Chapter 1
Rationale for COMPASS

Overview: This chapter describes COMPASS as the first research-supported consultation model for young students with autism spectrum disorders (ASD). It describes why COMPASS is specialized for ASD, is proactive, and is based on collaboration.

Preschool teacher: “It’s almost like he doesn’t know there is anybody or anything else going on. It’s like he is in his own zone and nothing penetrates that. I’ll be real honest with you: we’ve kind of been in survival mode. His frustration has been so high that it is just a matter of managing the tantrums. I’m at a loss. What can I do? What else can I try to replace these behaviors? What am I doing wrong?”
Parent: “Oh my gosh! I didn’t know it was that bad!”
Kindergarten teacher: “I want him to be able to sit in a group and not have outbursts.”
Parent: “For so long we encouraged active participation, verbal participation, and now we are saying, ‘Don’t verbally respond; keep it to yourself until we say you can.’”
Kindergarten teacher: “But as he gets older, I don’t know if kids with autism understand ‘Well, this is what I did when I was four, but now it’s inappropriate.’”

These statements are from parents and teachers during a COMPASS consultation. They portray the frustration, differences in priorities, and, ultimately, the need for communication between parents and teachers. This manual is designed to train consultants to help caregivers, teachers, and other therapists work together to improve outcomes for young students with ASD. We wrote this manual to help consultants begin to effectively address the issues presented by these examples with the assumption that understanding the importance of building competence in persons with ASD is essential and begins with good communication as well as a common understanding of how to influence positive outcomes.

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In this chapter, we discuss the core principles that compose COMPASS:

1. COMPASS teaches consultants to measure success by considering core competencies in students with ASD, not the degree of attainment of “normal” social development.
2. COMPASS is built on a research-supported consultation framework for ASD, meaning it has been evaluated experimentally in two randomized controlled trials for young children (Ruble, Dalrymle, & McGrew, 2010a; Ruble, McGrew, Toland, Dalrymple, & Jung, 2012).
3. While COMPASS was designed to intervene with problem behaviors in students with ASD, we believe that it is most effective when used proactively to prevent problem behaviors from developing.
4. Students with ASD express certain behavioral, communication, and social needs, and COMPASS is designed especially to address the core impairments of individuals with autism.
5. COMPASS is intended to be used collaboratively, with the consultant and the consultee (the teacher or parent and child if possible) all using the model.
6. COMPASS considers the student’s current services and supports and aims to improve the efficacy of those services through a dynamic and reiterative process rather than serve as a replacement process.

Measuring Success Through Competence

Every day we are faced with challenges. Our success in meeting daily challenges promotes a feeling of competence and a sense of personal well-being—along with an acceptable quality of life. Quality of life—as a goal or outcome for people with autism—is often ignored. In the past, outcomes were measured by the degree of attainment of “normal” social development and independence. Our first outcome study of young adults with autism (Ruble & Dalrymple, 1996) challenged the traditional methods researchers used to measure outcomes of adults with autism. Given this emphasis on achievement of “normal” functioning, in many ways, these studies appeared to be measuring the stability of autism over time, rather than actual clinical change associated with an intervention or outcomes. That is, social impairment, as a core defining feature of autism, remains constant over time. For example, if a person has autism in adulthood, meaning they still have social impairments, they would be judged as having a poor outcome. Instead, we offered other ways to think about and redefine outcomes. The development of competence and success was suggested as another way to consider outcome (Ruble & Dalrymple, 1996). The question is how to achieve competence. This can be challenging for us all and especially for individuals with autism spectrum disorder because they often lack the necessary skills to meet daily challenges.

Competence is defined as the ability to complete actions and tasks successfully. But we extend the definition of competency to include how well the environment helps the person be successful. The competence of a person with ASD can be enhanced by understanding how vulnerabilities interact with the environment in the face of challenges. In the COMPASS approach, competency development and enhancement requires consultants who work on behalf of individuals with ASD to empower families, service providers, teachers, and therapists through collaborative program planning and implementation.

