

Professional Development Specialist Interrater Reliability of Coaching Fidelity Scoring

in a Statewide Professional Development Program

Scott Tomchek, PhD, OTR/L, FAOTA, Serena Wheeler, MAE, IECE, Lauren Little, PhD, OT/L, & Winnie Dunn, PhD, OT/L, FAOTA

Federal Funds Support the Coaching in Early Intervention Training and Mentorship Program - Grant Number : H181A210048



Introduction

- Despite research evidence, DEC Mission and Key Principles, advocating for EI providers to support caregivers as the agents of change in EI, a **research-to-practice gap remains** (Bruder et al., 2021; Romano & Schnurr, 2020)
- Evidence-based PD (Childress et al., 2021; Dunst et al., 2015) can close this gap and promote sustained evidence-based practices
- To measure fidelity practice, however, requires a psychometrically sound measure of adherence.
- The purpose of this study** was to evaluate the inter-rater reliability of a coaching adherence rubric.

Methods

Study Design: Group research design with retrospective data collection

Measure: Kentucky Coaching Adherence Rubric – Revised (KCAR-R) measured adherence to a defined set of caregiver coaching skills with a max score of 28 and fidelity cut-score of 18

Reliability standards: 100% agreement on 4 of 7 within 1 on other 3; 20% of all videos in each cohort phase have randomly assigned second raters blinded (unaware) to initial scores for reliability checks

Raters: 8 professional development specialists were trained on scoring videos according to manualized procedures for n=260 reliability checks on 266 Kentucky EI providers who had completed the CEITMP

Data Analysis: Interrater reliability was analyzed using intraclass correlation coefficients (ICCs; Shrout & Fleiss, 1979) at the scale, and item levels using a two-way random effects model with a 95% confidence interval. When using a small sample size, ICCs are considered appropriate for ordinal data when unendorsed categories are present (Maclure & Willet, 1987). ICCs ranging from .4 to .6 were considered fair, those >.6 were considered good, and those >.75 were considered excellent (Fleiss, 1986).

