FOREWORD

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I am a life-long learner. Each day I learn new pieces of information – some important, others fascinating, and a small number trivial. For example, if you drop your cellphone in water, it is best not to try to power it on while it is still wet. If you are interested in understanding the relationship between music and math, you can study Bach. And if you run out of toothpaste, baking powder is a good replacement.

Underlying most of these life lessons, as well as many others, is the ability to problem solve. In fact, from one perspective, we can view our lives as a series of problems that we must solve. I don't think this is a pessimistic view of life, but rather an acceptance of the many challenges that come our way daily.

We start our day with problems. You get up in the morning planning to wear a certain shirt, but it is not in the closet. You find another shirt. You go to put on a specific pair of shoes, but can only find the left one. So you search until you find the matching shoe under your bed. You head to the kitchen for a quick breakfast; oatmeal sounds good. But there is no oatmeal. You settle for a granola bar. As you are leaving your house, you reach for your keys. They are always on the hook by the door leading to the garage, but this morning they are not. Somehow they have ended up on the bathroom counter. When you arrive at work, a colleague asks about your morning. You reply that it was ordinary – *and that is because you were able to quickly and automatically solve each problem you encountered.*

Many individuals, including many with autism spectrum disorders (ASD), do not seem to inherently have problem-solving skills and, as a result, struggle with the everyday activities of life – finding a comb, deciding what to do on the weekend, planning how to afford that new television that seems out of reach on your budget, and so forth. The lack of problem-solving skills or having inefficient problem-solving skills affects your quality of life and can act as barriers to developing relationships, completing tasks, seeking help when needed, and getting and keeping a job.

Kerry Mataya and Penney Owens, recognizing the complexity of life's problems and the challenges that learners on the spectrum experience in this area, have created a problem-solving rubric and curriculum that I can only refer to as brilliant! It is elegant in its simplicity and

rich in its breadth and depth. It is applicable to young and old alike and is easily generalized to most situations.

Several years ago, I learned that Kerry Mataya was a genius, and when she partners with people, such as Penney Owens, it is likely that her partners are gifted also. Kerry and Penney have used this model successfully with the myriad learners on the spectrum whom they have supported in home, school, and community settings. This common sense approach – an evidence-based antecedent-based intervention – teaches problem-solving in a manner that supports learners with ASD to reach their limitless potential.

Brenda Smith Myles, PhD

INTRODUCTION

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The last 10 minutes of the boys' social skills group for 10- to 12-year-olds is always devoted to unstructured activities. The boys are encouraged to do something with a peer, but they can play alone, if they wish. Raj elected to play a game on the iPad he had tucked into his backpack. One of the newest boys in the group, Luke, was sitting alone and was obviously unhappy.

As I sat with him and listened as Luke described how unfair it was that Raj was playing on an electronic device and he was not, I knew we needed to discuss a better way to problem solve. Instead of letting the problem go or talking it out with me, he continued to perseverate on the problem rather than focusing on a solution. In his mind, there was no room for resolution.

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As an autism consultant, I have worked with students in a variety of settings and situations – from after-school social skills groups, life skills planning, and IEP preparation and participation, to summer drama, sports, and overnight camps. Regardless of the setting, problem-solving is a persistent challenge among students with autism spectrum disorders (ASD), even those who are otherwise high functioning.

Problem-solving is fundamental to effective communication and social interaction; therefore, strengthening these skills will increase success in community activities, long-term relationships, employment, and overall independent living.

Research has shown that individuals with ASD have deficits in planning, abstract problem-solving, and multitasking (Hill, 2004). Moreover, they have difficulty applying knowledge and skills across settings and integrating learned material into real life. That is, although they may be able to memorize facts and information, they often do not recall and apply the information when needed (Collucci, 2011; Moore, 2002; Myles & Southwick, 2005).

To further complicate their issues related to the ability to problem solve using abstract reasoning, individuals with ASD have difficulty identifying and forming concepts (Minshew, Meyer, & Goldstein, 2002). Temple Grandin (1999), a well-known author with ASD, explains

how, in order to form concepts, she sorts pictures into categories similar to computer files. To form the concept of orange, for example, she sees many different orange objects, such as oranges, pumpkins, orange juice, and marmalade.