That students need to be identified early and receive specialized services is no longer questioned by community service programs. What is less clear and more challenging is how to meet the growing and often complex needs of individuals with ASD, not only as preschoolers, but also as teenagers and adults. To assist each individual in achieving an optimal outcome and a good quality of life, more attention is needed for services research, such as how to improve the quality of services, outcomes of services, and support for teachers, clinicians, staff members, and mental health professionals in delivery of services.

Evaluating the Effectiveness of COMPASS Through Research

The need for research-supported consultation in autism is clear. The last 10 years has witnessed a shift of perception of autism spectrum disorders. Once described as a low incidence disability affecting 2 out of 10,000 children, today ASD is recognized as a relatively common developmental disability affecting 1 out of about 110 children.

Research studies during this time have also resulted in the identification of best practices for diagnostic assessment, intervention and treatment, and working with families. Because more students are being identified as having ASD, we face additional challenges—namely, the need for more autism specialists. The positive effects of intervention research have compelled the federal government, state departments, and public service agencies responsible for funding intervention to take notice because there is a recognized shortage of specialized community- or school-based personnel trained in autism (National Research Council (NRC), 2001). Moreover, because education and behavioral interventions are the primary treatments for students with autism and are most effective when received early (NRC, 2001), a lack of trained personnel has direct consequences for students with autism and their families both immediately and long-term.

The Study: From 2004 to 2007, with funding from the National Institute of Mental Health (grant number R34MH073071), we studied 35 teachers and 35 students with autism (if there was more than one student with autism in the teacher's classroom, the student was randomly picked from the group of children). Each teacher–student pair was then randomly assigned (like a flip of a coin) to the experimental group or the control group. Teachers who were chosen for the experimental group received the COMPASS consultation at the start of the school year. That consultation included the child's parent (3-h meeting) and four teacher-coaching sessions (about one-and-a-half hours per meeting every 4–6 weeks) throughout the school year. The control received no intervention from the research team. An evaluator who was unaware of the teacher–student pair group assignment evaluated the students before (at the start of the school year) and after the intervention (at the end of the school year).

The results revealed that the students whose teachers received the consultation and coaching sessions made significantly more improvements in the targeted IEP objectives. Although the control group made progress throughout the year, the COMPASS group students made progress at almost twice the rate of the comparison group children. With more recent funding from the American Recovery and Reinvestment Act (grant number RC1MH089760), we conducted a second replication study, that utilized the two groups described above (experimental and control), and a third group that was added to receive COMPASS through Web-based teacher coaching sessions, rather than face-to-face sessions. We found that the students in both of the COMPASS consultation groups (Web-based and face-to-face) made significant gains on their targeted IEP objectives compared to the control group.

To understand why COMPASS worked, we analyzed the features of the IEPs expected to change as a result of COMPASS and found that the quality of the COMPASS IEPs was higher compared to the control group (Ruble, McGrew, & Dalrymple, 2010a). That is, one of the important elements underlying effectiveness is that COMPASS helped to create higher quality IEPs, e.g., goals were more measurable and goals focused more directly on critical skills for children with autism. Chapter 5 covers information on IEPs.

Another important aspect we studied was how well COMPASS was received by both teachers and parents. Feedback from the consumers—parents, caregivers, and teachers—showed that satisfaction with the COMPASS consultation was strong. Social validity, treatment acceptability, and consumer satisfaction provide crucial information on the perceived acceptability of an intervention, a variable that plays a key role in whether an intervention is adopted. Thus, it is critical that consumers like COMPASS. A number of research-supported interventions have been rejected by consultees due to dissatisfaction with procedures (Eckert & Hintze, 2000). Social validity is discussed in more detail in Chap. 3.

Another variable that related to student progress was teachers' adherence to the recommendations from the consultation and coaching sessions, especially for the last coaching session. Teacher adherence, also called fidelity, refers to how well the teacher implemented the teaching plans. Consultants judged adherence to implementation by making an overall assessment of how many of the components from the teaching plan were implemented during instruction and by evaluating the overall quality of the implementation of the various instructional components. That is, COMPASS works better when teachers follow the consultant's suggestions. However, more research is needed to understand how coaching methods affect teacher acceptance and satisfaction as well as likelihood of following recommendations and adhering to the plans generated.

