

Teacher–Child Interaction Training— Group Coaching (TCIT-GC): removing barriers to advancing classroom behavioral health

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Abstract

Purpose – The Teacher–Child Interaction Training program (TCIT) is an evidence-based intervention that coaches effective strategies for managing disruptive classroom behavior (Garbacz *et al.*, 2014). However, its widespread implementation is limited due to its costly and time-consuming model of delivery. This pilot study investigated whether the Teacher–Child Interaction Training- Group Coaching (TCIT-GC), a briefer, cost-effective adaptation of TCIT, would be effective in improving classroom climate, student behavior and professional quality of life among educators.

Design/methodology/approach – TCIT-GC is a remote, manualized, 8-week adaptation of TCIT. Participants included 41 educators representing both public and private K-12 schools from 11 public school districts. TCIT-GC comprised eight synchronous group sessions via Zoom, four Didactic sessions and four Consultation/Coaching sessions for trainer feedback, paired with asynchronous skill practice. This contrasted with the fully synchronous, one-on-one, *in vivo* coaching format of traditional TCIT. Participants practiced applying skills with students between Zoom sessions and documented the effectiveness of their acquired skills across various measures.

Findings – Results of pre- and post-training comparisons showed significant improvements in reported classroom functioning, positive student behaviors, perceived effectiveness of TCIT-GC skills and significant reductions in problematic student behaviors and discipline use. Findings showed significant improvement in compassion satisfaction. No significant changes in levels of other ProQOL scales were observed.

Originality/value – Disruptive student behavior takes a toll on the educational experience of misbehaving students, their classmates and educators. Results of this pilot study supported TCIT-GC as a feasible and promising behavioral health model that warrants further study.

Keywords School-Based Mental Health, TCIT, PBIS, Disruptive student behavior, Social-Emotional Learning, Learning collaborative model, Coaching Psychology, Teacher–Student interactions

Paper type Research paper

The quality of teacher–student relationships has a significant impact on the academic trajectories of young learners, as students co-create the quality of their educational experience with their teachers (Douglas *et al.*, 2014). When a student feels a warm and supportive connection with their teacher, they are more likely to exhibit prosocial behavior, persevere

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through challenges and ask for academic, social or emotional support when needed (Klem and Connell, 2004; Rimm-Kaufman and Sandilos, 2015). Close teacher–student relationships are commonly characterized by minimal conflict, the student receiving more praise and guidance than criticisms and the student trusting the teacher and feeling that the teacher understands their individual needs (Klem and Connell, 2004; Rimm-Kaufman and Sandilos, 2015). Close teacher–student relationships have been associated with higher standardized math scores (Engels *et al.*, 2021), gains in reading achievement (McCormick and O'Connor, 2014), increased student engagement and cooperation, higher academic resilience, increased self-direction, higher attendance rates (Klem and Connell, 2004), increased adaptive adjustment (Birch and Ladd, 1997) and enhanced social-emotional and behavioral development (Gasser *et al.*, 2018; Rucinski *et al.*, 2018). Close teacher–student relationships have also been associated with decreased stress among educators, enhancing their professional quality of life and promoting job retention (Post *et al.*, 2020; Madigan and Kim, 2021). Evidence suggests that improvements to individual relationships between teachers and at-risk students may have a cumulative effect across other relationships, as students who have exhibited aggressive behaviors are more likely to be accepted by their peers if they have a constructive relationship with their teacher (Hughes *et al.*, 2001).

Conversely, conflict between students and teachers has been linked to lower academic achievement (McCormick and O'Connor, 2014), decreased motivation, lower engagement in learning and increased stress among students and teachers (Jennings and Greenberg, 2009; Lisonbee *et al.*, 2008). Frequent conflict and disruptive student behaviors have been linked to increased feelings of burn-out among educators, depleting their energy and capacity to foster an emotionally supportive classroom (Aloe *et al.*, 2014).

This study investigated whether the Teacher–Child Interaction Training Group Coaching (TCIT-GC) model, developed from the traditional TCIT model, would be effective in improving classroom climate, student behavior and professional quality of life among educators while also improving accessibility and reducing costs associated with the traditional TCIT model. The study also aimed to expand research in support of scaling TCIT skills across wider audiences (Fernandez *et al.*, 2015b).

Behavioral management and the teacher–student relationship

While early research on child and adolescent behavioral management often focused on interventions involving parents, numerous studies have shown that effective behavioral management strategies can be transferred to the teacher–student relationship (Budd *et al.*, 2015). Research has indicated that relationship training can significantly improve teacher–student relationships among especially vulnerable populations, including academically at-risk students (Liew *et al.*, 2010), students living in poverty and students who have experienced trauma (Post *et al.*, 2020). Prior research also indicates that implementing TCIT training significantly reduces distress experienced by teachers, a growing concern when discussing teacher burnout (Fernandez *et al.*, 2015a). These findings suggest that widespread implementation of evidence-based teacher–student behavioral interventions such as Teacher–Child Interaction Training (TCIT) would have a positive impact on teachers and students.

The original TCIT model

The TCIT model is adapted from Parent–Child Interaction Therapy (PCIT) (Funderburk and Eyberg, 2011; Filcheck *et al.*, 2004); a model with over 40 years of research supporting its effectiveness in improving child behavior across a myriad of special populations in grades pre-kindergarten to 3, as well as increasing positive behavior management skills in adults

(Lieneman *et al.*, 2017). PCIT coaches caregivers in skills related to social learning theory, differential attention, behavioral modeling and emotional regulation. These skills promote an authoritative parenting style that supports a child's need for nurturance, autonomy and appropriate limit setting, thus promoting increased prosocial behaviors.

