BRIEF®2

Behavior Rating Inventory of Executive Function®, Second Edition

Generated by **PAR.iConnect**

Self-Report Form Interpretive Report

by Peter K. Isquith, PhD, Gerard A. Gioia, PhD, Steven C. Guy, PhD, Lauren Kenworthy, PhD, and PAR Staff

Client name :	Sample Client
Client ID :	111
Gender :	Male
Age :	16
Grade :	10th
Test date :	12/28/2015

This report is intended for use by qualified professionals only and is not to be shared with the examinee or any other unqualified persons.

Version: 2.4.0.0

Validity

Before examining the Behavior Rating Inventory of Executive Function®, Second Edition (BRIEF®2) Self-Report profile, it is essential to carefully consider the validity of the data provided. The inherent nature of rating scales carries potential biases to the ratings and scores. The first step is to examine the protocol for missing data. With a valid number of responses, the BRIEF2 Self-Report Inconsistency, Negativity, and Infrequency scales provide additional information about the validity of the protocol.

Missing items

Sample completed 55 of a possible 55 BRIEF2 Self-Report items. For reference purposes, the summary table for each scale indicates Sample's actual rating for each item. There are no missing responses in the protocol, providing a complete data set for interpretation.

Inconsistency

Scores on the Inconsistency scale indicate the extent to which Sample answered similar BRIEF2 Self-Report items in an inconsistent manner relative to the clinical samples. For example, a high Inconsistency score might be associated with the combination of marking Never in response to the item "I have angry outbursts" and Often in response to the item "I have outbursts for little reason." Item pairs comprising the Inconsistency scale are shown in the following summary table. *T* scores are not generated for the Inconsistency scale. Instead, the absolute value of the raw difference scores for the 8 paired items are summed, and the total difference score (i.e., the Inconsistency score) is compared with the cumulative percentile of similar scores in the combined clinical sample and used to classify the protocol as either Acceptable, Questionable, or Inconsistent. The Inconsistency score of 1 is within the Acceptable range, suggesting that Sample was reasonably consistent in his responses.

Item #	Inconsistency items	Response	
1	I have trouble sitting still	Sometimes	0
12	I have a short attention span	Sometimes	
6	I have angry outbursts	Never	0
14	I have outbursts for little reason	Never	
22	I get upset over small events	Sometimes	0
27	I overreact	Sometimes	
23	I have good ideas but do not get the job done (I lack follow-through)	Sometimes	0
52	I have trouble carrying out the things that are needed to reach a goal (such as saving money for special items or studying to get good grades)	Sometimes	
28	I have trouble remembering things, even for a few minutes (such as directions or phone numbers)	Sometimes	1
41	I forget instructions easily	Never	
33	I am slower than others when completing my work	Sometimes	0
42	It takes me longer to complete my work	Sometimes	
44	I have problems completing my work	Sometimes	0
55	I have problems finishing long-term projects (such as papers or book reports)	Sometimes	
45	I have trouble thinking of a different way to solve a problem when I get stuck	Never	0
53	I have difficulty coming up with different ways of solving a problem	Never	

Negativity

The Negativity scale measures the extent to which the respondent answered selected BRIEF2 Self-Report items in an unusually negative manner relative to the clinical sample. Items comprising the Negativity scale are shown in the following summary table. A higher raw score on this scale indicates a greater degree of negativity, with less than 1% of respondents scoring 5 or greater in the clinical sample. As with the Inconsistency scale, *T* scores are not generated for this scale. The Negativity score of 0 is within the acceptable range, suggesting that Sample's view of himself is not overly negative and that the BRIEF2 Self-Report protocol is likely to be valid.

Item #	Negativity items	Response
16	I get out of control more than my friends	Sometimes
19	I have trouble with jobs or tasks that have more than one step	Sometimes
20	I don't know when my actions bother others	Sometimes
24	I talk at the wrong time	Sometimes
30	I have problems waiting my turn	Sometimes
43	My eyes fill with tears quickly over little things	Sometimes
50	I am unaware of my behavior when I am in a group	Sometimes
51	I have trouble changing from one activity to another	Sometimes

Infrequency

The Infrequency scale measures the extent to which the respondent endorsed items in an atypical fashion. The scale includes three items that are likely to be endorsed in one direction by most respondents. Marking Sometimes or Often to any of the items is highly unusual, even for adolescents with severe cognitive impairment.

Items comprising the Infrequency scale are shown in the following summary table. A higher raw score on this scale indicates a greater degree of infrequency, with less than 1% of respondents scoring 1 or greater in the standardization sample. As with the Inconsistency and Negativity scales, *T* scores are not generated for this scale. The Infrequency score of 0 is within the acceptable range, reducing the likelihood of an atypical response pattern.

Item #	Infrequency items	Response
18	I forget my name	Never
36	I have trouble counting to three	Never
54	I cannot find the front door of my home	Never

End of Validity Section

Introduction

The BRIEF®2 Self-Report Form is a 55-item standardized self-report measure developed to capture older children's and adolescents' (aged 11 to 18 years with a fifth-grade or better reading level) views of their own executive functions, or self-regulation, in their everyday environment. The BRIEF2 Self-Report Form was intended to complement parent and teacher ratings of the adolescent's executive function on the BRIEF2 Parent and Teacher forms to meet the need for capturing adolescent's views of their self-regulatory strengths and weaknesses. In addition to a more comprehensive assessment, an understanding of the adolescent's perspective with respect to difficulties in self-control is critical when considering intervention strategies. Explicitly assessing, valuing, and providing feedback about his viewpoint can facilitate rapport and a collaborative working relationship, which in turn can serve as a starting point for interventions. Indeed, the adolescent's level of self-understanding and awareness becomes an important factor in gauging the amount of support he will require. For those who possess a high awareness of their executive and regulatory difficulties and who are eager to ameliorate their struggles, the intervention process can be facilitated. For those who lack awareness or acceptance, a much higher degree of external support may be required. While response patterns on self-report behavior rating scales such as the BRIEF2 Self-Report Form can range from strong agreement with other informants to aggressive denial of any problems, rich clinical information can be gleaned from directly assessing their opinions.

As is the case for all measures, the BRIEF2 Self-Report Form should not be used in isolation as a diagnostic tool. Instead, it should be used in conjunction with other sources of information, including detailed history, BRIEF2 parent and teacher ratings, clinical interviews, performance test results, and, when possible, direct observation in the natural setting. By examining converging evidence, the clinician can confidently arrive at a valid diagnosis and, most importantly, an effective treatment plan. A thorough understanding of the BRIEF2 Self-Report Form, including its development and its psychometric properties, is a prerequisite to interpretation. As with any clinical method or procedure, appropriate training and clinical supervision is necessary to ensure competent use of the BRIEF2 Self-Report Form.

This report is confidential and is intended for use by qualified professionals only. This report should not be released to the parents or teachers of the adolescent being evaluated or directly to the adolescent. If a summary of the results specifically written for the responding adolescent is desired and clinically appropriate, the BRIEF2 Self-Report Form Adolescent Feedback Report can be generated and given to the

adolescent, preferably in the context of verbal feedback and a review of the Adolescent Feedback Report with the clinician.