COMPASS as a Proactive Approach

Proactive collaborative program planning and effective program implementation are essential for children, youth, and adults to achieve optimal outcomes. Often, we wait until there is a problem behavior before a consultant with expertise is brought to the table. Although COMPASS was originally designed as a response to problems and used to conduct functional behavioral assessment and to develop positive behavior supports, program planning must be proactive. A proactive approach is more likely to result in expected outcomes, such as better quality and more specialized individual family service plans, individual education plans, and individual support plans.

Our research studies indicate that better program plans result in better goal attainment of the child. Further, COMPASS is helpful for transition planning, such as from early intervention to preschool; from preschool to school; from elementary to middle school. Although we have not conducted studies with older children we also expect that it will be helpful in the transition from high school to adult/vocational services. The main focus is to develop comprehensive, whole-student programs that include all people who work, live, and engage with the child.

Need for an ASD-Specific Consultation Model

There are several reasons why an autism-specific consultation model is needed. ASD is a diagnostic label that provides information about the nature of the impairments, information about the course of the disability (outcome, cause, intervention, or treatment), a basis for research, a means to receive services and information on specialized services, and, most important, a means by which parents and caregivers can organize themselves for advocacy efforts and support. This information is critical to the consultation process.

What a diagnostic label such as ASD does *not* do is identify specific teaching objectives, teaching strategies, or classroom placements. That kind of information comes from additional functional and curriculum-based assessments for program planning. Also, the teaching needs of each student are different, and what is taught, as well as how skills are taught, is unique for each child. Another challenge for students with autism is that the ability to learn—which is demonstrated by how well the student can apply skills taught in one setting, with one person, using a specific set of materials and directions—is not easily demonstrated across settings, persons, and materials, resulting in a learning weakness. Generalizing skills from one set of circumstances to another requires a team approach. It is not unusual for parents, teachers, and therapists to use different approaches and to set different teaching priorities. This becomes an environmental challenge that hinders learning.

ASD is a life-long disability, and achievement of changes in behavior may require relatively long periods of time. A time-limited consultation approach with a short-term goal of solving an immediate problem or answering a specific question may not be as effective as one with a longer-term goal of preventing problems and improving consultees' skills in problem-solving. Thus, an ongoing and systematic consultation framework is likely better and more socially valid for students who have life-long, complex disabilities like ASD.

Researchers have documented empirically supported interventions for autism (NRC, 2001). Such interventions can be categorized within one of two domains: comprehensive or focused (Odom, Boyd, Hall, & Hume, 2010). Focused interventions address specific or discrete skills. Approaches such as discrete trial training, video self-modeling, activity schedules, and social stories are examples of focused interventions. Comprehensive treatment approaches aim to improve broad areas of learning that address the core symptoms of autism. Examples of comprehensive treatment models are the Early Start Denver Model (Dawson et al., 2010), the Lovaas Model (Cohen, Amerine-Dickens, & Smith, 2006), and the TEACCH (treatment and education of autistic and related communication handicapped children) Model (Panerai, Ferrante, & Zingale, 2002). These approaches have not been compared directly with one another in an experimental way, thus we cannot say which intervention is best for each child. Further, no single specific causal mechanism that accounts for treatment progress for all individuals has been found. Instead, effective program components have been identified. Several documents are now available describing these common successful elements (National Research Council, 2001; Dawson & Osterling, 1997; Hurth, Shaw, Izeman, Whaley, & Rogers, 1999; Strain, Wolery, & Izeman, 1998) and include the following:

- Students should receive intervention at young ages.
- Intervention should be individualized to the student and family.
- Treatment should be systematic and planned and include periodic monitoring of progress and goals.
- The student should be engaged through teaching activities that foster initiative and adaptation to transitions.
- A specialized curriculum should be used that includes developmentally based programming in imitation, communication, play, and socialization.
- Treatment plans should encourage family involvement and generalization of skills to other settings.
- A functional approach to problem behaviors should be provided.