TCIT integrates the core principles and objectives of PCIT, such as enhancing child behavior through positive reinforcement and structured interactions as well as training teachers in specific techniques. However, TCIT is uniquely adapted to the classroom, addressing the complexities of managing multiple children and group dynamics. This involves specialized training and coaching for teachers, delivered through workshops and in-class, *in vivo* coaching and includes strategies like the "Ignoring Signal" and the use of a "Thinking Chair" or "Calm Down Spot" instead of a traditional time-out chair. Additionally, TCIT employs progressive coaching to facilitate skill acquisition, starting with one child and gradually including more. TCIT also provides follow-up consultations and booster sessions to ensure skill retention and utilizes visual aids like PRIDE posters as reminders (Tiano, 2010). A substantial body of research supports the effectiveness of TCIT in reducing disruptive student behaviors, increasing positive and supportive responses from teachers and increasing teacher satisfaction (Fawley *et al.*, 2019; Garbacz *et al.*, 2014).

Limitations of the original model

The positive effects of TCIT warrant efforts to broadly equip educators with its skills and strategies. However, the original TCIT model presents various barriers that make its widespread implementation inaccessible for many schools. Traditional TCIT takes 10–16 weeks (e.g. Gershenson *et al.*, 2010) and requires TCIT providers to be in the classroom, coaching teachers weekly. This demands a hefty time commitment from both schools and trainers, limits classroom implementation and the ability to collect teacher feedback (Garbacz *et al.*, 2014) and accrues substantial costs to schools by underwriting weekly one-on-one coaching sessions. The original training format also excludes a growing educational niche: remote instruction.

Modern technology, cultural shifts and health precautions have led to increased demands for remote schooling, leading researchers to explore how technology can advance professional development among teachers (Crawford *et al.*, 2021). With some students being taught in fully remote formats, teachers must be skilled with behavior management techniques for both *in-person* and remote students, the latter of whom are not addressed through traditional TCIT. These limitations informed the modifications that established TCIT-GC.

TCIT-GC framework

TCIT-GC is an eight-session manualized training that attempts to overcome limitations of the original TCIT model by presenting a briefer, fully remote, group coaching adaptation. TCIT-GC is designed to serve teachers and school staff who have direct contact with children from pre-K through high school who are identified as having behavioral problems. Like many similar training programs, the principles of TCIT-GC are rooted in social learning, behavioral and attachment theories. Aligning with the principles of PCIT and TCIT, TCIT-GC promotes the idea that through positive behavior management and behavior modification skills, teachers can become change agents in reinforcing students' positive behaviors and reducing disruptive and off-task behaviors.

The traditional TCIT model is exclusively synchronous, with coaching, classroom application, trainer observation and feedback all being conducted in real-time with the presence of both the TCIT trainer and trainee. TCIT-GC differs in that it has both synchronous and asynchronous components. TCIT-GC's learning collaborative model consists of eight weekly sessions: four remote Didactic group workshops that are conducted synchronously between educators and the TCIT-GC trainer, as well as four synchronous Consultation/

Coaching sessions to debrief and troubleshoot obstacles between Didactic trainings. This format enables the TCIT-GC trainer to coach multiple teachers simultaneously and allows the trainee cohort to learn from one another through discussion. In between each of the eight sessions, participants practice applying TCIT skills asynchronously in their respective classrooms without the real-time presence of a TCIT-GC trainer. During each subsequent synchronous Consultation/Coaching workshop, trainees share their experiences from the prior week and receive feedback and support from the TCIT-GC trainer.

Hypotheses

Before this pilot, no existing literature analyzed the effects of shortening TCIT or replacing in-classroom coaching with a learning collaborative model. The purpose of this investigation was to evaluate whether this briefer, cost-effective and less intrusive group adaptation could be an increasingly feasible model for advancing classroom behavioral health. The TCIT-GC pilot set out to answer the following research questions (RQ):

- RQ1. Will educators perceive TCIT-GC strategies as effective? Will their perceptions change over the course of training?
- RQ2. Will participants in TCIT-GC report reduced use of discipline strategies from pre-to post-training?
- RQ3. Will educators' participating in TCIT-GC report improvements in their classroom's functioning from pre-to post-training?
- RQ4. Will educators' participating in TCIT-GC report changes in their students' behaviors from pre-to post-training?
- RQ5. Will participants in TCIT-GC report improved professional quality of life among teachers from pre-to post-training?

Method

Participants

A total of 41 participants began TCIT-GC, entering one of three cohorts between January and June 2021. The first cohort of TCIT-GC participants were educators employed in 11 different school districts (N = 23); the second (N = 9) and third cohorts (N = 9) consisted of educators from a private school and day care. Approximately 79% were teachers, interns or education specialists; participants also included behavioral specialists, school psychologists, counselors and other staff who regularly interacted with children. Eighty-five percent of participants were female and 15% were male; Approximately 39% were younger than 40 years of age, 41% were 40–50 years or younger and 19% were 50 years or older. Participant ethnicity was varied, with over half of participants identifying as Hispanic or Latino (51%), 32% non-Hispanic White, 10% Middle Eastern and 7% Asian.