T scores are used to interpret the adolescent's self-reported profile of executive functioning on the BRIEF2 Self-Report Form. These scores are linear transformations of the raw scale scores (M = 50, SD = 10). *T* scores provide information about an individual's scores relative to the scores of respondents in the standardization sample. Percentiles, which are also presented in this report, represent the percentage of children in the standardization sample with scores at or below the same value. For all BRIEF2 clinical scales and indexes, *T* scores from 60 to 64 are considered mildly elevated, and *T* scores from 65 to 69 are considered potentially clinically elevated. *T* scores at or above 70 are considered clinically elevated.

In the process of interpreting the BRIEF2 Self-Report Form, review of individual items within each scale can yield useful information for understanding the specific nature of the adolescent's elevated score on any given clinical scale. Placing too much interpretive significance on individual items is not recommended, however, due to lower reliability of individual items relative to the scales and indexes.

Overview

Sample completed the Self-Report Form of the Behavior Rating Inventory of Executive Function, Second Edition (BRIEF2) on 12/28/2015. There are no missing item responses in the protocol. Responses are reasonably consistent. The respondent's ratings of his own self-regulation do not appear overly negative. There were no atypical responses to infrequently endorsed items. In the context of these validity considerations, Sample's ratings of his everyday executive function suggest some areas of concern. The overall index, the GEC, was mildly elevated (GEC T = 62, %ile = 84).

The CRI is potentially clinically elevated (T = 66, %ile = 93), but the BRI (T = 54, %ile = 73) and ERI (T = 57, %ile = 78) are within the average range.

Within these summary indicators, all of the individual scales are valid. One or more of the individual BRIEF2 Self-Report scales were at least mildly elevated, suggesting that Sample reports difficulty with some aspects of executive function. Concerns are noted on the following behaviors: get going on tasks, activities, and problem-solving approaches, sustain working memory and plan and organize his approach to problem solving appropriately. Sample describes his abilities on the following behaviors as not problematic: resist impulses, be aware of his functioning in social settings, adjust well to changes in environment, people, plans, or demands and react to events appropriately.
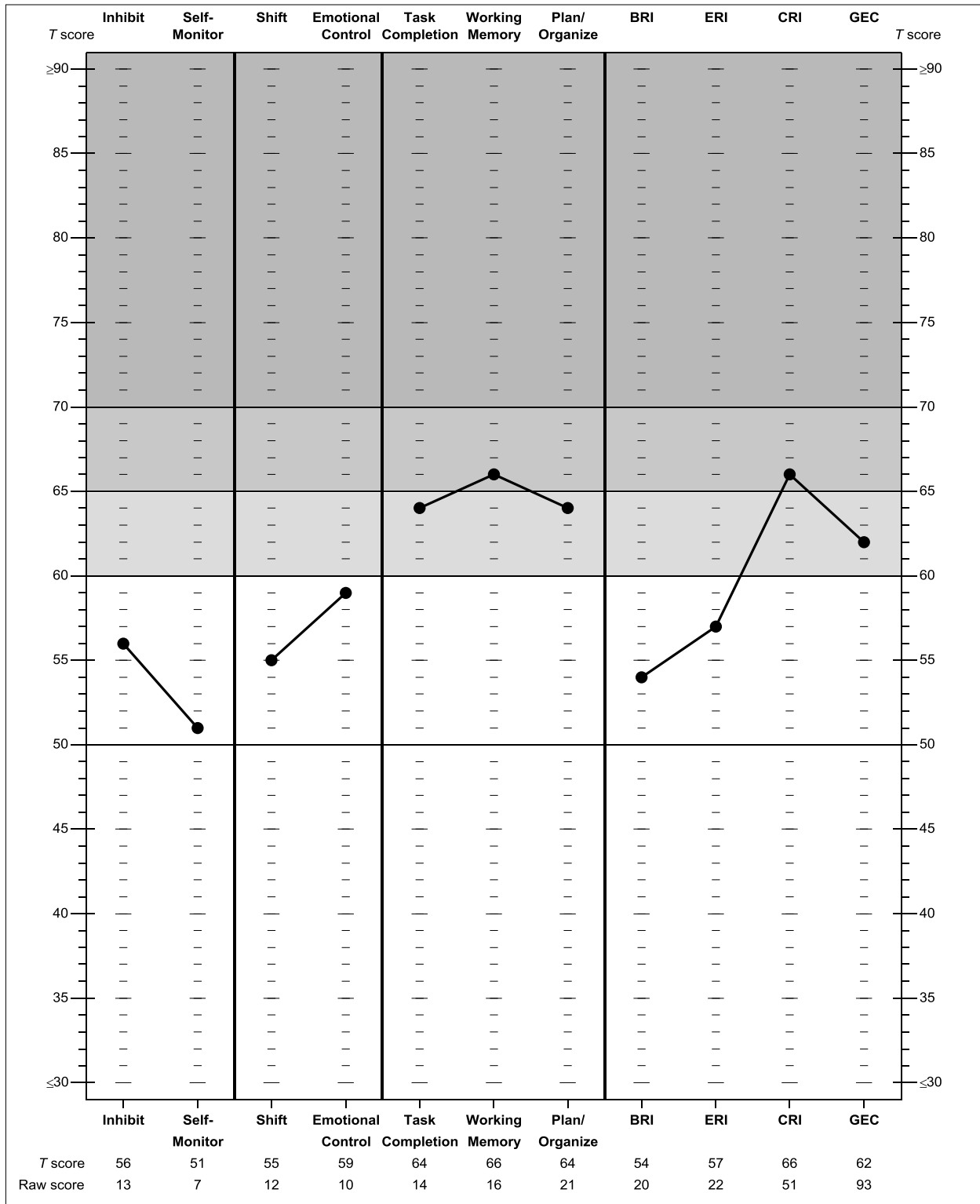
BRIEF®2 Self-Report Score Summary Table

Index/Scale	Raw score	*T* score	Percentile	90% C.I.
Inhibit	13	56	77	50-62
Self-Monitor	7	51	71	44-58
Behavior Regulation Index (BRI)	20	54	73	49-59
Shift	12	55	73	49-61
Emotional Control	10	59	85	52-66
Emotion Regulation Index (ERI)	22	57	78	52-62
Task-Completion	14	64	91	58-70
Working Memory	16	66	94	60-72
Plan/Organize	21	64	92	59-69
Cognitive Regulation Index (CRI)	51	66	93	63-69
Global Executive Composite (GEC)	93	62	84	59-65

Validity scale	Raw score	Percentile	Protocol classification
Negativity	0	≤ 98	Acceptable
Inconsistency	1	≤ 98	Acceptable
Infrequency	0	99	Acceptable

Note: Male, age-specific norms have been used to generate this profile.

For additional normative information, refer to Appendix C in the BRIEF®2 Professional Manual.

Profile of BRIEF®2 Self-Report *T* Scores

	Inhibit	Self-Monitor	Shift	Emotional Control	Task Completion	Working Memory	Plan/Organize	BRI	ERI	CRI	GEC
T score	56	51	55	59	64	66	64	54	57	66	62
Raw score	13	7	12	10	14	16	21	20	22	51	93

Note: Male, age-specific norms have been used to generate this profile.
For additional normative information, refer to Appendix C in the BRIEF®2 Professional Manual.

Clinical Scales

The BRIEF2 Self-Report clinical scales measure the extent to which Sample reports problems with different behaviors related to the seven domains of executive functioning captured within the BRIEF2 Self-Report Form. The following sections describe the scores obtained on the clinical scales and the suggested interpretation for each individual clinical scale.