Fidelity Measure Development: KCAR-R

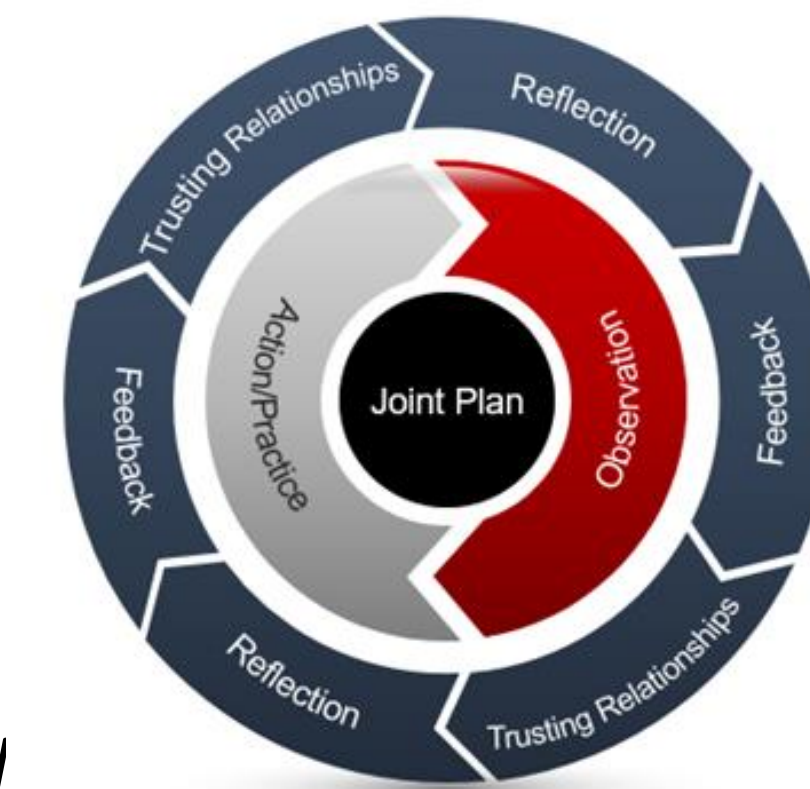
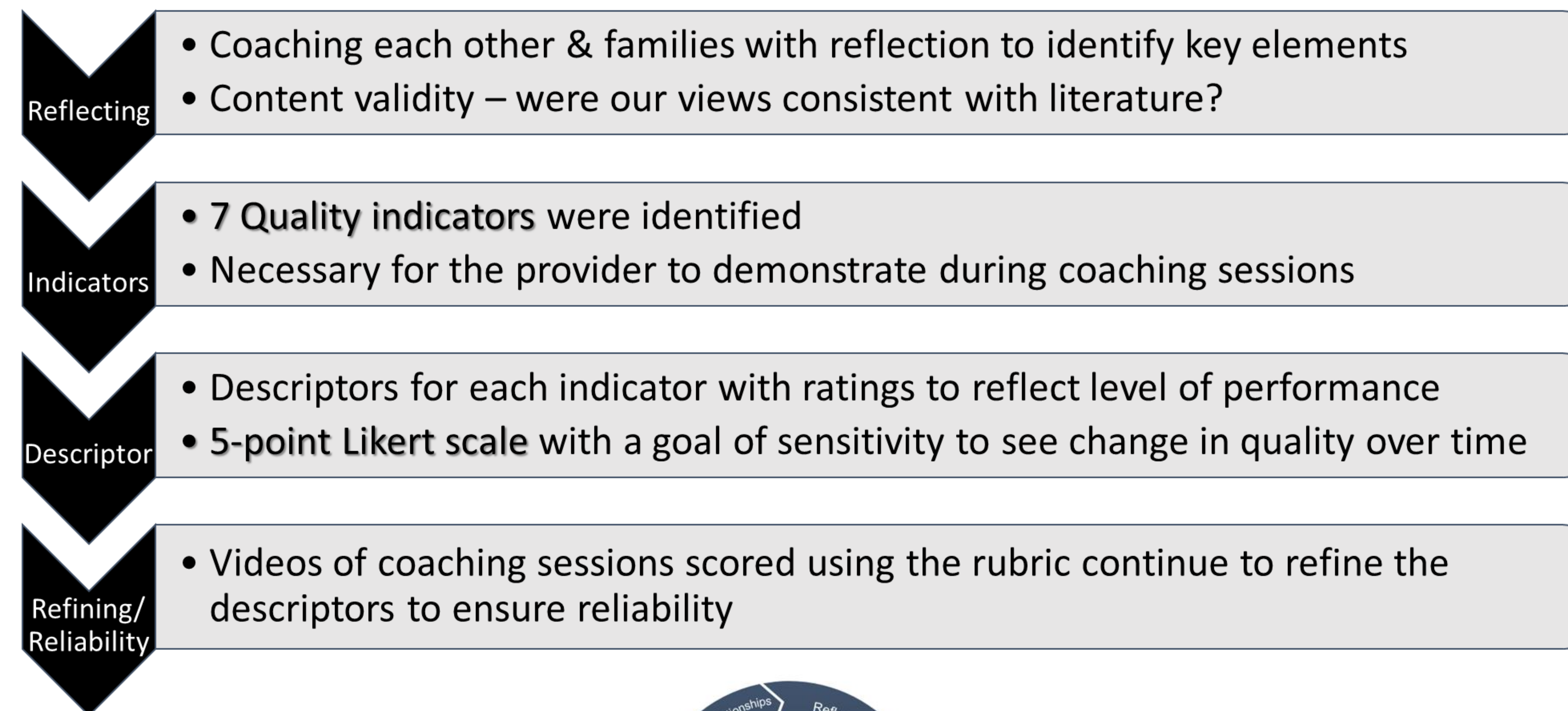


