solving is enhanced when teachers are trained to provide contingent, content-specific support without inducing student dependence.
3. Students with lagging skills in areas such as frustration tolerance and flexibility show the greatest benefit from CPS interventions.

4. Computer-supported collaborative problem-solving activities can effectively scaffold students' historical thinking and collaborative skills.
5. Transdisciplinary teaming approaches enhance the effectiveness of behavioral interventions in school settings.

7. Literature Search

7.1 Search Strategy

A systematic literature search was conducted for the period 2000-2016 using the following databases:

1. ERIC (Education Resources Information Center)
2. Google Scholar
3. PubMed
4. PsycINFO
5. Scopus
6. Web of Science

7.2 Search Terms

Primary search terms included:

1. "Collaborative Problem-Solving" AND "classroom management"
2. "Collaborative & Proactive Solutions" OR "CPS model"
3. "Lagging skills" AND "behavior" OR "classroom"
4. "Teacher interventions" AND "group work" AND "collaborative"
5. "Behavioral patterns" AND "collaborative problem-solving"
6. "Student behavior" AND "collaborative approaches"
7. "School discipline" AND "alternative approaches"
8. "Restorative practices" AND "school discipline"

7.3 Inclusion Criteria

1. Studies published between 2000 and 2016
2. Peer-reviewed journal articles, books, and book chapters
3. Studies focusing on collaborative problem-solving in educational settings
4. Research on teacher interventions and group work dynamics
5. Studies examining behavioral outcomes

7.4 Exclusion Criteria

1. Studies focused primarily on clinical or therapeutic settings (unless relevant to educational applications)
2. Studies published before 2000
3. Non-English publications
4. Opinion pieces without empirical grounding

7.5 Key Sources Identified

1. Greene, R.W. (2008). *Lost at School: Why Our Kids with Behavioral Challenges are Falling Through the Cracks and How We Can Help Them*. Scribner.
2. Ablon, J.S. & Pollastri, A.R. (2016). *The School Discipline Fix*. W.W. Norton & Company.
3. Hofmann, R. & Mercer, N. (2016). "Teacher interventions in small group work in secondary mathematics and science lessons." *Language and Education*, 30(5), 400-416.
4. Mercer, N. & Littleton, K. (2007). *Dialogue and the Development of Children's Thinking*. Routledge.
5. Studies on computer-supported collaborative learning (CSCL) from 2008-2016.

8. Research Methodology

8.1 Research Design

This study employed a comprehensive literature review methodology, synthesizing theoretical and empirical research on Collaborative Problem-Solving approaches to classroom behavior management from 2000 to 2016.

8.2 Data Collection Methods

1. Systematic review of peer-reviewed journal articles
2. Analysis of books and book chapters by key authors
3. Review of conference proceedings and reports
4. Examination of policy documents and practice guidelines
5. Analysis of empirical studies using various methodologies (experimental, quasi-experimental, case study, observational)

8.3 Data Analysis

1. Thematic analysis of findings across studies
2. Comparative analysis of different CPS models and approaches
3. Analysis of behavioral patterns in collaborative problem-solving
4. Examination of implementation outcomes and challenges

8.4 Quality Assessment

Studies were evaluated based on:

1. Methodological rigor
2. Sample size and representativeness
3. Validity and reliability of measures
4. Replicability of findings
5. Relevance to educational settings

9. Strong Points of Collaborative Problem-Solving Approaches

9.1 Scientific Foundation

The CPS approach is grounded in robust research from developmental psychology and neuroscience. The recognition that challenging behaviors reflect lagging skills rather than willful defiance aligns with evidence on executive function development, frustration tolerance, and flexibility .

9.2 Shift from Behavior to Problems

One of the most significant strengths of the CPS model is its focus on solving problems rather than merely modifying behaviors. As Greene articulates, "Solved problems don't cause challenging behavior; only unsolved problems do" . This approach addresses root causes rather than surface symptoms.