Inhibit

The Inhibit scale assesses inhibitory control and impulsivity. This can be described as the ability to resist impulses and the ability to stop one's behavior at the appropriate time. Sample's T score of 56 (%ile = 77) on this scale is within the expected range compared with his peers. This suggests that he views himself as typically able to resist impulses, to consider consequences before acting, and generally to be in control of himself.

Item #	Inhibit items	Response
1	I have trouble sitting still	Sometimes
10	I am impulsive (I don't think before doing)	Never
16	I get out of control more than my friends	Sometimes
24	I talk at the wrong time	Sometimes
30	I have problems waiting my turn	Sometimes
39	I interrupt others	Sometimes
48	I think or talk out loud when working	Never
49	I don't think of consequences before acting	Never

Self-Monitor

The Self-Monitor scale assesses awareness of the impact of one's behavior on other people and outcomes. It captures the degree to which a child or adolescent perceives himself as aware of the effect that his behavior has on others and how his behavior compares with standards or expectations for behavior. Sample's score on the Self-Monitor scale is within normal limits, suggesting that he perceives himself as appropriately aware of his functioning in social settings ($T = 51$, %ile = 71).

Item #	Self-Monitor items	Response
4	I am not aware of how my behavior affects or bothers others	Never
13	I have a poor understanding of my own strengths and weaknesses (I try things that are too difficult or too easy for me)	Never

Item #	Self-Monitor items	Response
20	I don't know when my actions bother others	Sometimes
26	I don't notice when my behavior causes negative reactions until it is too late	Never
50	I am unaware of my behavior when I am in a group	Sometimes

Shift

The Shift scale assesses the ability to move freely from one situation, activity, or aspect of a problem to another as the circumstances demand. Key aspects of shifting include the ability to make transitions, tolerate change, problem solve flexibly, switch or alternate attention between tasks, and change focus from one mindset or topic to another. Mild deficits may compromise efficiency of problem solving and result in a tendency to get stuck or focused on a topic or problem, whereas more severe difficulties can be reflected in perseverative behaviors and marked resistance to change. Sample's score on the Shift scale is within the average range as compared with peers (T = 55, %ile = 73). This suggests that he views himself as able to adjust to changes in environment, people, plans, or demands well.

Item #	Shift items	Response
2	I have trouble accepting a different way to solve a problem with things such as schoolwork, friends, or tasks	Sometimes
11	I have trouble getting used to new situations (such as classes, groups, or friends)	Sometimes
17	I get stuck on one topic or activity	Never
31	It bothers me when I have to deal with changes (such as routines, foods, or places)	Sometimes
40	I try the same approach to a problem over and over even when it does not work (I get stuck)	Never
45	I have trouble thinking of a different way to solve a problem when I get stuck	Never
51	I have trouble changing from one activity to another	Sometimes
53	I have difficulty coming up with different ways of solving a problem	Never

Emotional Control

The Emotional Control scale measures the impact of executive function problems on emotional expression and assesses an individual's ability to modulate or control his or her emotional responses. Sample's score on the Emotional Control scale falls within the average range compared with peers ($T = 59$, %ile = 85). This suggests that Sample experiences himself as having appropriate ability to modulate or regulate emotions overall. Sample generally described himself as reacting to events appropriately: without outbursts, sudden or frequent mood changes, or excessive periods of emotional upset.

Item #	Emotional Control items	Response
6	I have angry outbursts	Never
14	I have outbursts for little reason	Never
22	I get upset over small events	Sometimes
27	I overreact	Sometimes
34	I am easily overwhelmed	Sometimes
43	My eyes fill with tears quickly over little things	Sometimes

Task Completion

The Task Completion scale reflects the ability to finish or complete tasks appropriately and/or in a timely manner, emphasizing difficulties with the production of work or performance output. Although "task completion" is not commonly considered an executive function, it represents the outcome of other executive difficulties including working memory, planning, organization, and inhibitory control. Sample's score on the Task Completion scale is mildly elevated compared with peers ($T = 64$, %ile = 91). This suggests that Sample may have difficulties finishing homework or other projects in a timely fashion. Examination of other scales may reveal potential sources of difficulty completing tasks, including struggles with working memory, planning, and organization or with the ability to inhibit task-irrelevant actions.

Item #	Task Completion items	Response
23	I have good ideas but do not get the job done (I lack	Sometimes

Item #	Task Completion items	Response
	follow-through)	
25	I have trouble finishing tasks (such as chores or homework)	Sometimes
33	I am slower than others when completing my work	Sometimes
38	I have difficulty finishing a task on my own	Sometimes
42	It takes me longer to complete my work	Sometimes
44	I have problems completing my work	Sometimes
55	I have problems finishing long-term projects (such as papers or book reports)	Sometimes

Working Memory

The Working Memory scale measures the capacity to hold information in mind for the purpose of completing a task, encoding information, or generating goals, plans, and sequential steps to achieving goals. Working memory is essential to carrying out multistep activities, completing mental manipulations such as mental arithmetic, and following complex instructions. Sample's score on the Working Memory scale is potentially clinically elevated compared with peers (T = 66, %ile = 94). This suggests that Sample experiences substantial difficulty holding an appropriate amount of information in mind or in active memory for further processing, encoding, and/or mental manipulation. Further, Sample's score suggests difficulties sustaining working memory, which has a negative impact on his ability to remain attentive and focused for appropriate lengths of time. Caregivers or teachers often describe children or adolescents with fragile or limited working memory as having trouble remembering things (e.g., phone numbers or instructions) even for a few seconds, losing track of what they are doing as they work, or forgetting what they are supposed to retrieve when sent on an errand. Such individuals may miss information that exceeds their working memory capacity such as instructions for an assignment. Clinical evaluators may observe that Sample cannot remember the rules governing a specific task (even as they work on that task), rehearses information repeatedly, loses track of what responses he has already given on a task that requires multiple answers, and struggles with mental manipulation tasks (e.g., repeating digits in reverse order) or solving arithmetic problems that are orally presented without writing down figures.

Appropriate working memory is necessary to sustaining performance and attention. Parents of children and adolescents with difficulties in this domain often report that they cannot stick to an activity for an age-appropriate amount of time and frequently switch or fail to complete tasks. Although working memory and the ability to sustain it have been conceptualized as distinct entities, behavioral outcomes of these two domains are often difficult to distinguish.

Item #	Working Memory items	Response
3	When I am given three things to do, I remember only the first or last	Often
12	I have a short attention span	Sometimes
19	I have trouble with jobs or tasks that have more than one step	Sometimes
28	I have trouble remembering things, even for a few minutes (such as directions or phone numbers)	Sometimes
29	I make careless errors	Often
32	I forget to hand in my homework, even when it's completed	Sometimes
41	I forget instructions easily	Never
46	I am absentminded (forgetful)	Never

Plan/Organize

The Plan/Organize scale measures perceived ability to manage current and future-oriented task demands. The scale has two components: Plan and Organize. The Plan component captures the ability to anticipate future events, to set goals, and to develop appropriate sequential steps ahead of time to carry out a task or activity. The Organize component refers to the ability to bring order to information and to appreciate main ideas or key concepts when learning or communicating information. Sample's score on the Plan/Organize scale is mildly elevated as compared with peers (T = 64, %ile = 92). This suggests that Sample may have some difficulty with planning and organizing information, which has a negative impact on his approach to problem solving.