Recruitment and inclusions

Participants were recruited and self-selected through an announcement shared via Eventbrite, an event management website. The announcement was digitally distributed among the professional networks of contributing researchers and the Orange County Department of Education. Participants received training at no cost, and a certificate of completion at the end of the coaching. Inclusion criteria consisted of educators with access to students in pre-k to 12th grade and had classroom management responsibilities. We excluded educators who desired to learn behavior management skills but who were not in an instructional role. For example,

interested school psychologists or counselors who taught small groups on social skills or social-emotional learning were able to attend the Didactic sessions to learn behavior management skills, but if they did not teach a group of students and only conducted individual 1:1 student counseling, they were excluded from evaluation.

Measures

Perceptions of classroom functioning. We administered a 22-item questionnaire, “My Classroom” (Timmer *et al.*, 2020a, b) to educators (N = 41), which asked questions about their teaching style and how their classroom functioned (e.g. usage of class rules, how they delivered directions and commands and use of positive teaching strategies). It also contained six questions about the quality of their students’ classroom behavior (e.g. compliance, prosocial behavior and respect for rules). The educators rated their use of these skills and students’ behavior on a 5-point Likert scale ranging from 1 (No, N/A) to 5 (Yes). We created an “educator” scale (Coefficient of reliability, $\alpha = 0.88$), and a “student” scale (Coefficient of reliability, $\alpha = 0.86$), with both showing strong internal reliability. Educators rated themselves as using these positive skills and strategies (Mean = 4.03 (SD = 0.63) significantly higher than they rated the children’s classroom behavior (Mean = 3.62 (SD = 0.58)).

Use of discipline strategies. The “Discipline Strategies” questionnaire consisted of questions about whether the participant had used any of seven common classroom disciplinary strategies currently used in local school districts in the past week and were prompted to respond with “yes” or “no.” The strategies included: (1) warning a student about problem behavior using a card system or similar system, (2) sending notes or emails to parents informing them of their child’s disruptive behaviors, non-compliance or inattention, (3) using virtual disciplinary measures such as sending a student to a Zoom breakout room/other virtual space, muting them, or removing other virtual classroom privileges, (4) filing a student incident report (e.g. breaking rules, verbal or physical aggression toward peers or teachers), (5) sending a student to the principal or other authority figure as a result of misbehavior, (6) referring a student to the school counselor or outside mental health services and (7) referring a student for further assessment. Participants were asked about the strategies they used in their classrooms the week before TCIT-GC training began (N = 18).

Perception of professional quality of life (ProQOL). All participants were administered the Professional Quality of Life Questionnaire (ProQOL) (Hudnall Stamm, 2009), a 30-item measure to evaluate the feelings and perceptions related to work that are experienced by those in helping professions, such as teachers, police officers, firefighters, clergy, social workers, attorneys and healthcare workers. ProQOL measures three categories: the positive aspects of their work experience (compassion satisfaction), and the negative aspects (compassion fatigue, which is subcategorized into the two categories of burnout and secondary traumatic stress). Analyses of scales’ reliability in the current sample revealed good internal consistency. Alpha coefficients of reliability for compassion satisfaction were $\alpha = 0.86$, for burnout $\alpha = 0.79$ and for secondary traumatic stress $\alpha = 0.86$. Hudnall Stamm (2009) divided scores into categories of low (22 or less), moderate, (23–41) and high (42 or more) compassion satisfaction, burnout and secondary traumatic stress.

Perception of student behavior problems. Sutter-Eyberg School Behavior Inventory (SESBI). Educators were asked to reflect upon the students they worked with and select target students who they identified as exhibiting challenging behaviors, such as being disruptive, non-compliant or off-task. Each educator was required to select at least one student for the training but could evaluate up to three students if multiple students exhibited externalizing behaviors that impacted classroom instruction. This approach allowed educators to focus on the most challenging students while providing flexibility to address additional individuals if needed. The educators were then asked to evaluate those students using the Sutter-Eyberg School Behavior Inventory (SESBI; Eyberg and Pincus, 1999). The SESBI is a 38-item

measure used to assess conduct problems in students aged 2 to 16. The SESBI evaluates the frequency and intensity of disruptive behaviors, along with assessing whether the educator perceives each identified behavior as disruptive. Educators indicated the frequency of different problem behaviors on a Likert-scale ranging from 1 (Never) to 7 (Always) and whether they thought the behavior was a problem (yes/no). T-scores equal to or greater than 60 are clinically significant on either scale. Twenty-eight educators rated between 1 and 3 students with challenging behaviors on this scale. A total of 47 students were rated with a mean intensity scale T-score of $M = 57.64$ and a mean problem scale T-score of $M = 60.01$. Approximately 40% of students were rated as having intensity scale scores in the clinical range and 55.3% of students were rated as having problem scale scores in the clinical range.

Weekly Assessment of Child Behavior for Teachers (WACB-T). The WACB-T asks educators to identify a student in their classroom and report the frequency or intensity of 9 different positive classroom behaviors (i.e. doing things the right away, behaving well at lunch and snack times, obeying school rules, acting calmly, showing an ability to self-calm, playing nicely with toys, keeping hands to themselves, waiting their turn to talk and easily sitting still) and whether those behaviors need to change (Forte et al., 2012). Behaviors are framed positively to support a strengths-based approach to students' behavioral assessments. The WACB-T yields an Intensity and Need to Change scale scores. An examination of session 1 item scores of 43 children showed that the Intensity and Problem Scale had strong internal reliability (Intensity: Coefficient of reliability, $\alpha = 0.89$; Problem: Kuder-Rich 21 = 0.82). High scores on the intensity scale and lower scores on the problem were more desirable as they indicated higher frequencies of desired behavior and a lower desire for change.