There is an abundance of resources in the area of social skills for individuals with ASD, but significantly fewer address problem-solving. I developed the Problem-Solving Chart to help fill this void. The Problem-Solving Chart teaches how to effectively communicate and interact with others. The strategy has worked in my practice for several years with many individuals with high-functioning ASD, from kindergarten through adulthood. In addition, many teachers and therapists have utilized the chart in their schools and social groups with positive results.

Teachers and parents who have used the Problem-Solving Chart in classrooms and homes have reported an increase in students' self-advocacy skills. Additionally, when students have been successful in talking out a problem, they are more likely to repeat the strategy in other situations – and are likely to gain self-confidence with each successful exchange. When they finally learn to "let it go and move on" – an important life skill for everyone – their lives are changed. They no longer have to hold on to negative feelings for months and years, often leading to frustration, anger, and even suicide.

How This Book Can Help

The objective of this book is to teach you how to integrate the Problem-Solving Chart into classrooms, homes, and social skills groups to help individuals with ASD to learn to problem solve effectively. The strategy is considered an evidence-based strategy (EBP) under the category of *antecedent-based interventions* (Centers for Medicare and Medicaid Services, 2009; National Autism Center, 2009; National Professional Development Center on Autism Spectrum Disorders, n.d.). That is, it is designed to be put in place prior to a behavior to prevent its occurrence. In addition, it has social validity. Problem-solving is a skill that is used across the lifespan in all environments.

I hope you find the Problem-Solving Chart to be helpful. While the challenges of teaching problem-solving may seem daunting, the barriers can be overcome. You may not see changes overnight, but keep at it. Through repetition of vocabulary and a simple protocol for problem-solving, you will succeed and, best of all, the child or student will benefit immensely now and in the future.

Best of luck,

Kerry Mataya

NOTE: Reproducing and laminating the chart (see p. 54) and using a dry-erase marker allows you to use the chart multiple times.

What Is the Problem-Solving Chart?

Many individuals with autism spectrum disorders (ASD) have difficulty coming up with effective ways to solve problems.

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TJ, a high school student who has ASD, was assigned the role of leader for a small-group activity. TJ planned the group project and assigned tasks. She was not pleased with the work of the other team members; nonetheless, the team received an A on the project.

The teacher later complimented TJ on her success as a team leader and asked her what strategies she had used to help the team to produce such good work. TJ responded, "Thank you. It was easy. I just told the team that they were lazy and stupid, and I fired them. Then I did the project the right way myself."

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Going through life followed by a trail of unresolved difficulties can make every day and every experience a challenge. The list on page 4 shows behaviors that may indicate somebody does not have the necessary problem-solving skills.

Common Indicators of Deficits in Problem-Solving Skills

- Being bothered by a problem for extended periods of time
- Lashing out at others
- Remembering an unresolved problem for years and bringing it up often
- Experiencing a cycle of negative thoughts
- Difficulty maintaining positive interactions
- Unable to broaden focus to include all relevant facts
- Unable to identify relevant parts of problem situations
- Focusing on some aspect of a situation to the exclusion of all else
- Attaching extreme emotional connotations to seemingly minor events
- Difficulty asking for help
- Unwillingness to listen to other persons' problems and concerns
- Difficulty expressing opinions using neutral tone and body language
- Difficulty losing in game situation
- Unwillingness to try potential strategies that may resolve the problem

The following describes the case of Davis, a fourth grader, who needed assistance with problem-solving skills. Davis has a diagnosis of high-functioning ASD.

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Davis was usually able to complete his homework assignments within 30 minutes and with very little "drama." One evening while doing homework at the kitchen table, Davis hesitated on each step of his assignments. He argued with his mother about the instructions and announced that his homework was "not fair." He became increasingly upset and began to cry and yell. In the middle of his homework crisis, he screamed, "It is going to storm tomorrow!"