Planning involves developing a goal or end state and then strategically determining the most effective method or steps to attain that goal. Evaluators can observe planning when a student is given a problem requiring multiple steps (e.g., assembling a puzzle or completing a maze). Sample may underestimate the time required to complete tasks or the level of difficulty inherent in a task. He may often wait until the last minute to begin a long-term project or assignment for school, and he may have trouble carrying out the actions needed to reach his goals.

Organization involves the ability to bring order to oral and written expression and to understand the main points expressed in presentations or written material. Organization also has a clerical component that is demonstrated, for example, in the ability to efficiently scan a visual array or to keep track of a homework assignment. Sample may approach tasks in a haphazard fashion, getting caught up in the details and missing the big picture. He may have good ideas that he fails to express on tests and written assignments. He may often feel overwhelmed by large amounts of information and may have difficulty retrieving material spontaneously or in response to open-ended questions. He may, however, exhibit better performance with recognition (multiple-choice) questions.

Item #	Plan/Organize items	Response
5	My work is sloppy	Sometimes

Item #	Plan/Organize items	Response
7	I don't plan ahead for school assignments	Sometimes
8	I have difficulty finding my things (such as clothes, glasses, shoes, books, or pencils)	Often
9	I have problems getting started on my own	Often
15	I get caught up in details and miss the main idea	Sometimes
21	I have problems organizing my written work	Sometimes
35	I don't plan ahead for future activities	Sometimes
37	I don't think ahead about possible problems	Never
47	I have trouble prioritizing (ordering) my activities	Sometimes
52	I have trouble carrying out the things that are needed to reach a goal (such as saving money for special items or studying to get good grades)	Sometimes

Summary Indexes and Global Executive Composite

Behavior Regulation, Emotion Regulation, and Cognitive Regulation Indexes

The Behavior Regulation Index (BRI) captures the adolescent's ability to regulate and monitor behavior effectively. It is composed of the Inhibit and Self-Monitor scales. Appropriate behavior regulation is likely to be a precursor to appropriate cognitive regulation. It enables the cognitive regulatory processes to successfully guide active, systematic problem solving and more generally supports appropriate self-regulation.

The Emotion Regulation Index (ERI) represents an adolescent's ability to regulate emotional responses and to shift set or adjust to changes in environment, people, plans, or demands. It is composed of the Shift and Emotional Control scales. Appropriate emotion regulation and flexibility are precursors to effective cognitive regulation.

The Cognitive Regulation Index (CRI) reflects an adolescent's ability to control and manage cognitive processes and to problem solve effectively. It is composed of the Task Completion, Working Memory, and Plan/Organize scales and relates directly to the ability to actively problem solve in a variety of contexts and to complete tasks such as schoolwork.

Examination of the indexes reveals that the CRI is potentially clinically elevated (T = 66, %ile = 93), but the BRI (T = 54, %ile = 73) and ERI (T = 57, %ile = 78) are within the average range. This suggests broadly intact inhibitory control, emotional modulation, ability to shift set, and ability to self-monitor behavior but also indicates difficulties with one or more aspects of working memory, planning, organizing, or completing work.

Global Executive Composite

The Global Executive Composite (GEC) is an overarching summary score that incorporates all of the BRIEF2 Self-Report clinical scales. Although review of the BRI, ERI, CRI, and individual scale scores is strongly recommended for all BRIEF2 Self-Report Form profiles, the GEC can sometimes be useful as a summary measure. In this case, at least two summary indexes are substantially different, with T scores separated by 12 points or greater. Differences of this magnitude occurred less than 10% of the time in the normative sample. Thus, the GEC may not adequately reflect the overall profile. With this in mind, Sample's T score of 62 (%ile = 84) on the GEC is mildly elevated compared with the scores of his peers, suggesting some difficulty in one or more areas of executive function.

Executive Function Interventions

Ratings of Sample's everyday functioning revealed some areas of concern. Recommendations for interventions and accommodations are offered according to the identified concerns. While the efficacy of each intervention has not been empirically demonstrated, the majority are common interventions that are likely familiar to the intervention team. These recommendations are general and are intended here as suggestions or ideas that may be tailored to suit Sample's needs. As with any intervention, clinical judgment is paramount.

Task Completion

While the ability to complete tasks is not an executive function per se, it is one of the most common complaints among adolescents with executive function difficulties. Problems with planning, organizing, initiating, or sustaining working memory often interfere with getting schoolwork done, and task completion can be seen as an outcome of executive function difficulties.

External Structuring, Accommodations, and Modifications

Rule in or out basic skills deficits as cause for poor task completion: If a student is unable to complete tasks in school or to complete school-related tasks at home, it is important to ensure that the necessary cognitive and learning processes are intact. If the adolescent presents with difficulty completing tasks in the context of aversion to or difficulty with basic academic skills such as reading, writing, or calculating, it may be important to ensure that these basic skills are intact and that no learning or cognitive difficulties are present. Otherwise, these issues likely need to be addressed first or at least alongside the executive processes.

For many students who routinely do not complete tasks, the underlying self-regulatory functions may be responsible for, or at least contribute to, the difficulty. Problems with planning their assignments in general or specific tasks can make the tasks seem overwhelming. Organizational difficulties can interfere with efficient use of time and effective approaches to assignments. It is important to examine other areas of executive difficulty and to provide supports and accommodations if problems with organization or planning interfere with Sample's ability to keep pace with task demands.

Assess executive function strengths and weaknesses that could contribute to poor task completion: Students with intact cognitive and learning abilities who have difficulty completing tasks such as schoolwork may be experiencing problems in one or more of the underlying executive functions necessary to plan, organize, and sustain output. It is important to identify the relative weaknesses in executive functions for Sample and to implement supports, interventions, or accommodations to address these weaknesses.

Provide supervised, structured study period: A study period that is supervised by a designated teacher, special education teacher, or academic coach can provide a structured setting in which clear goals are set. Many adolescents who struggle to complete their schoolwork at home can benefit from such a supervised study period. The level of supervision and support required varies with each student, from assistance in defining and prioritizing assignments to cues to initiate or begin work to assistance remaining focused, organizing an approach to a task, or organizing thoughts for writing.

Student-Focused Interventions

Establish consistent daily study routine with executive function supports: Some adolescents can benefit from a set study or homework period at home. This can be established as a daily routine within the home for the student. Keeping the environment consistent, reasonably quiet, and free of distractions is important. Parental supervision can also be helpful to review tasks, help prioritize, set goals, and monitor completion of each task.

Apply success-oriented approach to task completion: Returning to success levels for each task can be a helpful starting point for students with difficulties completing work. This often means simplifying or shortening the task such that the student does not feel overwhelmed and can experience success. Once a starting level is determined, the length and complexity of tasks can be increased in stepwise fashion, with external supports provided as needed until the student feels competent and demonstrates success at each level of difficulty.

Establish supportive home–school communication: Home–school communication is often an important aide to help students stay on track with assignments. Some students fall behind in their work and then feel overwhelmed with what is required of them to catch up with expectations. Establishing regular communication about the nature of assignments and their due dates between the home and school environments can help avoid this situation and keep the student on track.