Weekly Evaluations of Skills ("Will they work?"/"Did they work?"). During each weekly Didactic group session, educators were asked to project how well they thought each behavioral management strategy would work in the upcoming week, and during subsequent group Consultation/Coaching sessions, they were asked to rate how well the strategies they learned the previous week actually worked during the intervening week. (i.e. "Using strategies: How well will they work for you?" and subsequently, "Using these strategies: How well did they work?"). During Week 8, the "Did they work?" survey asked about all skills learned over the course of training, rather than just the skills learned the previous week. Data for both questions was gathered using Likert-scale surveys, ranging from 1 = "Not at all well" to 5 = "Extremely well." These questionnaires and the mode of administration were adapted from measures used in Parent-Child Care (PC-CARE; Hawk et al., 2022) and were designed to increase engagement in the skill acquisition process, hoping to reinforce participants' agency in deciding which strategies to use.

Procedures

Remote synchronous coaching and asynchronous implementation. TCIT-GC sessions were conducted once weekly via Zoom at 4:00 p.m., ensuring the day's classes had ended for all participants. TCIT-GC's learning collaborative training model followed the Plan → Do → Study → Act format, introducing information and practicing skills in one week (Didactic sessions), and then discussing how the skills taught in the previous workshop worked in their classrooms over the past week (Consultation/Coaching sessions). Didactic workshops were two hours in length and Consultation/Coaching sessions were one hour. During Consultation/Coaching sessions, teachers shared what they had attempted, and trainers provided direction on how to apply TCIT strategies with specific students during subsequent weeks. Trainings were led by Certified TCIT Trainers Dr Marta M. Shinn, Dr Elsa L. Torres and Dr Amy E. Weir.

TCIT-GC curriculum. The TCIT-GC curriculum content included lessons on positive communication, including PRIDE skills (praise, reflection, imitation, description, enjoyment), BE DIRECT skills (be specific, every command positively stated, developmentally

appropriate, individual rather than compound, respectful and polite, essential commands only, carefully timed explanations, tone of voice being neutral) (Timmer *et al.*, 2020a, b), evidence-based behavior management strategies, as well as education on effects of traumatic adverse childhood experiences (ACEs) on child behavior and social-emotional learning. Content was modified for student age by including strategies for “younger” and “older” students (Shinn and UC Davis CAARE Center, 2020a, b, c, d). Table 1 shows the numbers of participants and activities from week to week, as well as the measures collected.

Participant engagement in TCIT-GC sessions. At the end of each Didactic session, participants completed a Formsite survey consisting of either the “Will they work?” or “Did they work?” questionnaires and the WACB-T. Filling out the surveys each week was an important part of the training process, engaging participants in reflecting on what they heard and deciding whether they thought it was suitable for the children they worked with. If participants did not fill out the survey, we assumed that participants were either absent or not engaged. Of the 41 participants that enrolled for the training, 19 completed the work for every session (47.5%). An additional 2 participants (5%) missed one session, 2 (5%) missed two sessions and 4 (10%) missed three sessions. The remaining third (32.5%) of participants missed 6 or 7 sessions. Overall, participation in Didactic sessions was greater than in Consultation/Coaching sessions. An average of 72.5% attended the Didactic sessions, whereas an average of 58.8% attended Consultation/Coaching sessions.

Data collection. Assessment measures were administered before the training began and again at the last Consultation/Coaching meeting to evaluate the effects of TCIT-GC on

Table 1. Weekly attendance, TCIT-GC training activities and measures collected

Session	Topic of discussion	Measures administered	Number engaged
Week 1	Didactic: Introduction to TCIT-GC; Learning PRIDE skills	ProQOL, My Classroom Use of discipline strategies (TCIT-GC) SESBI-R, WACB-T Strategies Learned: Will they work?	38
Week 2	Debrief past week, consultation, coaching	Strategies: Did they work? WACB-T	26
Week 3	Didactic: BE DIRECT skills	Strategies Learned: Will they work? WACB-T	27
Week 4	Debrief past week, consultation, coaching	Strategies: Did they work? WACB-T	26
Week 5	Didactic: Strategies to manage behavior	Strategies Learned: Will they work? WACB-T	27
Week 6	Debrief past week, consultation, coaching	Strategies: Did they work? WACB-T	20
Week 7	Didactic: ACEs and Social-Emotional Learning	Strategies Learned: Will they work? WACB-T	24
Week 8	Debrief past week, consultation, coaching	ProQOL, My Classroom Use of discipline strategies (TCIT-GC) SESBI-R, WACB-T All strategies Learned: What worked?	22

Source(s): Authors’ own work

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educators’ perceptions of classroom functioning, their frequency of discipline use, their professional quality of life and a standardized measure of student behavioral concerns. Surveys were administered via Formsite, a HIPAA-compliant digital survey tool. The survey items asked about participants’ professional quality of life, classroom functioning (“My Classroom”) and a standardized measure of student behavioral problems (Sutter-Eyberg School Behavior Inventory (SESBI); [Eyberg and Pincus, 1999](#)). We asked participants to evaluate the skills they had learned each week, using the “Will they work?” for Didactic sessions and “Did they work?” questionnaires for Consultation/Coaching sessions. We also asked participants to rate the behavioral problems of one or two students whose behaviors were particularly difficult for them to handle, using the Weekly Assessment of Child Behavior – Teacher (WACB-T).