COMPASS is a framework that includes these elements. It is also a comprehensive treatment model, as it focuses on the core symptoms of autism and is tailored to the child's environment to promote the following:

- Collaboration between school personnel and parents or caregivers, in the generation of interventions.
- Linkage between assessment information and program plans.
- Prevention of problem behaviors by placing emphasis on functional skills development and environmental supports.
- The practice that teaching strategies are developed only *after* objectives is identified.

Collaborative Program Planning and Program Implementation

COMPASS aims to enhance competence of not only the student with ASD but also the person working with the student. This is done by empowering participants through a *collaborative* problem solving and program planning process that builds on comprehensive, ongoing assessments before reaching decisions. The process gathers information from both formal and informal means and from input from those who know the individual. This helps reach a consensus for building successful individualized programs.

Collaborative program planning and problem solving refers to an interactive process between people of diverse expertise and roles for the purpose of generating creative and novel solutions to mutually defined problems or questions. This approach tends to produce enhanced outcomes and solutions that are different from those produced independently (Idol, Nevin, & Paolucci-Whitcomb, 1995).

Consultation implies that the consultee (typically the teacher or parent) takes responsibility for the implementation of the intervention. But collaborators—the consultant and the consultee—share responsibility in the implementation of the program and work together from the beginning to the end—starting with assessing problems, setting goals, and designing interventions. Consultants also assume responsibility for teaching the intervention to the consultees and may share some responsibility for evaluating the outcome (Brown, Pryzwansky, & Schulte, 2006).

Including parents and caregivers as collaborators is essential. Not only is a collaborative approach preferred by teachers and parents (Freer & Watson, 1999; Sheridan & Steck, 1995), but it is also the most effective (Sheridan, Welch, & Orme, 1996). Collaborative program planning and implementation help students generalize skills from one environment to another and also helps with skill maintenance (Sheridan & Steck, 1995; Stokes & Baer, 1977; Wahler & Fox, 1981).

In addition, collaboration reinforces the intention of Part B and Part C of the federal Individuals with Disabilities Education Act (IDEA) by providing opportunities for parents and school personnel to work together. Here are direct quotes from teachers about the benefits of COMPASS for promoting collaboration:

- His general education teachers have been more excited about his progress and, therefore, have been more involved in implementing strategies which has helped his overall progress.
- It has helped get his mom involved in his education. It has helped all who work with him to focus on clear goals.
- My student has met these goals and can participate in the classroom and peers interactions successfully. It has built a more positive relationship with teachers and parent interaction.
- It has required all staff/therapists to be consistent.
- She made great progress on her goals. The videotaping and conferencing with coaches has made me more focused on her goals and how best to work with her. Plus, I worked and collaborated with a great team (OT, SLP) in developing activities related to her goals.

COMPASS as a Wrap-Around Model

COMPASS considers the child's current services and supports and aims to improve the efficacy of those services through a dynamic and iterative process rather than replacing them. In the early 1990s, the COMPASS framework was used as a process for creating a single and coordinated plan of intervention. It bridged services and supports that came from different agencies and providers, such as those from home- and community-based waiver programs for adults and students and from public schools and other adult programs, including supported employment. The need for a wrap-around model is just as necessary today as it was 20 years ago. Today, outside of their school program, students with autism receive between four and six additional types of different treatments and services provided by different professionals (Ruble & McGrew, 2007; Thomas et al., 2006). Although it is good that parents are accessing a variety of services, the unplanned interplay of interventions from multiple providers can also create problems. First, the research support from many of the interventions used is limited. And second, some providers have different treatment goals that are not coordinated with the treatment plans produced by other service providers. These differing teaching strategies and objectives may dampen outcomes. Thus, the need for single, integrated, and coordinated plans of intervention is greater than ever.