Provide explicit rewards for task completion: Some adolescents

benefit from clear rewards associated with completing tasks such as homework or other household activities. Particularly for students who do not find schoolwork or chores inherently rewarding, implementing a simple behavior plan can help develop better work habits, which leads to completed assignments. Rewards are best when they occur naturally, such as providing time for the adolescent to engage in a favorite activity. Consultation with a behavioral specialist can be helpful in designing such a plan.

Provide extra time for task completion: Some students need extra time to complete their work, including in-class assignments, tests, and homework. Some students perform best when they can work on tests or independent projects in a supervised but more isolated setting, such as a resource room.

Working Memory

Working memory is the capacity to hold information in mind, typically enabling one to think about problems, to focus on a goal, to carry out multistep activities, to complete multistep problems, or to follow complex instructions. Students with working memory difficulties may have problems remembering things even for a few seconds. They may lose track of what they are doing, forget what they went to get, or struggle with mental problem solving. Many students with problems sustaining working memory are viewed as inattentive and as having poor concentration.

External Structuring, Accommodations, and Modifications

Preteach the big picture to provide meaningful context: Preteaching the general framework of new information and guiding attention to listen for important points can be an essential tool for circumventing working memory difficulties when they interfere with the ability to capture new material. Sample might meet with a resource teacher or aide at the outset of each day and preview the gist of what will be learned that day. Information may need to be preorganized for Sample to reduce demands for working memory and to make encoding more efficient at the outset.

Establish direct eye contact with student: Establishing eye contact with Sample prior to giving essential instructions or new material will help ensure that he is ready to listen carefully. Adolescents with working memory difficulties often need to be alerted when essential material or instructions are being presented.

Manage rate of information flow: The rate of presentation for new material may need to be altered for Sample. He may need additional processing time or time to rehearse the information.

Manage quantity of information flow: An adolescent with working memory difficulties often needs tasks or information broken down into smaller steps or chunks. New information or instructions may need to be kept brief and to the point or repeated in concise fashion for Sample. Lengthy tasks, particularly those that Sample experiences as tedious or monotonous, should be avoided or interspersed with more frequent breaks or other, more engaging tasks. Sample might be

rewarded with a more stimulating activity such as computer instruction time for completing the more tedious task.

Write it Down: One way to reduce the burden on working memory is to provide the student with a hard copy of essential information such as facts, main ideas, or a list of steps for problem solving or an assignment. Providing an outline or set of notes at the start of class can alleviate working memory demands and allow the student to listen actively rather than trying to listen, hold information, and write it down in real time.

Reduce Distractions: Given the negative impact of competing information on working memory, it is important to reduce distractions in the environment that can tax or disrupt sustained working memory.

Provide refresh period: Changing tasks more frequently can alleviate some of the drain on sustained working memory for an adolescent such as Sample, whose focus is likely to fade more quickly than his peers. Changing from one task to the next sooner can help restore his focus for a brief period of time. Tasks can be rotated, such that he might work for 10 minutes on math problems and 10 minutes on reading and then return to another 10 minutes of math.

Provide attention breaks: An adolescent with difficulties sustaining working memory often needs frequent short breaks. Breaks typically need only be 1 or 2 minutes in duration. Observing when Sample's ability to focus begins to wane will help determine the optimal time for a break. Attentional breaks are best taken with a motor activity or a relaxing activity. Sample might walk to the pencil sharpener, run a short errand, get a drink, or simply bring his work to show his teacher or his parent. Teacher check-ins can be an efficacious method of providing a break with motor activity and can also serve as an opportunity for reinforcement. Sample might be asked to complete only a few problems of a set or a few lines of a paragraph before bringing his work to his teacher or his parent for review. This provides a built-in break that Sample can anticipate, forces a stepwise approach to the task, includes motor activity, and provides an opportunity for reinforcement for work completed.

Provide preferential seating: Sample may need increased

supervision. Preferential seating can be an important accommodation for adolescents with limited ability to sustain working memory. Placing his seat near the teacher provides greater opportunity to observe when he is adequately focused and when he is fatiguing, and redirection or breaks can be more easily implemented.

Use cueing strategies for retrieval: Often adolescents with working memory deficits also exhibit word and information retrieval difficulties. They frequently experience the tip-of-the-tongue phenomenon, or may produce the wrong details within the correct concept. Sample may need additional time to retrieve details when answering a question. Cues may be necessary to help him focus on the correct bit of information or word. It is often helpful to avoid open-ended questions and to rely more on recognition testing which does not require retrieval.

If Sample answers an open-ended question such as a fill-in-the-blank or short-answer question incorrectly, it will be important to follow-up with increasing levels of questions to determine whether he knows the information. Offering cues for the missed response and then following up with recognition format questions will clarify if Sample missed the answer due to retrieval difficulty or whether he needs to relearn the material.

Optimize daytime schedule: It may be important to observe Sample to determine whether he has greater difficulty at certain times of the day. Some adolescents with difficulties sustaining working memory do better in the morning than in the afternoon as they begin to fatigue. It may be helpful to schedule more demanding tasks in the morning.

Present information in multiple modalities: Adolescents with working memory difficulties often benefit from multimodal presentation of information. Verbal instruction can be accompanied by visual cues, demonstration, and guidance to increase the likelihood that new material will be learned. Hands-on instruction also can be a helpful learning method for adolescents with difficulties sustaining working memory as it places less demand on working memory.

Student-Focused Interventions

Use verbal mediation: Adolescents with difficulties sustaining working memory often show problems remaining focused on a task or activity, particularly for schoolwork or homework assignments. Many demonstrate a natural tendency to use self-talk or verbal mediation to guide their own problem solving and to direct their attention. Such verbal mediation strategies might be encouraged or taught directly. Initially, Sample might verbalize aloud with supervision as he works through a task. Eventually, talking aloud can be minimized such that Sample relies on subvocalization or only a whisper to direct his focus.

Provide external memory supports: Adolescents with working memory deficits often demonstrate difficulties keeping track of more than one or two steps at a time. Providing a written checklist of steps required to complete a task can serve as an external memory support and can alleviate some of the burden on working memory.

Repeat new information: It is often necessary to repeat instructions or new information for adolescents with working memory deficits so that they may increase the amount of information captured.

Teach strategies for new learning and memory processing: Sample can learn how to actively listen, such as stopping what he is doing at the time, focus his attention, ask questions, restate the information or question, or take notes.

Mnemonic devices (i.e., memory strategies) are important tools to help adolescents such as this learn, and later recall, basic skills and facts. Teaching Sample to chunk information may be useful in helping him increase the amount that he can learn or capture at one time. It may be necessary for Sample's teachers or his parents to help him learn how to approach new information as sets or groups of details rather than as a single series to facilitate chunking.

Rehearsal is often a helpful method of increasing the amount of information encoded into memory. Sample might need to practice a series of steps for solving a problem, memorizing a list of key facts, or completing an everyday activity to accommodate his more limited working memory at the outset. Spaced practice

is more effective than massed practice. That is, Sample would benefit more from practicing new skills or information in short sessions over the course of the day rather than in one long session. He might rehearse, for example, a set of key facts for a few minutes two or three times during the school day and then again at home both at night and in the morning.