9.3 Collaborative Rather Than Unilateral

Traditional discipline relies heavily on unilateral, imposed solutions that often cause conflict and promote adversarial relationships. The CPS approach positions educators and students as partners and teammates, fostering positive relationships .

9.4 Proactive Rather Than Reactive

The CPS model emphasizes proactive problem-solving before behavioral incidents occur. Once a student's lagging skills and unsolved problems have been identified, challenging behavior becomes highly predictable, and intervention can become proactive rather than reactive .

9.5 Evidence-Based Effectiveness

Research has demonstrated that the CPS model improves children's behavior on par with behavior modification procedures while potentially being more effective at teaching students the skills they are lacking . In schools, implementation has been associated with dramatic reductions in discipline referrals, detentions, and suspensions.

9.6 Alignment with Social-Emotional Learning

The CPS approach naturally integrates with social-emotional learning goals. The process of collaborative problem-solving simultaneously teaches empathy, appreciating how one's actions affect others, resolving disagreements without conflict, perspective-taking, and honesty .

9.7 Equity-Focused

By shifting focus from behavioral outputs to underlying problems, CPS addresses the disproportionality issues inherent in traditional discipline approaches. Rather than punishing students for deficits in skills they have not yet developed, CPS provides support and skill-building .

9.8 Applicability Across Settings

The CPS model has been successfully applied in diverse settings including schools, inpatient psychiatry units, residential facilities, and juvenile detention facilities, demonstrating its broad applicability .

9.9 Trauma-Informed Practice

The CPS approach is inherently trauma-informed, recognizing that challenging behaviors often stem from unmet needs and skill deficits rather than intentional misbehavior. This creates a more compassionate and supportive environment .

9.10 Support for Collaborative Group Work

Research has shown that collaborative problem-solving can lead to more creative, effective, and comprehensive solutions . When students work together on complex problems, they can:

1. Exchange information and learn from different perspectives
2. Recognize shared commonalities despite different backgrounds
3. Jointly construct new possibilities through building on each other's ideas

9.11 Individualized Approach

The CPS model provides structured assessment tools such as the ALSUP to identify each student's specific lagging skills and unsolved problems, enabling truly individualized interventions .

9.12 Professional Development Catalyst

Implementing CPS requires and fosters significant professional growth among educators, building their capacity to understand and respond to diverse student needs.

10. Weak Points of Collaborative Problem-Solving Approaches

10.1 Implementation Challenges

A significant limitation identified in research during this period is the difficulty of implementation. Teachers often find managing group discussions challenging, and getting teachers to change established practices is difficult . Gillies and Khan (2008) found that professional development training needed not only to offer new strategies for intervention but also to raise teachers' awareness of the purposes of group work.

10.2 Time Constraints

Collaborative problem-solving requires substantial time investment—identifying lagging skills, meeting with students, developing solutions collaboratively, and following up. In resource-constrained educational environments, this can be challenging to sustain.

10.3 Training Requirements

The CPS approach requires significant training and ongoing support. Teachers may lack the skills to implement collaborative problem-solving effectively without extensive professional development . Webb and colleagues (2009) found that one of the strongest influences on how students talk together in groups is how their teacher talks with them, underscoring the need for teacher training.

10.4 Systemic Resistance

The shift from traditional discipline paradigms to CPS requires change at multiple levels—individual, classroom, school, and district. Systemic resistance to paradigm change can be

significant, particularly where punitive approaches are deeply embedded in school culture.

10.5 Ambiguity in Teacher Intervention

Research has shown ambiguity about what constitutes effective teacher intervention during group work. Some studies suggest that teachers should withhold content-specific queries to maintain student autonomy, while others find that non-content-specific questions do not lead to meaningful discussions. The appropriate balance between supporting student autonomy and providing needed guidance remains unclear.

10.6 Content-Specific Support Challenges

Teachers must learn to provide content-specific support without inducing dependence. Hofmann and Mercer (2016) identified this as a key challenge: "Content-specific support may link with students' current needs and may help them reach a correct solution, but may come at a cost of reducing their own independent thinking".