Transparency and openness. We report how we determined our sample size, all data exclusions, all manipulations and all measures in the study. We follow the Journal Article Reporting Standards ([Kazak, 2018](#)). Data and research materials are not currently available in a repository. Data were analyzed using SPSS version 26.0. This study’s design and its analysis were not pre-registered.

Results

Educator perceptions of the effectiveness of TCIT-GC strategies

[Table 2](#) shows the effective ratings educators gave to the skills they learned before trying them out in the classroom (“Will they work?”), after trying them for one week (“Did they work?”),

Table 2. Educators’ bi-weekly evaluation of the potential effectiveness (i.e. “Will they work?”) and actual effectiveness (i.e. “Did they work?”) of skills taught that week in their own classrooms

Session	Subject	Will they work? Mean (SD)	Did they work? Mean (SD)	Week 8: Did they work? Mean (SD)
Week 1 (N = 40) and Week 2 (N = 26)	PRIDE skills	4.26 (0.86)	3.73 (0.92)	4.48 (0.51)
	AVOID statements	3.63 (1.22)	3.00 (1.20)	3.81 (0.87)
	All Week 1 skills	3.95 (0.88)	3.37 (0.97)	4.14 (0.62)***
Week 3 (N = 26) and Week 4 (N = 26)	Commands	4.26 (0.76)	3.85 (0.88)	4.52 (0.51)
	Consequences	3.11 (1.20)	3.15 (1.08)	4.29 (0.64)
	Recovery	3.30 (0.95)	3.42 (1.21)	4.24 (0.83)
	All Week 3 skills	3.56 (0.83)	3.47 (0.98)	4.35 (0.56)***
Week 5 (N = 27) and Week 6 (N = 22)	Transitions	4.30 (0.72)	4.25 (0.72)	4.43 (0.60)
	Adjust environment	4.30 (0.61)	4.05 (0.76)	4.38 (0.59)
	Selective attention	4.15 (0.72)	3.85 (0.93)	4.19 (0.81)
	Model positive behavior	4.33 (0.68)	4.30 (0.73)	4.67 (0.58)
	Redirect	4.33 (0.56)	4.25 (0.85)	4.43 (0.75)
	Rules	4.44 (0.69)	4.05 (0.95)	4.29 (0.78)
	Choices	4.41 (0.69)	3.95 (0.83)	4.57 (0.75)
	When-then statements	4.41 (0.69)	3.95 (0.83)	4.52 (0.68)
	All Week 5 skills	4.33 (0.56)	4.09 (0.68)	4.43 (0.54)*
	Tense and release	4.50 (0.59)	4.18 (0.66)	
	Grounding	4.00 (0.93)	3.91 (1.07)	
	Breathing	4.67 (0.57)	4.41 (0.67)	
	Creative arts	4.50 (0.72)	4.23 (0.92)	
	Visualization	4.00 (0.98)	3.91 (1.07)	
Week 7 (N = 26) and Week 8 (N = 22)	Modeling	4.54 (0.51)	4.55 (0.60)	
	All Week 7 skills	4.37 (0.51)	4.52 (0.51)	

Source(s): Authors’ own work

and at week 8 (Week 8: “Did they work?”). Results of paired-sample *t*-tests of educators’ initial beliefs about the usefulness of different skill sets after being taught the skills but before practicing them revealed that evaluations of skills taught week 1 (PRIDE, AVOID) and 3 (Commands, Consequences, Recovery) were perceived as similarly likely to be effective (PRIDE vs Commands: $t = 1.70$, $df = 25$, $p = 0.010$) but were both perceived as likely to be significantly less effective than skills taught week 5 (PRIDE vs Strategies to Manage Behavior: $t = 2.84$, $df = 24$, $p = 0.009$; Commands vs Strategies to Manage Behavior: $t = 5.54$, $df = 25$, $p < 0.001$), and week 7 (PRIDE vs Calming: $t = 4.57$; $df = 23$, $p < 0.001$; Commands vs Calming: $t = 7.31$, $df = 22$, $p < 0.001$), suggesting that educators were significantly less positive about the value of PRIDE skills and AVOIDS commands, removing privileges and recovery than about other skills when they first learned them.

Change in perceptions of TCIT-GC strategies’. To test the effects of practicing and using skills for a week on educators’ perceptions of their effectiveness, we conducted a 2×4 Repeated Measures Multivariate Analysis of Variance (RM-MANOVA) with two assessment points (Didactic Week, Consultation/Coaching Week) for each of the four sets of skills. Results of analyses showed a non-significant trend suggesting changing perceptions from the Didactic session to the Consultation/Coaching session a week later ($F(4, 15) = 2.46$, $p = 0.09$, $\eta^2 = 0.40$, $OP = 0.56$). An examination of the effects of the individual skill sets revealed that only evaluations of effectiveness of Week 1 (PRIDE skills/AVOID) were significantly lower by the following week ($F(1, 18) = 4.59$, $p = 0.046$, $\eta^2 = 0.20$, $OP = 0.53$). Other skills showed no significant change in ratings after one week of use.

