

# Adapting an Evidence Based Intervention using an Implementation Science Framework

Lisa Ruble, Ph.D.<sup>1</sup>, Claire Snell-Rood, Ph.D.<sup>2</sup>, Medina Adams<sup>1</sup>, Jaxcy Odom, Alexis Rodgers<sup>1</sup>, Wing Hang Wong<sup>1</sup>, Yue Yu<sup>3</sup>, John McGrew, Ph.D.<sup>3</sup>, Harold Kleinert, Ph.D.<sup>4</sup>

Department of Educational, School, and Counseling Psychology, University of Kentucky<sup>1</sup>

Behavioral Sciences, University of Kentucky<sup>2</sup>

Department of Psychology, Indiana University-Purdue University Indianapolis<sup>3</sup>

Human Development Institute, University of Kentucky<sup>4</sup>



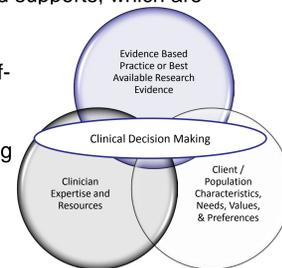
## BACKGROUND

### COMPASS:

- The Collaborative Model for Promoting Competence and Success (COMPASS) is an evidence based consultation intervention that improves educational outcomes of young children with autism (Ruble, Dalrymple, & McGrew, 2010; Ruble, McGrew, et al, 2013).
- Tested in two RCTs, COMPASS is an implementation strategy influenced by the framework of Dunst, Trivette, and Raab (2013) that considers the relationships between what the COMPASS consultant does (implementation practice) to impact what the teacher does (intervention practice) to improve child educational outcomes.

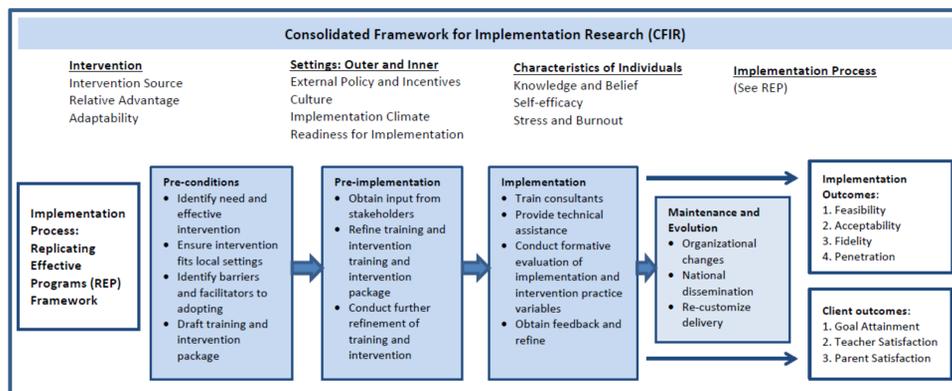


- COMPASS is comprised of an initial parent-teacher planning session that lasts approximately 2.5-3 hrs, and is followed by four 1-1.5 hr teacher coaching sessions that focus on plan implementation that occur over the 9-month school year.
- Influenced by the Evidence Based Practice In Psychology Framework, the initial consultation involves the special education teacher, parent, and consultant who meet to establish a shared understanding of the child's personal and environmental challenges and supports, which are important for developing *personalized* intervention plans.
- Specifically, the comprehensive profile asks the teacher and parent to review the child's preferences and strengths, fears and frustrations, self-management skills, problem behaviors, social skills, communication skills, sensory issues, and learning skills.
- Following the discussion of the child's COMPASS profile, goals targeting each of the following critical areas: socialization, communication, and learning/ behavioral skills are identified based on parent and teacher priorities.
- After goals are identified, intervention plans are developed.
- A profile for individualizing evidence based practices based on the child's circumstances and teacher resources (personal/environmental challenges and supports) are identified. Following the initial consultation, teacher-coaching sessions take place that are designed to support the implementation of the intervention plans.



### Need for Adapting COMPASS for Transition Age Youth with ASD

- We adapted COMPASS for transition age youth using the Consolidated Framework for Implementation Science as a guide (CFIR; Damschroder, et al., 2009).
- CFIR provides a comprehensive approach of existing implementation science theories.
- CFIR includes five domains, each composed of several sub-domains: (a) characteristics of the intervention; (b) outer setting; (c) inner setting; (d) characteristics of the individuals conducting the intervention; and (e) process of implementation.



- Researchers are able to select the constructs most relevant for their study. For our study we identified features of good transition planning that were relevant for all five CFIR areas.

## OBJECTIVES

- To use an implementation science framework to identify the critical factors impacting quality implementation and intervention effectiveness in COMPASS.
- A long-term goal is to apply this information to understand, adapt, refine, and pilot COMPASS.