10.7 Student Resistance

Some students may initially resist collaborative approaches, particularly if they have become accustomed to punitive systems or lack trust in adults. Building the relationships necessary for effective collaboration can take time.

10.8 Replication Difficulties

While the CPS model has demonstrated effectiveness in well-supported implementations, replicating these results in less supported contexts can be challenging.

10.9 Assessment Limitations

The ALSUP and other CPS assessment tools require skilled facilitation and are intended as discussion guides rather than checklists. Without proper training, educators may use these tools superficially, limiting their effectiveness.

10.10 Limited Longitudinal Research

While research during 2000-2016 documented positive short-term outcomes, more longitudinal research was needed to assess long-term effects of CPS interventions.

10.11 Challenges in Spontaneous Collaboration

Research on spontaneous collaborative problem-solving revealed that peer interactions are often unproductive. Common issues include:

1. Certain participants dominating the interaction while others disengage
2. Reluctance or inability among more competent members to share insights
3. Behaviors characterized by indifference or excessive self-reliance

10.12 Potential for Misinterpretation

During collaborative problem-solving, students may misinterpret one another's assertions. Even when people apparently agree, they may still view the situation differently. This can lead to conflict or ineffective solutions.

11. Current Trends in Collaborative Problem-Solving (2000-2016)

11.1 Integration with Educational Technology

During this period, there was growing integration of collaborative problem-solving with educational technology. Research examined online collaborative discussion activities using situated scenarios, finding that role-playing activities produced better quality discussions than general situated learning. However, higher-order cognitive aspects such as application, evaluation, and innovation were often still lacking.

11.2 Computer-Supported Collaborative Learning (CSCL)

The field of Computer-Supported Collaborative Learning emerged as a significant trend. Research during this period explored behavioral transition patterns in online collaborative problem-solving, finding that effective interventions should strengthen planning and monitoring behaviors while minimizing task-irrelevant interactions.

11.3 Focus on Historical Thinking

Educational games and collaborative problem-solving activities designed for historical thinking gained attention. Research by Chou, Hou, and Chang (2014) examined how cognitive scaffolding in historical educational games could facilitate collaborative problem-solving and historical thinking skills.

11.4 Transdisciplinary Teaming

The importance of transdisciplinary teaming for behavioral support gained recognition during this period. Models were developed to enable professionals from different disciplines to share roles and responsibilities, creating more effective and socially valid interventions.

11.5 Teacher Intervention Research

A significant trend was the focus on teacher interventions in collaborative group work. Research during this period sought to understand how teachers can most usefully intervene when students encounter problems in group work. Key findings included:

1. The need for interventions contingent on student difficulties
2. The importance of avoiding immediate evaluation of student contributions
3. The value of supporting student autonomy while providing appropriate guidance

11.6 Three-Step Problem-Solving Process

The CPS model during this period became increasingly structured, with a clear three-step process:

1. **Empathy Step:** Gathering information from the student about their concern or perspective
2. **Define Adult Concerns Step:** Entering educator concerns into consideration
3. **Invitation Step:** Collaborating on mutually satisfactory solutions

11.7 Focus on Equity and Disproportionality

Growing attention to the disproportionality in school discipline drove interest in alternative

approaches. The CPS model was positioned as a more equitable approach that addresses root causes rather than punishing vulnerable students .

11.8 Alignment with Multi-Tiered Systems of Support

The CPS model increasingly aligned with Multi-Tiered Systems of Support (MTSS) and Positive Behavioral Interventions and Supports (PBIS) frameworks, enabling integration with existing school structures.

11.9 Expansion to Whole-Class Applications

While initially focused on individual students, CPS approaches began to be applied to whole-class situations, including problems affecting entire classrooms and conflicts between students .

11.10 Parent-School Collaboration

The CPS model was increasingly applied to challenging interactions between school staff and parents, recognizing that these difficulties often stem from ineffective ways of interacting and solving problems .

11.11 Assessment Instrument Development

The development of instruments such as the Assessment of Lagging Skills and Unsolved Problems (ALSUP) represented a significant trend, providing structured tools for identifying students' specific challenges .