To see whether ratings of skills’ effectiveness changed with educators’ increased familiarity and use of TCIT-GC skills, we conducted a 3×3 RM-MANOVA, which included three assessment points (Didactic Week, Consultation/Coaching Week, Week 8) and 3 sets of skills. We omitted the Week 7 Calming skills, since there were only two assessment points for these skills (the Consultation/Coaching session for these skills occurred on Week 8). Results of analyses showed a significant effect of assessment point ($F(3, 13) = 3.63$, $p = 0.02$, $\eta^2 = 0.63$, $OP = 0.81$). Examination of the weekly measures revealed significant quadratic effects for Week 1 (PRIDE and AVOID: $F(1, 18) = 15.34$, $p = 0.001$, $\eta^2 = 0.46$, $OP = 0.96$) and Week 5 (Strategies to Manage Behavior: $F(1, 18) = 4.64$, $p = 0.045$, $\eta^2 = 0.21$, $OP = 0.53$) skills, and a significant linear effect for Week 3 (Commands: $F(1, 18) = 21.85$, $p < 0.001$, $\eta^2 = 0.55$, $OP = 0.99$). Findings suggest overall increased perceptions of skills’ effectiveness from initial exposure to week 8, with use and familiarity, in some cases (e.g. Week 1 and Week 5 skills) after dips in expectations.

The Week 8: Did they work? Survey also asked participants to rate their top 3 favorite skills. Examination of participants’ selection of their favorite skills showed that 86% chose PRIDE skills as one of their three favorite skills, 29% chose commands and consequences, 35% chose calming skills and 95% chose at least one skill for managing behavior.

Use of discipline strategies

Participants that had classroom management responsibilities ($N = 18$) were asked about the strategies they used in their classrooms the week before TCIT-GC training began. The percentages of respondents that reported using the strategies before the training began ($N = 18$) and when completed ($N = 15$) are listed in Table 3, together with the number of times they reported using the discipline strategy during the week. All participants responding to discipline questions reported using at least one of the above seven discipline strategies during the week; 55.5% used more than 3 types of discipline and 61.1% used discipline strategies more than 3 times in the week before the TCIT-GC training began.

To assess change in educators’ use of discipline strategies, Wilcoxon Signed Ranks analyses were conducted of the teachers’ reports of the sum scores of the numbers of times they used the different discipline strategies over the previous week, comparing pre-training with post-training totals. Results of analyses of the sample showed no significant improvement over

Table 3. Percentages of educators using various discipline strategies during the week before the TCIT-GC Workshop (N = 18)

Discipline strategy	Percent used strategy		Frequency used past week: Mean (SD)	
	Pre (N = 18) (%)	Post (N = 15) (%)	Pre (N = 18)	Post (N = 15)
1. Warn a student about problem behavior using yellow/red card or other classroom strategy	88.9	73.3	1.78 (1.6)	1.53 (1.5)
2. Send notes/emails to parents informing them of their child’s disruptive behaviors, non-compliance or inattention	77.8	60.0	1.56 (1.3)	1.33 (1.5)
3. Use virtual disciplinary measures such as sending a student to a Zoom breakout room/other virtual space, muting them or removing other virtual classroom privileges	50.0	40.0	1.50 (1.9)	0.67 (0.90)
4. File a student incident report (e.g. breaking rules, verbal or physical aggression toward peers or teachers)	44.4	53.3	0.89 (1.4)	1.00 (1.3)
5. Send a student to the principal or other authority figure as a result of misbehavior	33.3	26.7	0.67 (1.3)	0.53 (1.1)
6. Refer to the school counselor or outside mental health services	33.3	20.0	0.78 (1.4)	0.33 (0.82)
7. Refer for further assessment	44.4	20.0	0.83 (1.3)	0.33 (0.72)
Source(s): Authors’ own work				

the training period ($z = -1.44, p = 0.15$; Pre-training reports: Mean = 7.17 (SD = 7.4); Post-training reports: Mean = 5.40 (5.8)). However, we observed that more than a third of respondents reported low use (scores of 1 or 2) of discipline in the previous week and concluded that a floor effect may have been depressing the ability to detect change. When analyses were re-run separately for low (< 3 times in past week: N = 7 vs higher use (3 or more times in the past week: N = 11), those reporting the use of more discipline pre-TCIT-GC used significantly less discipline by post-training ($z = -2.14, p = 0.03$).

Perceptions of classroom functioning and student behavior among educators

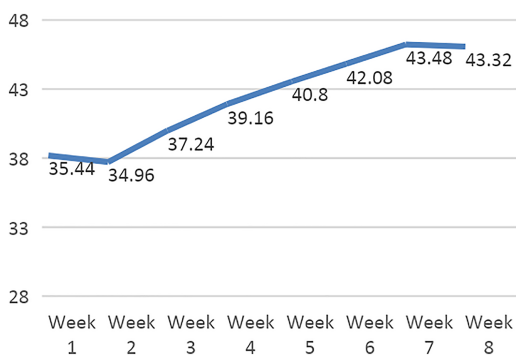
Repeated measures analyses of variance were conducted using the teachers’ reports of their classroom functions (e.g. use of rules, giving directions, positive classroom context) and reports of their students’ general classroom behavior (e.g. compliant, pro-social), using pre- and post-training assessments. Results of analyses revealed significant pre- to post-training change in reports of classroom functioning ($F(1, 19) = 9.47, p = 0.006, \eta^2 = 0.33, OP = 0.83$), and a non-significant trend suggesting improved overall student behavior ($F(1,19) = 23.13, p = 0.09, \eta^2 = 0.14, OP = 0.39$).