Have Sample repeat or paraphrase what he has heard or understood to check for accuracy and to provide an opportunity for rehearsal. Ultimately, teaching self-initiated comprehension-checking strategies (e.g., the adolescent asking for repetition of instructions) helps to promote independent management of working memory weaknesses.

Planning

Planning encompasses the ability to anticipate future events, set goals, and develop appropriate steps ahead of time to carry out a task or activity. It requires imagining a goal or end state, strategically determining the most effective approach, and sequencing a series of steps to attain the goal. Students with planning difficulties may not start assignments in a timely fashion or may start projects without thinking through the materials or steps needed.

External Structuring, Accommodations, and Modifications

Provide examples of planning: It is often helpful to provide examples of how students might plan differently to complete the same task. In this way, Sample can see options for alternative methods. Adolescents with difficulties planning may benefit from having a binder or cookbook of steps for common routines or assignments. They might have a section for approaches to specific types of math problems, writing assignments, or reading materials and can reference the plans as needed.

Model planning: Parent modeling is an important means of teaching good planning skills. Sample's parents can discuss plans for the day at the breakfast table or verbalize their thinking about how to approach a series of errands. The use of the adolescent's planning guide for the parent's multistep activities may serve as a good model. Developing an overall plan for the day, week, month, and year with a calendar can also serve as a useful exercise.

Student-Focused Interventions

Practice goal setting: Involve Sample maximally in setting a goal for the activity or task. Encourage him to generate a prediction regarding how well he expects to do in completing the task or activity. Structure planning and organization efforts around the stated goal.

Involve student actively in development of plans: Active, maximal involvement of the adolescent in the development of plans is important. The use of a planning guide may be necessary to reduce the organizational and working memory demands of this multistep process.

Verbalize planning strategies: Have Sample verbalize a plan of

approach at the outset for any given task, whether it is an everyday chore or routine or an academic activity. The plan can be broken down into a series of steps, arranged in sequential order, and written down as a bullet list. The plan can be guided interactively with his parent or his teacher to achieve sufficient detail and to increase the likelihood of success. Sample might be asked to develop more than one plan for a task or activity to increase his awareness of alternative approaches. For example, he might plan to approach a writing assignment by starting with the introductory paragraph, but might also plan to start with a detailed outline and to write paragraphs for the body of the text first and then write an introduction. It may be helpful to begin learning strategic planning by practicing with only a few steps at the outset and then gradually increasing the number of steps and the amount of detail.

Practice planning with familiar, everyday tasks: Strategic planning can be practiced with familiar, everyday tasks. Sample might develop a plan for completing familiar routines such as getting ready for school in a more efficient manner. Developing plans for meaningful, complex activities (e.g., his own birthday party, baking his favorite treat) provides inherent motivation for the adolescent.

Teach use of timelines: Teach Sample to develop timelines for completing assignments, particularly for long-term projects or term papers. Sample may need assistance in budgeting his time to complete each step or phase in larger projects or tasks. Break long-term assignments into sequential steps, with timelines for completion of each step and check-ins with the teacher to ensure that he is keeping pace with expectations.

Organization

Students who have difficulty organizing their thinking, behavior, or work may have difficulty grasping key points or the main idea of new information. They may show problems forming written or spoken communication and may struggle to keep their tasks and schoolwork in order. They may have good ideas but be unsuccessful in expressing them and may feel overwhelmed by large tasks or amounts of information.

External Structuring, Accommodations, and Modifications

Preorganize new information: Present information in a well-organized manner at the outset. Students with difficulties grasping new concepts or the gist or framework of new material often do best when material is given in a structured fashion. Teachers that offer a higher degree of structure in their courses may be a better fit for Sample.

Provide school-to-home communication: A resource or special education teacher may need to serve as the communication facilitator between home and school to help Sample stay on track with his assignments. Often communication can be accomplished via an assignment or planning notebook, but more direct communication via e-mail or phone can be helpful on a regular basis.

Provide extra books at home: Keeping an extra set of books at home can be a powerful tool for helping an adolescent with organizational difficulties, as it alleviates a need to remember what books to bring back and forth and provides ready access to materials both at school and at home. Rather than relying entirely on having books at home, however, coaching the student in remembering materials, including books, to bring home can help develop better organizational habits.

Breakdown complex tasks into smaller steps: Worksheets or deskwork may seem overwhelming for Sample and he may need additional structure to get started. Worksheets can be separated into smaller problem sets, or divided on the page with a marker and prioritized for approach.

Work on complex tasks one step at a time: Given the particular difficulty managing complex, long-term assignments, students with organizational difficulties often benefit from working on

only one task, or one step of a larger task, at a time. Tasks may need to be broken down into smaller steps to facilitate organization and planning. Long-term assignments, such as term papers or projects, are often insurmountable for adolescents with organization and planning difficulties. Because such tasks can feel overwhelming, Sample may not begin work until the night before the assignment is due. It may be necessary to break down longer assignments into smaller, sequential steps, and to develop a timeline for completion of each step. At each step, it is important to review what has been accomplished and to plan for the next step.

Provide individualized strategy instruction with study skills classes: Study skills classes are often available in middle and high schools. Adolescents with organizational difficulties should avail themselves of the opportunity to approach planning and organization as an academic subject. It is important that key concepts and methods be communicated with parents and teachers, so that they can be practiced across all environments for consistency. Although study skills classes can provide important information to students about academically relevant organizational strategies, the student may need ongoing assistance with the executive application of these strategies. Thus, individual application of strategies with review, cuing, and generalization should be strongly considered.

Provide organization time at beginning and end of day: Sample may need extra organization time at the outset or the end of the day. He might review his assignment notebook or planner with his parents each morning and perhaps with a designated teacher at the end of the school day.

Provide supervision study supports: A supervised study hall can be an important tool for helping Sample keep pace with his work, particularly as he enters the middle and high school years. Organizational difficulties often do not become apparent or problematic until middle school, when the organizational demands increase and supports decrease. Many schools offer study halls with direct supervision for organization and content. Alternatively, having a study period at the end of the day in a resource room where access to a special education teacher is

readily available can help Sample stay on track more successfully.

Work in small groups with peer models: Adolescents with organizational difficulties can benefit from working in small groups with more organized peers who serve as models.

Provide cross-age tutoring of organizational skills: Cross-age tutoring can be helpful as a means of modeling better organizational strategies for Sample. It is important to choose an older peer tutor carefully, considering the tutor's own organizational skills and the likelihood of he or she being a good fit with Sample.

Student-Focused Interventions

Teach pretask organizational strategies: Call to Sample's attention the structure of new information at the outset of a lesson or lecture. It may be helpful to provide an outline or list of major points prior to the lesson. Preview the organizational framework of new material to be learned in a bulleted or outline format to increase appreciation of the structure and enhance Sample's ability to learn associated details.

Teach posttask summarizing organizational strategies: Have Sample restate the overall concept and structure of the information or task following a lecture. This will provide an opportunity to ensure accurate understanding and to correct any misunderstanding.

Teach strategies for detecting organizational structure: As Sample becomes more aware of his difficulties grasping organization of new information, he may be able to learn to search for the organizational frameworks inherent in novel material. He might be taught to listen or look for the structure in a strategic manner.