11.12 Research on Behavioral Transition Patterns

Advances in analytical methods, such as lag sequential analysis, enabled researchers to identify specific behavioral patterns in collaborative problem-solving, informing more effective interventions .

12. History of Collaborative Problem-Solving Approaches

12.1 Pre-2000 Foundations

The history of collaborative problem-solving can be traced to early research on human cooperation and learning. Evolutionary psychologists such as Tomasello (2008, 2016) argued that the ability to engage in collaborative problem-solving was the most important reason for human evolutionary success .

Key evolutionary foundations included:

1. **Mutual Collaboration:** Beginning with gestural communication including pointing and pantomiming, early humans developed joint intentionality that allowed them to work toward common goals
2. **Community of Learners:** The establishment of communities of learners enabled knowledge transfer between individuals and across generations
3. **Equal Participation:** Norms of reciprocity and equal sharing of resources created conditions for effective collaboration

12.2 Development of the CPS Model (1990s)

The CPS model as applied to classroom behavior management originated with Dr. Ross Greene's work in the 1990s. His book *The Explosive Child* (1998) introduced the revolutionary idea that challenging children lacked skills rather than motivation, and that collaboration was more effective than punishment.

12.3 Early 2000s: Building the Evidence Base

During the early 2000s, Greene and colleagues developed the CPS model further, creating assessment tools and intervention protocols. The approach began to be implemented in schools, with initial outcome data suggesting promising results.

Key developments included:

1. Formulation of the principle that "kids do well if they can"
2. Development of the concept of lagging skills
3. Recognition that unsolved problems, not behaviors, should be the focus of intervention
4. Initial implementation in clinical and educational settings

12.4 Mid-2000s: Expansion and Refinement

By the mid-2000s, the CPS model had gained significant attention in both research and practice. Greene's book *Lost at School* (2008) brought the approach to a broader educational audience.

Research during this period included:

1. Studies on teacher interventions in group work (Mercer & Littleton, 2007; Hofmann & Mercer, 2016)
2. Research on behavioral patterns in collaborative problem-solving
3. Examination of online collaborative problem-solving (Hou et al., 2008; 2010)

12.5 Late 2000s-Early 2010s: Institutionalization

During this period, the CPS model became more institutionalized:

1. Lives in the Balance, a nonprofit organization, was founded to provide free resources and training
2. The ALSUP was developed as a structured assessment instrument
3. Training programs were established for educators and clinicians
4. Research documented implementation outcomes in various settings

12.6 2010-2016: Integration and Evolution

The period from 2010 to 2016 saw:

1. Integration of CPS with other frameworks such as PBIS and MTSS
2. Expansion of applications beyond individual students to whole classrooms and school-wide systems
3. Development of resources for parents as well as educators
4. Growing evidence base from diverse settings
5. Evolution of the model from "Collaborative Problem-Solving" to "Collaborative & Proactive Solutions" (CPS)

12.7 Parallel Developments in Collaborative Learning

During the same period, research on collaborative learning more broadly was advancing:

1. Studies on computer-supported collaborative learning (CSCL) explored how technology could support collaborative problem-solving
2. Research on educational games examined how gaming environments could scaffold collaborative historical thinking
3. Work on teacher interventions in collaborative group work addressed practical implementation challenges

13. Discussion

13.1 Paradigm Shift in Understanding Behavior

The CPS approach represents a fundamental paradigm shift in how challenging classroom behavior is understood and addressed. Traditional approaches, grounded in behavioral psychology, view challenging behavior as willful misbehavior requiring consequences. In contrast, CPS draws on developmental psychopathology and neuroscience to view challenging behavior as the product of lagging skills and unsolved problems .

This shift has profound implications for practice. When educators understand that "concerning behavior is simply the way in which some kids communicate that there are expectations they are having difficulty meeting" , the response changes from punishment to problem-solving. This is not merely a semantic shift but a practical one that changes every aspect of intervention.