Figure 1 Kentucky Coaching Adherence Rubric - Revised

CQ	PROVIDER...	Not Yet 0	Knowledge 1	Awareness 2	Application 3	Mastery 4
CQ1 FTR	Fosters trusting relationships when partnering with caregivers by connecting, listening, and responding in respectful, supportive ways	Focuses attention mostly on child	Directs; talks more than listens; conversation may be general or not related to caregiver topic(s)	Leads conversation; responds to caregiver statements mostly to clarify or review	Interacts reciprocally; actively listens; shows interest and sensitivity for family members	Stays engaged with caregiver to consistently shape conversation around caregiver topic(s); communicates in respectful, strengths-based ways; includes family members
CQ2 JPB	Engages caregiver early in session to review their previous joint plans and develop priorities for current visit	No joint plan; takes charge of visit; directs activities	Confirms only previous or current priority; Primarily offers own activity suggestion(s) for current visit and asks caregiver for input	Reviews only priority of the previous between visit and current plan OR discussion leads to development of only one plan (previous between visit or current) to include both caregiver priority with additional detail(s) (e.g., with who, family routines, activity, strategy)	Supports caregiver to review how their previous between visit joint plan went and to ultimately identify their priority for current visit; discussion allows caregiver to identify at least one detail (how, what, why, where) for both plan parts. Joint plan implemented.	Launches visit by engaging with caregiver to reflect on previous joint plan implementation and develop explicit, detailed plan for current visit (activities around their priority, preferred contexts, methods, and purpose). Current Joint plan is implemented.
CQ3 O	Observes caregiver and child in prioritized activities followed with reflection to promote insight and/or flow to action/practice	Does not or has no opportunity to observe child activities or child-caregiver interactions	Selects activities to observe or observes activity not related to established family priority or joint plan; may ask questions to gain information and/or give feedback	Observes child activities and/or child-caregiver interactions related to established family priority or joint plan; may ask questions to gain information and/or give feedback	Captures opportunities to intentionally observe child-caregiver interaction in identified family prioritized activities followed by asking at least one reflective question related to the observation to promote caregiver insight	Collaborates with caregiver to observe child-caregiver interaction in prioritized family routines/activities, followed by using reflective questions to elicit caregiver insight or/and flow into action/practice
CQ4 A/P	Proactively captures opportunities for caregiver to practice their prioritized ideas and reflect	Utilizes own materials to engage child in activity or alter activity; or no opportunity to observe child or child-caregiver action/practice	Implements own activities; attempts to engage caregiver in the activities	Identifies opportunities and supports caregiver to practice ideas/strategies linked to established family priority or joint plan; may offer feedback	Cues, prompts and/or models to engage caregiver to practice or try ideas related to their identified priority; At least one reflective question follows to facilitate caregiver insights related to the action/practice	Uses intentional modeling, cueing, or prompting to engage caregiver to practice or try ideas related to their priority in a natural routine; use of reflective questions with caregiver encourages linkage to other routines, contexts, or outcomes
CQ5 F	Provides substantive feedback to caregiver, to affirm and attempt to enhance their learning experience and insights	No feedback provided to caregiver; child focused	Directs praise toward caregiver and/or offers suggestions	Praises caregiver and provides explanation of why; may offer suggestions/information prior to giving caregiver opportunity to reflect	Acknowledges or confirms shared understanding paired with substantive explanations; if offered, suggestions or information are related to activity/priority and after ample time for caregiver reflection	Reflects with caregiver about experience to affirm and attempt to enhance caregiver insight, learning or action
CQ6 R	Asks effective reflective questions to stimulate thinking, promote problem solving, and elicit insights from the caregiver	Makes many declarative statements; may ask yes/ no and informational questions, without intent to reflect	Asks at least one question with reflective intent; directs conversation more than responding	Occasionally asks questions with reflective intent; may lead part of conversation to a particular response	Frequently employs open-ended reflective questions with intent to have caregiver share thoughts and insights related to their priority or the joint plan	Predominantly and throughout the session, asks open-ended reflective questions related to caregiver priority or the joint plan and allows opportunity for them to respond with thoughts and insights
CQ7 JPE	Engages caregiver in developing detailed plans for their actions between visits and for the next visit centered on their priorities	No joint plan formed	Confirms only between or next visit priority; Primarily directs plan development by giving homework or selecting the best activities to work on	Reviews only priority for the between visit and next visit plans OR discussion leads to one plan (between visit or next) to include both the caregiver priority and at least one additional detail (e.g., with who, family routines, activity, strategy)	Supports caregiver to ultimately identify what they would like to focus on between visits and for the next visit; discussion allows caregiver to define at least one additional detail for both plan parts	Ends visit by engaging with caregiver to reflect and develop more detailed plans for between visits and the next visit that includes caregiver's priority, preferred contexts, methods, and purpose.

Results

Table 1 Interrater Reliability Results

Item	ICC value
Fosters Trusting Relationships	0.914
Beginning Joint Plan	0.935
Observation	0.923
Action/Guided Practice	0.934
Provides Substantive Feedback	0.911
Asks Effective Reflection Questions	0.949
Ending Joint Plan	0.966
Total	0.982

- Professional development specialists had .976 agreement at video level across all 8 raters
- Interrater reliability of the Kentucky Coaching Adherence Rubric-Revised was very strong, ranging from .911-.966 at the item level and .982 for the total score.

Conclusion

- Intervention fidelity is critical to promoting positive EI outcomes
- Implementation of PD with fidelity contributes to the integrity of the program supporting intervention fidelity
- The Kentucky Coaching Adherence Rubric – Revised (KCAR-R) can support professional development efforts in training early intervention practitioners to deliver evidence-based caregiver coaching.

Selected References

- Bruder, M. B. (2010). Early Childhood Intervention: A Promise to Children and Families for Their Future. *Exceptional Children*, 76(3), 339–355. <https://doi.org/10.1177/001440291007600306>
- Childress, D. C., Raver, S. A., Eckhoff, A., & Gear, S. B. (2021). Technology-mediated professional development for EI service providers: connecting adult learning with caregiver support. *Professional Development in Education*, 1-15.
- Dunst, C. J., Bruder, M. B., & Hamby, D. W. (2015). Metasynthesis of in-service professional development research: Features associated with positive educator and student outcomes. *Educational Research and Reviews*, 10, 1731–1744.
- Fleiss, J.L. (1986) Design and Analysis of Clinical Experiments. Willey, New York.
- Romano, M., & Schnurr, M. (2020). Mind the gap: Strategies to bridge the research-to-practice divide in early intervention caregiver coaching practices. *Topics in Early Childhood Special Education*. <https://doi.org/10.1177/0271121419899163>
- Shrout, P. E., & Fleiss, J. L. (1979). Intraclass correlations: Uses in assessing rater reliability. *Psychological Bulletin*, 86(2), 420–428. <https://doi.org/10.1037/0033-2909.86.2.420>