Teach one generalizable organizational system to start: Many teachers prefer different organizational and planning systems. This can be confusing for adolescents with organizational difficulties. It is best for Sample to learn one system that is sufficiently flexible to be used for all or most subjects and can be maintained or expanded as needed over the years. It is essential that the system or the book fit well with the student's style and needs. Sample might enjoy choosing a planner book with which

he feels comfortable. Size and appearance are important first considerations. Layout of the daily pages (e.g., columns, one page per day, one week at a time) also needs to fit with Sample's preferences and organizational needs.

Teach the use of organizational systems and materials: Students with difficulties keeping track of their assignments may benefit from learning to use an organizational system, schedule book, or daily planner. Use of such a system can help facilitate many aspects of organization and planning, but requires effort on the part of the student, parents, and teachers.

Teach flexible use of organizational strategies: Flexibility is the key to a successful organizational notebook or planner. Ring-bound books that allow addition of pages or features (e.g., sticky note pads) and removal of unnecessary pages are often best. Essential information can be written or typed and placed in a plastic sheet protector at the front of the book for quick access. This might include important phone numbers, locker combination, and overall schedule. There are many options for ways to organize material including by date, by subject, or by priority. Deciding on one method and devising a system, such as separate color-coded tabs for each subject, is important.

Access peers for assistance: Often students with organizational difficulties are inconsistent in completing homework and/or turning in completed work. This may be a problem of remembering assignments or writing them down accurately. It may be helpful to maintain a list of students in each subject with phone numbers that Sample can call if he forgets an assignment.

Tracking work with organizational notebook: An assignment sheet or organizational notebook can serve as an essential tool in helping Sample keep on track with his work. Before leaving each class, Sample might show his teacher what he has written down as an assignment. The teacher can initial the assignment to indicate that it is correct and complete. Sample's parents can then review the assignment with Sample, help him plan an approach, and initial that each assignment has been completed. Should Sample not turn in his work, this communication device can uncover the problem more quickly.

Teach organizational strategies for reading: Specific strategic

approaches for reading can be taught to facilitate Sample's efficiency in learning new material. For example, Sample might learn to first examine the chapter outline or list of headings and then read the chapter summary and focus questions before approaching the body of the text.

Teach organizational strategies for writing: Strategic approaches to structured writing can be helpful for students like Sample who have difficulties organizing their written output. A cookbook of methods for responding to basic types of writing tasks (e.g., short answer, short essay, expository paper) can be developed with Sample. He might need to learn what goes in the first sentence or paragraph, what goes in the second, and so on.

Teach Organizational Strategies for Note Taking: Outlining and note-taking skills can be taught directly in a study skills course or in a resource room. These are essential skills that Sample will need to practice for future academic success.

General Intervention Framework

Introduction

Given the unique nature of the executive functions in playing a supervisory or conductor role in terms of guiding and regulating behavior, emotion, and thought, an approach to intervention can be considered globally. The general principles of many intervention models for enhancing executive functions are based largely on the pioneering work of Mark Ylvisaker and colleagues (Ylvisaker, 1998; Ylvisaker & Feeney, 1998; Ylvisaker, Szekeres, & Feeney, 1998), who advocate for positive everyday routines (i.e., make behaviors routines so that they are less demanding of executive functions) in a contextualized (i.e., in the adolescent's real world so that it is meaningful), collaborative (i.e., together with, not for, the student), assessment and treatment approach. These authors relied on a coaching model of intervention now widely regarded as an effective approach.

Goal of Intervention

The ultimate goal of executive function intervention is to establish regular behavioral and cognitive routines to maximize independent, goal-oriented problem solving. Good outcomes might include demonstrating behavioral or emotional control, initiating activity, engaging in planful and well-organized problem solving, or monitoring one's own social success or problem-solving outcomes.

In structuring an executive function intervention, we advocate the use of everyday executive routines in a meaningful, real-world everyday context as opposed to teaching specific skills out of context. Given the difficulties with working memory seen in many individuals with executive dysfunction, using a written copy of the multistep executive routine is often helpful. The student should become increasingly more active in formulating and carrying out the plans and reviewing his performance, thus promoting internal executive control. The goal of executive function intervention is maximal independence, which necessitates the active involvement of the student in each phase via a coaching model.

Develop Problem-Solving Routines

A critical feature of any intervention is to establish external environmental conditions that will enable the student to develop and make automatic or habitual, behavioral, and cognitive routines. Making an approach to problem solving a routine reduces the demand on executive functions. For individuals just starting to learn executive control behaviors, for young children, or for individuals with extreme executive dysfunction, the focus of intervention may need to be more externalized or environmental (i.e., to organize and structure the external environment and to organize and provide cuing for

behavioral strategies and routines). Many such individuals do not have the internal resources available to initiate behaviors without significant individualized structuring, cuing, and reinforcement. They often need help to know when and how to apply the appropriate problem-solving behavioral routine. Direct rewards and positive incentives are often necessary to motivate the student to attend to and practice new behavioral routines. Once these behavioral routines are established, positive cuing becomes the crucial factor; cuing can then be faded as autonomy increases. Several basic tenets are advocated, including the following:

♦ Teach explicit, goal-directed, problem-solving processes.

♦ Implement processes within positive, meaningful everyday routines.

♦ Provide real-world relevance and meaning.

♦ Involve everyday people (parents, teachers, and peers) as models and coaches.

♦ Include the student in the design of the intervention as much as possible.

For example, a student who does not show independent organization of writing might be taught a structured approach to developing a piece of writing that is within his grasp. Each day, he could be coached by teachers, aides, or parents to use this method to complete a homework assignment more successfully and efficiently, providing relevance and value that becomes self-reinforcing.

Provide Structure and Support

Many students with executive function difficulties do not yet possess the internalized routines needed for well-regulated problem solving. Therefore, intervention often begins from an external support position with active modeling, coaching, and guidance by important everyday people, which gradually transitions into an internal process as the direct coaching and cuing is faded. The general intervention process includes the following:

♦ Externally model multistep problem-solving (i.e., executive) routines.

♦ Externally guide with the development of everyday executive routines.

♦ Practice using executive routines in everyday situations.

♦ Fade external support and cue internal generation and use of executive routines.

♦ Coach for generalization to new situations or new coaches.

♦ Provide feedback throughout the process.

Intervene Across Activities

It is possible to have an executive system focus in any and all activities, including classroom, therapy activities, social and recreational, and daily home-living activities. Furthermore, this may take little time or effort once parents and school personnel develop coaching habits. For example, any activity can include:

♦ Goal setting: What do I need to accomplish?

♦ Self-awareness of strengths and weaknesses: How easy or difficult is this task or goal?

♦ Organization and planning: What materials do we need? Who will do what? In what order do we need to do these things? How long will it take?

♦ Flexibility and strategy use: When or if a problem arises, what other ways should I think about reaching the goal? Should I ask for assistance?

♦ Monitoring: How did I do?

♦ Summarizing: What worked and what didn't work? What was easy and what was difficult, and what will I do next time?

Example of an Executive Function Intervention System

The use of a general executive problem-solving routine that promotes (1) systematic goal definition, (2) planning, (3) action, (4) self-monitoring and evaluating, and (5) flexible, strategic adjustment of plans and actions may serve as a general framework or vehicle within which specific executive function intervention methods and strategies can be incorporated. The goal-plan-do-review (GPDR) method is one such system (Ylvisaker, Szkeres, et al., 1998). Several goal-oriented problem-solving methods may also serve as models (e.g., Braga et al., 2012; Chan & Font, 2011; Kenworthy et al., Levine et al., 2000; Marlowe, 2001; Wade, Wolfe, Brown, & Pestian, 2005; Wade, Wolfe, & Pestian, 2004). The complexity of the problem-solving routine should be adapted to the competency of the student. The GPDR system is presented in Figure 1.