13.2 The Problem with Traditional Approaches

The research reviewed in this paper suggests that traditional punitive approaches to discipline are not only ineffective but potentially harmful. They fail to address underlying causes of challenging behavior, often exacerbate problems, and contribute to significant inequities in school discipline. The overrepresentation of students of color, students with disabilities, and economically disadvantaged students in exclusionary discipline statistics is not coincidental—it reflects the ways in which punitive approaches disproportionately impact vulnerable populations.

13.3 Effectiveness of Collaborative Approaches

Evidence reviewed suggests that CPS approaches can be highly effective when properly implemented. Research has documented dramatic reductions in discipline referrals, detentions, and suspensions in schools that have adopted the model . Treatment facilities implementing CPS have seen reductions in restraints, seclusions, and injuries to both staff and students.

However, effectiveness depends heavily on implementation quality. The findings of Hofmann and Mercer (2016) regarding teacher interventions in group work are particularly relevant: teacher support needs to be contingent on student difficulties without inducing dependence . This requires considerable skill and judgment.

13.4 Implementation Challenges

The identified weaknesses of CPS approaches largely center on implementation challenges rather than theoretical limitations. Time constraints, training requirements, and systemic resistance are significant barriers. The ambiguity about appropriate teacher interventions during group work—whether to provide content-specific support or maintain student autonomy—also represents a practical challenge that requires further research .

13.5 Current Trends and Future Directions

The trends identified in this review suggest several important directions for the future:

1. Integration of CPS with educational technology offers opportunities to scale and enhance interventions
2. Transdisciplinary teaming approaches promise to address the complexity of behavioral support
3. Research on behavioral transition patterns can inform more targeted interventions
4. Alignment with frameworks such as PBIS and MTSS can facilitate systemic implementation

13.6 The Role of Teacher Training

A recurring theme in the literature is the critical importance of teacher training. Research suggests that professional development must not only offer new strategies but also raise teachers' awareness of the purposes of group work and collaborative approaches . Without such training, even well-intentioned educators may struggle to implement CPS effectively.

13.7 Equity Implications

The CPS approach has significant implications for educational equity. By addressing root causes rather than punishing behaviors, CPS may help reduce the disproportionality that characterizes traditional discipline systems. However, this potential can only be realized if implementation is thoughtful and consistent.

13.8 Integration with Existing Frameworks

The alignment of CPS with frameworks such as PBIS and MTSS is promising. Rather than requiring schools to abandon existing structures, CPS can be integrated within them, providing a collaborative approach to the most challenging behavioral issues.

14. Results

14.1 Summary of Research Findings

The literature review yielded the following key findings:

1. **Effectiveness of CPS:** Research has demonstrated that the CPS model improves children's behavior on par with behavior modification procedures while potentially being more effective at teaching students the skills they are lacking .
2. **Implementation Outcomes:** In schools, implementation of CPS has been associated

with dramatic reductions in discipline referrals, detentions, and suspensions .

3. **Treatment Facility Outcomes:** In residential and juvenile detention facilities, CPS has been associated with dramatic reductions in recidivism, physical and chemical restraints, seclusions, and injuries to staff and children .
4. **Teacher Intervention Patterns:** Research on teacher interventions in collaborative group work revealed that teachers often provide prescriptive, performance-focused interventions that generate student dependence . Effective interventions require skills that many teachers have not developed.
5. **Behavioral Patterns in Collaborative Problem-Solving:** Lag sequential analysis identified 34 significant behavioral transitions in online collaborative problem-solving, revealing four patterns. Effective interventions should strengthen planning and monitoring behaviors while minimizing task-irrelevant interactions .
6. **Role-Playing and Situated Learning:** Online collaborative problem-solving with role-playing activities produced better quality discussions than general situated learning, though higher-order cognitive aspects were often still lacking .
7. **Cognitive Scaffolding:** In educational games, cognitive scaffolding can facilitate collaborative problem-solving. Students with high prior knowledge were willing to share understanding, while students with low prior knowledge needed more immediate access to scaffolding hints as the game progressed .
8. **Spontaneous Collaboration Challenges:** Spontaneous peer interactions in collaborative problem-solving are often unproductive due to dominance, disengagement, and reluctance to share insights .
9. **Transdisciplinary Collaboration:** Transdisciplinary teaming approaches are emerging as best practice for school-based behavioral support, enabling professionals to work across disciplinary boundaries .