## METHODS

### Participants

- A total of 42 stakeholders, including college students with ASD, participated in 10 focus groups. Participants included parents, school service providers, school administrators, adult service providers, and state policy makers from the Kentucky offices of Vocational Rehabilitation, Special Education, Medicaid, and Developmental Disabilities. Table 1 describes the different focus groups and participant demographics

Table 1. Focus Group Description

Focus Group Name	Gender	Race
1. State Autism Committee	2 males; 8 females	100% White
2. Policymakers Group 1	1 male; 1 female	100% White
3. Parent Group 1	4 females	100% White
4. Policymakers Group 2	1 male; 3 females	75% White; 25% Latino
5. School Providers	4 females	100% White
6. Parent Group 2	1 male; 3 females	100% White
7. School Administrators	4 females	100% White
8. Adult Service Providers	3 females	100% White
9. Individuals with ASD	3 males; 1 female	75% White; 25% Latino
10. Parent Group 3	3 females	67% Black; 33% White

### Focus Group

- The focus groups lasted about 1hr. Each hour-long session was recorded and transcribed.
- The research team performed qualitative content analysis. An initial codebook was created from themes derived from the literature on transition. All codes were cross-checked against themes appearing in a preliminary reading of all transcripts.
- Codes were discussed and refined within the team to finalize the codebook.
- Team members worked in pairs to test and apply codes; all codes were tested until reaching 80% agreement in inter-rater reliability.
- Then, each pair of coders applied codes line by line to all transcripts.
- Researchers reviewed coded content code-by-code to identify specific aspects of COMPASS to be adapted and revised to meet the needs of transition-age youth

Table 2. Percent Coder Agreement

Interview Themes	% coder Agreement
1. Key Players	100%
2. Key Services	82%
3. Navigator/Coordinator	100%
4. Employment	100%
5. Voc Rehab	100%
6. Student, parent, and family	100%
7. Public Benefits	92%
8. Continuum of Autism	100%
9. Educational Outcomes & Skills	80%
10. Timing	100%
11. Goal Setting	84%
12. Transition	87%
13. Communication	100%
14. Monitoring & Assessment	86%
15. Specific Training on ASD	82%

- The recommendations for changes were reviewed with a panel of stakeholders. The products developed were also reviewed and feedback was used for further revisions.

## RESULTS

- Stakeholders identified the following adaptations for COMPASS:

- Measures:
  - Add measures of quality of life, self-determination, activation, and social support;
  - Assess parent perception of openness of IEP team to parent input and curricular changes;
- Handouts:
  - Develop psychoeducational handouts on the transition process, state services, and a transition planning timeline with descriptions of different roles;
- Process:
  - Involve student in completion of COMPASS forms and in the consultation;
  - Assess student interests, strengths, and skills;
  - Adapt interests questionnaires based on student abilities, such as use of visuals, and adapting COMPASS questions for age appropriateness
  - Incorporate student goals for vocational and independent living skills and parent goals for obtaining services;
- Players:
  - Invite vocational rehabilitation counselor, and offer different methods for involvement (phone);
- Services:
  - Assess current services and those needed

COMPASS Transition Study Revisions		
Stakeholder Recommendations	Products	Impact
1. Provide a checklist of things that parents need to do for their child's transition: simple, one page checklist	<a href="#">Top 10 List</a>	<ul style="list-style-type: none"> <li>Increased knowledge of services</li> <li>Increased service use</li> </ul>
2. Ask parent about current services in initial paperwork and needed services (will use for determining what informational handouts are needed)		
3. Have psychoeducational modules/handouts with information about: <ol style="list-style-type: none"> <li>transition process</li> <li>supports COMPASS can provide</li> <li>typical goals, and</li> <li>information about services including what services are available and how to obtain them.</li> </ol>	<a href="#">Transition Process Resource Guide</a>	<ul style="list-style-type: none"> <li>Increased knowledge about transition, the planning process, and roles</li> <li>Increased activation</li> </ul>
4. Create/adapt a timeline for transition planning which includes descriptions of roles.		
5. Have vocational goals, independent living skill goals, job skills - Checklist for COMPASS consultant about key players, in initial paperwork.	<a href="#">COMPASS Training Packet</a>	<ul style="list-style-type: none"> <li>Increased sensitivity of COMPASS for vocational planning, individualization, and strengths-based approach</li> </ul>
6. Adapt COMPASS forms – make sure they are age-appropriate and in 1 <sup>st</sup> person	<a href="#">COMPASS Profile Assessment</a>	<ul style="list-style-type: none"> <li>Increased clarity of role responsibility</li> </ul>
7. Have additional forms for parents asking about child's interests and skills.		
8. Combine Vocational checklist and Compass forms for adults		
9. Have goals for parents and teachers along with student's goals.		
10. Measure of how well meetings are attended by key players		
11. Be flexible with how/long key players attend meetings – allow them to attend by phone or for only part of meeting if needed.	<a href="#">Process Changes</a>	<ul style="list-style-type: none"> <li>Understanding impact of certain players on transition outcomes</li> <li>Increased involvement of players</li> </ul>
12. Build plan around VR, not waiver, since most students will likely not have waiver at time of transition.		<ul style="list-style-type: none"> <li>Increased service use</li> </ul>
13. Invite VR to initial consultation		
14. Forms for students may include pictures for nonverbal individuals.		<ul style="list-style-type: none"> <li>Increased student engagement</li> </ul>

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