This apparently unrelated outburst made his mother realize that Davis was distressed by the forecast of a severe storm and that, as a result, even a routine homework assignment had become overwhelming to him. Davis was not able to sort through the challenges that he was facing. He had not told her about his fear, nor had he sought reassurance.

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As is true with many with ASD, Davis needed a strategy for problem-solving – to help him recognize problems, identify a solution, and move on.

Much has been written about the characteristics of autism – deficits in theory of mind, emotional recognition, and executive functioning – that may underlie the social challenges experienced by individuals with ASD. That is, a combination of executive functioning deficits, including difficulties with organization, cognitive flexibility, inhibition, prioritizing, multitasking, monitoring, and planning (Abendroth & Damico, 2009; Crane, Pring, Ryder, & Hermelin, 2011; Hill, 2004; Hill & Bird, 2006; Geurts, Verté, Oosterlaan, Roéyers, & Sergeant, 2004; Ostryn & Wolfe, 2011). With these difficulties in understanding their social world along with deficits in executive functioning, it is not surprising that social conflicts are particularly difficult for individuals on the autism spectrum to solve.

The Problem-Solving Chart is an instructional tool that helps address these underlying deficits. The chart provides a concrete structure for the process of problem-solving based on the premise that it is important to see the "big picture" of the situation and identify specific courses of action that may be taken to solve it. Due to their rigid thinking, tendency toward obsessive thought, and low frustration tolerance (Frith, 2004; Kim, Szatmari, Bryson, Streiner, & Wilson, 2000), individuals with ASD often get stuck focusing on the problem itself and not on a solution.

In order to develop a strategy for teaching how to problem-solve, it is first necessary to review the problem-solving process. Steps to problem-solving generally include the following:

1. **Identify the problem**
2. **Determine possible solutions**
3. **Identify consequences**
4. **Develop a plan of action with the most appropriate choice**
5. **Evaluate your choice**

It is important that individuals with ASD learn to visualize the whole problem-solving structure in order to make a decision that works for a given situation. The word "visualize" is significant here. Most people with ASD process information more effectively when it is presented in a visual rather than an auditory manner. The Problem-Solving Chart is a visual support that facilitates understanding of the whole problem-solving structure – the problem and the possible solutions. When using the chart, if possible, color the three positive and most effective options (Seek Help From Adult, Talk It Out and Compromise, and Let It Go and Move On) blue and color the fourth (Let It Bother You) red.