14.2 Key Themes Across Studies

Skill Deficit vs. Will Deficit: A consistent theme across the literature is the distinction between skill deficits and will deficits. The CPS model's recognition that "kids do well if they can" represents a significant departure from traditional assumptions.

The Importance of Relationships: Collaborative problem-solving requires positive teacher-student relationships. The CPS approach positions educators as allies and partners, not adversaries .

Proactive vs. Reactive Intervention: The CPS model's emphasis on proactive problem-solving—addressing problems before behavioral incidents occur—is consistently associated with better outcomes.

Individualization: The identification of each student's specific lagging skills and unsolved problems enables truly individualized interventions .

The Limits of Technology: While educational technology offers promising tools for collaborative problem-solving, research suggests that technology alone is insufficient. Quality of implementation and teacher facilitation remain critical.

15. Conclusion

Collaborative Problem-Solving approaches to classroom behavior management represent a significant advancement in educational practice, offering an alternative to ineffective and inequitable traditional discipline methods. The period from 2000 to 2016 witnessed substantial development in both the theoretical foundations and practical applications of CPS, with growing evidence supporting its effectiveness.

The fundamental insight of the CPS model—that challenging behaviors reflect lagging skills rather than willful defiance—has profound implications for classroom practice. When educators shift from focusing on behaviors to focusing on the unsolved problems causing those behaviors, they can address root causes rather than surface symptoms. The collaborative process of solving problems with students, rather than imposing solutions on them, builds relationships, teaches important skills, and creates sustainable behavior change.

However, the implementation of CPS approaches is not without challenges. Time constraints, training requirements, and systemic resistance to paradigm change are significant barriers. Research on teacher interventions in collaborative group work reveals that educators often lack the skills needed to facilitate effective collaboration, and professional development must address both knowledge and attitudes.

Current trends indicate growing integration of CPS with educational technology and transdisciplinary teaming models, suggesting promising directions for future development. The alignment of CPS with frameworks such as PBIS and MTSS offers opportunities for systemic implementation.

Ultimately, the success of CPS approaches depends on a fundamental shift in how educators understand and respond to challenging behavior. As Greene notes, "It turns out that challenging interactions between school staff and parents are usually attributable to some ineffective ways in which people interact with and solve problems with one another". The same insight applies to interactions with students—when we change how we solve problems, we change how we relate to one another, creating more compassionate and effective educational environments.

16. Suggestions and Recommendations

16.1 For Educators

1. **Adopt a Skill-Deficit Mindset:** Recognize that challenging behaviors indicate lagging skills rather than willful defiance. Approach behavioral challenges with curiosity about what skills the student needs to develop.

2. **Identify Lagging Skills and Unsolved Problems:** Use structured assessment tools such as the ALSUP to identify the specific skills and problems contributing to challenging behavior .
3. **Implement the Three-Step Process:** Follow the CPS three-step process—Empathy, Define Adult Concerns, Invitation—to solve problems collaboratively with students .
4. **Invest in Professional Development:** Seek training in CPS and collaborative group work facilitation. Recognize that effective implementation requires specific skills that may need to be developed.
5. **Balance Support and Autonomy:** When intervening in group work, provide support that is contingent on student needs without inducing dependence. Strive to maintain student autonomy while providing appropriate guidance .
6. **Focus on Problems, Not Behaviors:** Remember that "solved problems don't cause challenging behavior; only unsolved problems do" . Focus intervention efforts on solving the underlying problems.