Changes in student behavior (WACB-T and SESBI)

Week to week changes: Educators were asked to identify a child in their classroom or who they interacted with regularly and report on their behaviors each week using the WACB-T (Timmer et al., 2020a, b) after applying the skills they had been taught. Twenty-one educators identified students and rated weekly. The large majority (86%) of educators selected one student to rate, two (10%) rated two students, and one (4%) rated three students. Identified students ranged in age from 2 to 13 years of age: 46% were 2–5 years, 29% were 6–10 years and 25% were 11–13 years of age; approximately two-thirds (64%) were male. A repeated measures analysis of variance was conducted to test whether educators reported improvements in student behaviors from week to week. Where there were missing data points, the last observation was carried

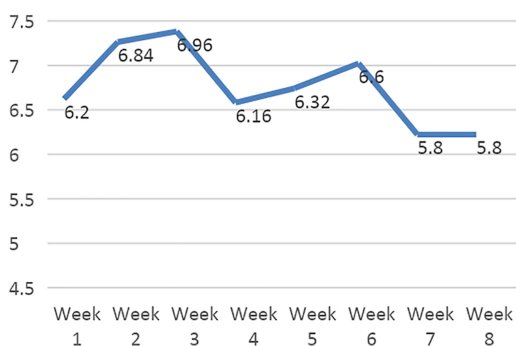
forward (Gupta, 2011) to maximize the number of data points and hence the power of the analysis. Results of analyses of the frequency of student positive behavior showed significant increases over the course of the training, correcting sphericity (Intensity: $F(3.69, 88.65) = 10.53, p < 0.001, \eta^2 = 0.31, OP = 1.0$) The number of behaviors rated as needing to change showed a non-significant tendency to decrease, correcting sphericity (Need to Change: $F(3.94, 94.53) = 2.11, p = 0.09, \eta^2 = 0.08, OP = 0.60$). Figures 1 and 2 show the week-to-week changes in educators' ratings. Results of post-hoc analyses examining week to week change in WACB-T intensity scale scores showed significant gains in children's behavior from Week 2- Consultation/Coaching- PRIDE/AVOID to Week 3- Didactic-Commands ($t = -2.63, df = 28, p = 0.014$) and from Week 4- Consultation- Commands to Week 5- Didactic- Strategies to Manage Behavior ($t = -2.24, df = 31, p = 0.032$) (see Figure 3).

Pre-to Post-training change: To verify the week-to-week findings shown in analyses of the WACB-T of reports by educators of improvements in students' behavior from pre-to post-TCIT-GC (i.e. Week 1 to Week 8), a 2×2 repeated measures analysis of variance was conducted using Intensity and Problem scale T-scores of the SESBI (Sutter-Eyberg Behavior Inventory), including educators completing both the Week 1 and Week 8 measures. (Intensity



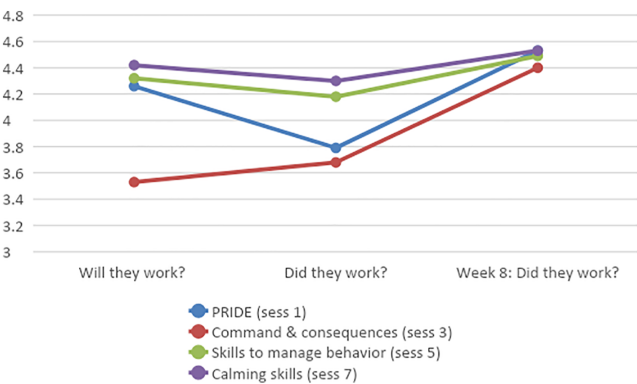
Source(s): Own work

Figure 1. Mean scores for the WACB-T intensity scale, measuring the frequency of students' positive classroom behaviors



Source(s): Own work

Figure 2. Mean scores for the WACB-T need to change scale, measuring the number of students' positive classroom behaviors that need to change [i.e. improve]



Source(s): Own work

Figure 3. Mean evaluations of the effectiveness of skills taught: before practicing (“will they work?”), after practicing for a week (“Did they work?”) and at week 8 of the training

scale: $F(1, 426) = 33.96, p < 0.001, \eta^2 = 0.57, OP = 1.0$; Problem scale: $F(1,26) = 8.74, p = 0.007, \eta^2 = 0.25, OP = 0.81$).

Perception of professional quality of life

To investigate the relationship between participation in TCIT-GC and changes in educators’ professional quality of life, RM-MANOVAs were conducted using pre- and post-training measures of the ProQOL’s three scales: compassion satisfaction, burnout and secondary traumatic stress. Because large percentages of educators rated themselves as having optimal levels of Compassion Satisfaction (67%), Burnout (75%) and Secondary Traumatic Stress (72.5%), we ran analyses separately and controlled for optimal levels on the scale. Results of these analysis showed a significant improvement in Compassion Satisfaction from pre-to post-training, controlling for levels of pre-treatment compassion satisfaction. No statistically significant changes were observed in levels of Burnout or Secondary Traumatic Stress. [Table 4](#) shows the pre- and post-training mean and effects of the RM-ANOVA.

Discussion

This evaluation was a first step in testing the effectiveness and feasibility of a brief version of Teacher–Child Interaction Training in an adapted group format, without the demands of one-on-one, *in vivo* coaching. Overall, combined results showed positive outcomes related to

Table 4. Results of Repeated Measures Analysis of Variance (RM-ANOVA) of ProQOL scale scores pre- and post-training (N = 22)

Scale: (N = 22)	Pre-training mean (SD)	Post-training mean (SD)	Effects
Compassion satisfaction	44.09 (5.4)	45.14 (5.2)	$F(1, 21) = 4.92, p = 0.03, \eta^2 = 0.20, OP = 0.47$
Burnout	18.27 (5.7)	18.68 (6.0)	$F(1, 21) = 0.36, p = 0.56, \eta^2 = 0.01, OP = 0.09$
Secondary traumatic stress	20.55 (6.9)	20.45 (7.8)	$F(1, 21) = 0.004, p = 0.95, \eta^2 = 0.00, OP = 0.05$

Source(s): Authors’ own work

participation in TCIT-GC. Educators reported improved classroom functioning, and among users of discipline strategies, a reduction in discipline use. By the end of the TCIT-GC training program, educators also reported an increased perception of the effectiveness of skills taught during the program. Week-to-week and pre-post training comparisons of the intensity of behavior problems in hard-to-manage children showed significant improvements; and among educators with moderate levels of compassion satisfaction, significant improvements were indicated in this important component of emotional wellness and career longevity.