Basic Problem-Solving Chart

Talk It Out and Compromise

Seek Help From Adult

Problem

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Let It Go and Move On

Let It Bother You
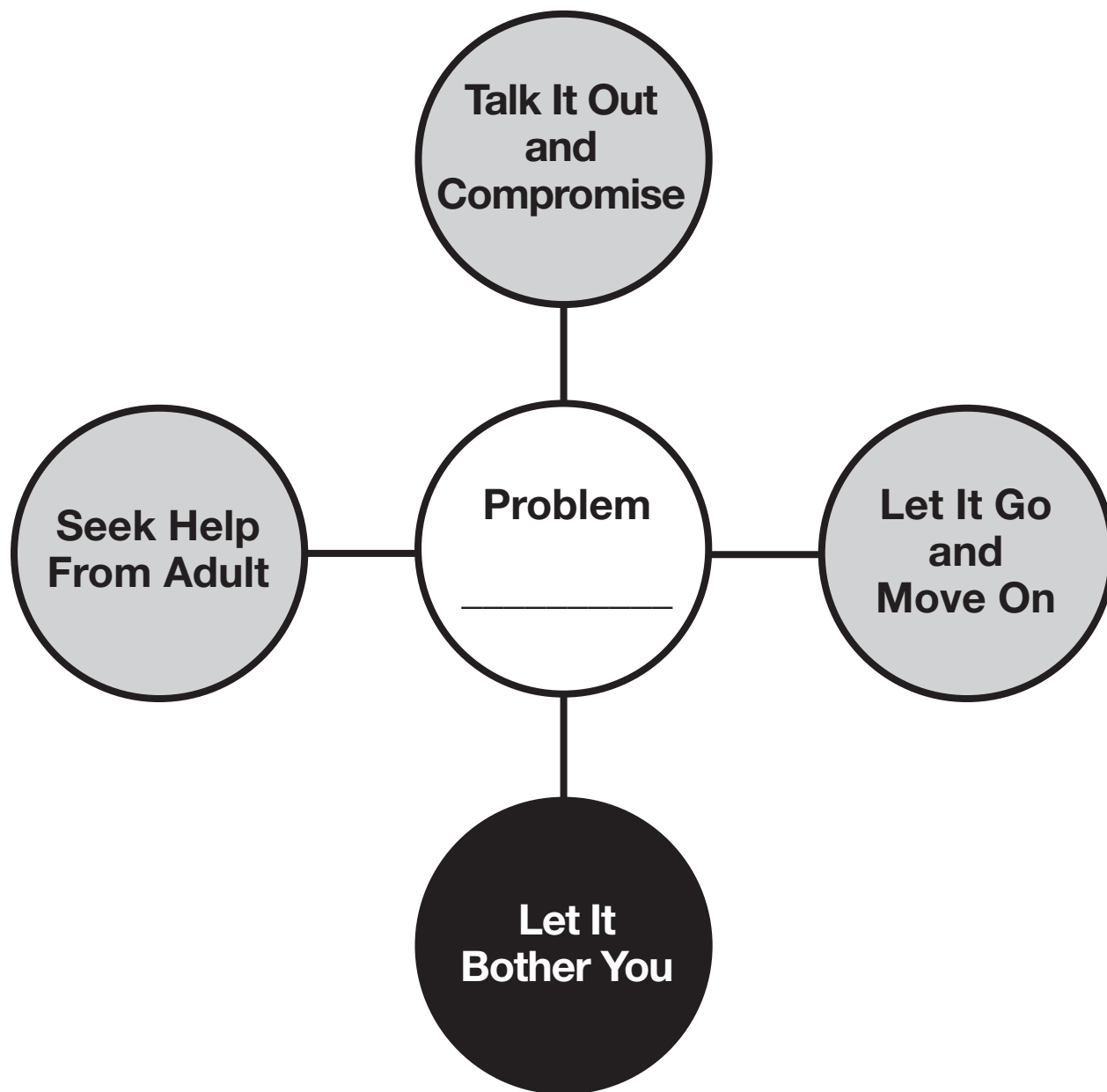
Since what is considered an appropriate response will vary with each situation, the Problem-Solving Chart is set up as a choice board, and the strategies that make up the process are not designed to be used in a particular order. However, while learning to use the chart, many students* start at Seek Help From Adult and then rotate clockwise through the other strategies: Talk It Out and Compromise, Let It Go and Move On, and Let It Bother You.

*While the Problem-Solving Chart may be used across a wide age range, including adulthood, throughout this book we use the term *student* to denote the person who is learning this problem-solving method. Also, we alternate between the pronouns "he" and "she" when referring to individual students.

Let's look at each strategy.

Seek Help From Adult

A trusted adult can offer a different perspective on the situation, and perhaps even a solution to the problem. Another person's perspective can be helpful for anyone who is stuck in a situation. Seeking help is a particularly important strategy, especially for young students, until they are able to independently Talk It Out and Compromise or Let It Go and Move On.

Talk It Out and Compromise

If the problem involves another person, talking it out can help both parties feel they are being heard and understood. A compromise can turn a problem into a win-win situation for both parties.

Let It Go and Move On

There are many times in life when things don't go our way and the only acceptable solution is to let it go and move on. This is a life skill that everyone needs to learn, and it is often a helpful solution if other strategies have been tried without resolution, or if the problem involves something that cannot be changed.

Let It Bother You

It is common for a student with high-functioning ASD to get stuck on a problem long after others have moved on (Ritvo et al., 2008). This is not an acceptable long-term solution because it creates distress for the student and does not allow him to focus on other things. The option to Let It Bother You is included on the chart to help the student to understand that being stuck is a choice but that he can select – and is strongly encouraged to – from more productive alternatives.

In the next chapter, we will look at how to put the Problem-Solving Chart into practice.