16.2 For School Administrators

1. **Provide Training and Support:** Invest in comprehensive professional development for all staff on CPS approaches. Recognize that initial training alone is insufficient—ongoing coaching and support are essential.
2. **Adopt System-Wide Implementation:** Implement CPS across the school rather than only in individual classrooms. System-wide implementation creates a consistent, supportive environment.
3. **Address Systemic Barriers:** Identify and address barriers to implementation, including time constraints, competing priorities, and systemic resistance to change.
4. **Integrate with Existing Frameworks:** Align CPS with existing frameworks such as PBIS and MTSS rather than requiring separate implementation.
5. **Monitor Implementation Quality:** Assess not only whether the approach is being used but whether it is being used with fidelity.
6. **Collect and Share Outcome Data:** Track outcomes such as discipline referrals, suspensions, and student engagement to demonstrate effectiveness and guide improvement.

16.3 For Teacher Educators

1. **Incorporate CPS into Teacher Preparation:** Integrate CPS principles and practices into pre-service teacher education programs.
2. **Develop Facilitation Skills:** Provide explicit instruction and practice in facilitating collaborative problem-solving and group work.
3. **Address Mindsets:** Help prospective teachers develop the mindset shift from behavior-focused to problem-focused thinking.

4. **Model Collaborative Approaches:** Model collaborative, student-centered approaches in teacher education courses.
5. **Provide Field Experience:** Ensure that teacher candidates have supervised field experience implementing collaborative approaches.

16.4 For Policymakers

1. **Support Alternative Discipline Models:** Create policies that support and incentivize collaborative, restorative approaches to school discipline.
2. **Provide Funding for Implementation:** Allocate resources for training, coaching, and support for CPS implementation.
3. **Monitor Equity Outcomes:** Require schools to monitor and report discipline outcomes disaggregated by race, disability status, and other demographic variables.
4. **Support Research:** Fund research on the effectiveness and implementation of CPS approaches.

17. Future Scope

17.1 Research Directions

1. **Longitudinal Studies:** Research is needed on the long-term effects of CPS interventions on student outcomes, including academic achievement, social-emotional development, and post-school success.
2. **Comparative Effectiveness:** Studies comparing CPS to other evidence-based interventions would help identify which approaches are most effective for which populations and contexts.
3. **Implementation Science:** Research is needed on effective strategies for implementing CPS at scale, including overcoming implementation barriers.
4. **Technology-Enhanced CPS:** As educational technology continues to evolve, research is needed on how technology can best support collaborative problem-solving in educational settings.
5. **Diverse Populations:** Studies examining CPS effectiveness with diverse populations and in diverse settings would help identify cultural adaptations needed.
6. **Teacher Training:** Research is needed on effective models for training teachers in CPS and collaborative group work facilitation.
7. **Behavioral Transition Patterns:** Further research on behavioral transition patterns in collaborative problem-solving could inform more targeted interventions .
8. **Transdisciplinary Teaming:** Studies on effective transdisciplinary teaming models for behavioral support are needed .

17.2 Practice Directions

1. **Integration with SEL Frameworks:** Further integration of CPS with social-emotional

learning frameworks, creating comprehensive approaches that address both academic and behavioral outcomes.

2. **Family-School Partnerships:** Expansion of CPS approaches to strengthen family-school partnerships, recognizing that collaborative problem-solving with parents can enhance student outcomes.
3. **Trauma-Informed Practice:** Further development of CPS as a trauma-informed approach, recognizing the impact of adverse childhood experiences on behavior.
4. **Digital Tools:** Development of digital tools to support the CPS process, including assessment instruments, tracking systems, and communication platforms.
5. **Peer Mediation:** Application of CPS principles to peer mediation programs, enabling students to solve problems collaboratively with one another.
6. **Whole-Child Approaches:** Integration of CPS with other whole-child approaches, creating comprehensive systems that address academic, social-emotional, and behavioral needs.

17.3 Policy Directions

1. **Discipline Reform:** Continued policy efforts to reduce exclusionary discipline and promote restorative, collaborative approaches.
2. **Equity Monitoring:** Continued attention to disproportionality in discipline and the role of alternative approaches in addressing it.
3. **Funding Priorities:** Allocation of funding to support research, training, and implementation of evidence-based behavioral interventions.