Strengths of the TCIT-GC pilot

Strengths of the TCIT-GC pilot included its accessible scheduling, remote format, core skills and group practice model. Being offered virtually at 4:00 p.m., teachers were able to participate immediately after the end of the school day without needing to commute to another location. This alleviated transportation and after-school traffic barriers. The format was cost-effective for teachers, as participants did not need to invest time or money into travel, thus allowing more flexibility to manage personal and professional schedules alongside TCIT-GC training. Additionally, this format limited school costs by removing the need to bring in TCIT trainers for multiple in-person sessions. The remote workshops also allowed educators teaching in different settings to have equal access to the trainings (most participants taught on campus, while some taught hybrid classes on campus and remotely, and others taught fully remotely). Another strength is the model's use of positive skills for managing student behaviors; the framework provided specific examples of how to respond to disruptive behaviors in educational settings based on evidenced skills that promote social-emotional learning and sensitivity to adverse childhood experiences (ACEs). The group format was beneficial as it provided opportunities for rehearsal with participants' peers during coaching sessions, as well as the ability to learn from both personalized and group feedback from TCIT-GC trainers.

Limitations and future direction

While the TCIT-GC model may be easier to universally apply across general education settings, it is not a one-size-fits-all intervention and is meant to exist as an additional effective format, rather than a replacement for traditional TCIT. A limitation is that the TCIT-GC format is likely more beneficial for educators with mild to moderate student behavioral concerns; in educational settings where students have severe presentations of behavioral disabilities (e.g. ADHD, conduct disorder or emotional disturbance with externalized symptoms), teachers and students may be better supported with in-classroom coaching and real-time feedback provided by the traditional TCIT model. TCIT-GC would also not be an appropriate replacement for a token economy behavioral model embedded with applied behavioral analysis (ABA) and cognitive behavioral therapy (CBT) skills, as often utilized within classrooms focused on supporting students with autism spectrum disorder. The study's methodological integrity also faced some limitations, as it is difficult to determine whether educators' impressions of pre-to-post student behavior was influenced by the fact that they were equipped with more skills by the end of the study, or due to feeling heard and supported by trainers and peers throughout the process. It is possible that participation in group coaching could have reduced participants' stress and increased self-reported positive outcomes that were independent of their newly acquired behavior management skills. Furthermore, the impact on professional quality of life may have been limited due to the stressors of the COVID-19 pandemic counteracting the resources and tools gained through coaching. The ProQOL measure could not control for variables such as participant stress induced by the pandemic, versus stress induced by students' disruptive behaviors. Future studies may develop modules to specifically address teacher well-being and self-care while controlling variables to clearly isolate those that may contribute to increased or reduced stress, and perform post interviews discussing teacher perceptions of

professional quality of life. Future studies may also investigate the degrees of correlation between positive outcomes and TCIT-GC skill development versus positive outcomes and trainer or peer support, as well as the effects of TCIT-GC on intervention retention.

Because this was a pilot study of an innovation in TCIT delivery, we offered as many cohorts of TCIT as possible during the funding period, casting a wide net among educators. Eligible participants all had direct contact with students and comprised a convenience sample of three cohorts. As information about the specific grade levels that participants worked with was not collected, future studies could collect student grade data to evaluate whether significant differences exist between TCIT-GC teachers at varying grade levels. Specialized “My Classroom” tools could also be developed for studies to collect information on participants’ students. While ideally, we would have liked to examine differences in outcomes by the type of educator, resulting sample sizes of the different cohorts and different types of educators limited the complexity of analyses we were able to perform. Future research should evaluate variations in effectiveness by each educator’s role and type of institution. Continued research should also compare the degree of positive effects between traditional TCIT and TCIT-GC models, as well as exploring the effectiveness of TCIT-GC for special education programs serving children with mild to moderate disabilities. Another limitation of this pilot study is that data was collected solely from the educators who participated in the training, using self-report questionnaires. While this provides valuable insights, it may benefit future research to include measures such as observations of teacher–student interactions by trained observers, which could provide an alternative perspective on participants’ judgments of the effectiveness of TCIT skills, student behavior and classroom functioning. Further assessment will be required to investigate whether the positive effects of TCIT-GC are sustained over time, and whether these outcomes differ by types of classrooms, the severity of student behavioral problems and school and community resource levels. However, the results of this study suggest that participating in a briefer, less intensive, learning collaborative approach to acquiring classroom management skills can effectively train educators to improve classroom climate and promote positive student behavior.

This study contributes to the wider body of work addressing TCIT by expanding professional development into the virtual, group coaching sphere. As teacher burnout and stress rates increase, providing accessible and effective training serves an essential role in enhancing student academic performance and teacher wellness. Future iterations of remote, virtual coaching could prove a critical resource for teachers and their students.

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