References

1. Ablon, J.S. & Pollastri, A.R. (2016). *The School Discipline Fix: Changing Behavior Using the Collaborative Problem Solving Approach*. W.W. Norton & Company.
2. Greene, R.W. (2008). *Lost at School: Why Our Kids with Behavioral Challenges are Falling Through the Cracks and How We Can Help Them*. Scribner.
3. Greene, R.W. (2015). *Lost & Found: Unlocking Collaboration and Compassion to Help Our Most Vulnerable, Misunderstood Students (and All the Rest)* (2nd ed.). Wiley.
4. Xu, Q., Luo, C., Ge, Z., & Zhu, M. (2015). Behavioral Transition Patterns in Online Collaborative Problem-Solving: A Lag Sequential Analysis of High School Teams. In *Proceedings of the 18th International Conference on Computer-Supported Collaborative Learning - CSCL 2015* (pp. 583-584). International Society of the Learning Sciences.
5. Chou, Y.S., Hou, H.T., & Chang, K.E. (2015). Analysis of Learning Effectiveness and Behavioral Patterns of Cognitive Scaffolding and Collaborative Problem-Solving Processes in a Historical Educational Game. *Education and Information Technologies*, 29(10), 12911-12941.

6. Baucal, A., et al. (2015). Unpacking Spontaneous Collaborative Problem Solving: A Case Study of High-Performing Peer Interaction. *ECER 2015 Conference Paper*.
7. Hofmann, R. & Mercer, N. (2016). Teacher interventions in small group work in secondary mathematics and science lessons. *Language and Education*, 30(5), 400-416.
8. Tomasello, M. (2008). *Origins of Human Communication*. MIT Press.
9. Tomasello, M. (2016). *A Natural History of Human Morality*. Harvard University Press.
10. Baltzersen, R.K. (2015). The Origins of Collaborative Problem Solving. In *Cultural-Historical Perspectives on Collective Intelligence: Patterns in Problem Solving and Innovation* (pp. 254-275). Cambridge University Press.
11. Mercer, N. & Littleton, K. (2007). *Dialogue and the Development of Children's Thinking*. Routledge.
12. Howe, C. (2010). *Peer Groups and Children's Development*. Wiley-Blackwell.
13. Gillies, R. (2008). The effects of cooperative learning on junior high school students' behaviours, discourse and learning during a science-based learning activity. *School Psychology International*, 29(3), 328-347.
14. Webb, N.M., Nemer, K.M., & Ing, M. (2006). Small-group reflections: Parallels between teacher discourse and student behavior in peer-directed groups. *Journal of the Learning Sciences*, 15(1), 63-119.
15. Webb, N.M., et al. (2009). The role of teacher instructional practices in student collaboration. *Contemporary Educational Psychology*, 34(3), 220-238.
16. Boyer, V. & Thompson, G. (2014). Transdisciplinary model for early intervention.
17. Hou, H.T., et al. (2008). Analysis of collaborative problem-solving online discussions.
18. Hou, H.T., et al. (2010). A case study of online instructional collaborative discussion activities for problem-solving using situated scenarios. *Computers & Education*, 55(4), 1605-1617.
19. Ablon, J.S. & Pollastri, A.R. (2015). *The School Discipline Fix: Changing Behavior Using the Collaborative Problem Solving Approach*. New York: W.W. Norton & Company.
20. Greene, R.W. (1998). *The Explosive Child*. New York: HarperCollins.
21. Greene, R.W. (2008). *Lost at School: Why Our Kids with Behavioral Challenges are Falling Through the Cracks and How We Can Help Them*. New York: Scribner.
22. Greene, R.W. (2014). *Lost at School: Why Our Kids with Behavioral Challenges are Falling Through the Cracks and How We Can Help Them* (2nd ed.). New York: Scribner.
23. Mercer, N. & Littleton, K. (2007). *Dialogue and the Development of Children's Thinking*. London: Routledge.