GOAL

What do I want to accomplish?

PLAN

How am I going to accomplish my goal?

MATERIALS/EQUIPMENT	STEPS/ASSIGNMENTS
1.	1.
2.	2.
3.	3.

PREDICTION

How well will I do? How much will I get done?

Self-Rating	1	2	3	4	5	6	7	8	9	10
Other Rating	1	2	3	4	5	6	7	8	9	10

DO

REVIEW

How did I do?

Self-Rating	1	2	3	4	5	6	7	8	9	10
Other Rating	1	2	3	4	5	6	7	8	9	10

What worked?	What didn't work?
1.	1.
2.	2.
3.	3.

What will I try differently next time?

Note: From "Cognitive Rehabilitation: Executive Functions," by M. Ylvisaker, S. Szekeres, and T. Feeney, in *Traumatic Brain Injury Rehabilitation: Children and Adolescents* (2nd ed., p. 244), by M. Ylvisaker (Ed.), 1998, Boston: Butterworth-Heinemann. Copyright ©1998 by Butterworth-Heinemann. Adapted with permission.

Figure 1. Goal-plan-do-review problem-solving system.

Application of Executive Function Interventions to the IEP/504 Process

For educational purposes, the goals for promoting executive system functioning are interrelated with all of the academic subjects and social/communication situations if they meet the following conditions (as most will): (a) novel learning or processing tasks, (b) necessitating goal-oriented performance, (c) requiring a delayed response, and (d) involving multiple steps over a period of time. Therefore, for the student with executive/organizational deficits, the executive/organizational strategies are important to link directly with each academic content area (reading, writing, math, science, etc.).

One's executive/organizational skills are increasingly in demand as the curriculum in the higher grades becomes more complex. The relationship between these two factors is direct (i.e., greater complexity of learning necessitates greater use of efficient executive skills). The curriculum in the later elementary grades and into middle/high school requires the student to derive information from increasingly complex text, reproduce this information in appropriately organized written form, and do so in an increasingly independent manner. Thus, tasks for which students may have difficulty are those that (a) are long-term (requiring planning), (b) require organization of a great many pieces of detailed information (e.g., a specific multistep task), and (c) are to be completed in a certain time frame (requiring time management).

It is important to incorporate active educational interventions into the translation of executive function interventions within the context of the Individualized Education Plan or the 504 Plan. A set of sample IEP/504 Plan goals and objectives are provided below. Importantly, rather than specific academic curriculum "content," these goals focus on the development of a learning and/or problem-solving "process" designed to enhance the efficient learning and memory of academic information. Implementation of the methods to achieve these unique, nontraditional "learning process" goals will likely require additional training and guidance of school personnel. The emphasis of support should be on teaching, modeling, and cuing an approach to self-management of learning through active planning, organization, and monitoring of work.

Thus, the overarching, long-term goal for the student could be stated as follows: "The student will independently employ a systematic learning/problem-solving method (e.g., Goal-Plan-Do-Review [GPDR] system) for tasks that involve multiple steps and/or require long-term planning." Domain-specific goals and objectives can then be articulated. For students who are younger or who have more severe executive dysfunction, the objectives might be prefaced with: "With directed assistance, Sample will . . .."

Goal Setting

(1) Sample will participate with teachers in setting instructional goals. For example, "I want to be able to… read this book; write this paragraph."

(2) Sample will accurately predict how effectively he will accomplish a task. For example, he will accurately predict whether or not he will be able to complete a task; predict his grade on tests; predict how many problems he will be able to complete in a specific time period.

Planning

(1) Given a routine (e.g., complete a sheet of math problems, clean his room), Sample will indicate what steps or items are needed and the order in which events will proceed.

(2) Given a selection of three actions necessary for an instructional session, Sample will indicate their order, create a plan on paper, and follow the plan.

(3) Given a task that he correctly identifies as difficult for him, Sample will create a plan for accomplishing the task.

(4) Having failed to achieve a predicted grade on a test, Sample will create a plan for improving performance for the next test.

Organizing

(1) Sample will follow or create a system for organizing personal items in his locker.

(2) Sample will select and use a system to organize his assignments and other schoolwork.

(3) Given a complex task, Sample will organize the task on paper, including the materials needed, the steps to accomplish the task, and a time frame for completion.

(4) Sample will prepare an organized outline before proceeding with writing projects.

Self-Monitoring, Self-Evaluating	(1) Sample will keep a journal in which he records his plans and predictions for success and also records his actual level of performance and its relation to his predictions.
	(2) Sample will identify errors in his work without teacher assistance.
	(3) Sample's rating of his performance on a 10-point scale will be within 1 point of the teacher's rating.
Self-Awareness	(1) Sample will accurately identify tasks that are easy and difficult for him.
	(2) Sample will accurately identify his strengths and weaknesses.
	(3) Sample will explain why some tasks are easy or difficult for him.
Self-Initiating	(1) When Sample does not know what to do, he will ask the teacher.
	(2) With regular or minimal prompting from the teacher, assistant, or parent, Sample will begin his assigned tasks, initiate work on his plan, and so forth.

References

Braga, L. W., Rossi, L., Moretto, A. L. L., da Silva, J. M., & Cole, M. (2012). Empowering preadolescents with ABI through metacognition: Preliminary results of a randomized clinical trial. *NeuroRehabilitation, 30*, 205-212.

Chan, D. Y. K., & Fong, K. N. K. (2011). The effects of problem-solving skills training based on metacognitive principles for children with acquired brain injury attending mainstream schools: A controlled clinical trial. *Disability & Rehabilitation, 33*, 2023-2032.

Kenworthy, L., Anthony, L. G., Alexander, K. C., Werner, M. A., Cannon, L., & Greenman, L. (2014). *Solving executive functioning challenges: Simple ways to get kids with autism unstuck and on target.* Baltimore, MD: Brookes Publishing.

Levine, B., Robertson, I. H., Clare, L., Carter, G., Hong, J., Wilson, B. A., … & Struss, D. T. (2000). Rehabilitation of executive functioning: An experimental-clinical validation of goal management training. *Journal of the International Neuropsychological Society, 6*, 299-312.

Marlowe, W. B. (2001). An intervention for children with disorders of executive functions. *Developmental Neuropsychology, 18*, 445-454.

Wade, S. L., Wolfe, C. R., Brown, T. M., & Pestian, J. P. (2005). Can a web-based family problem-solving intervention work for children with traumatic brain injury?. *Rehabilitation Psychology, 50*, 337-345.

Wade, S. L., Wolfe, C. R., & Pestian, J. P. (2004). A web-based family problem-solving intervention for families of children with traumatic brain injury. *Behavior Research Methods, Instruments, & Computers, 36*, 261-269.

Ylvisaker, M. (Ed.). (1998). *Traumatic brain injury rehabilitation: Children and adolescents* (2nd ed.). Boston, MA: Butterworth-Heinemann.

Ylvisaker, M., & Feeney, T. (1998). *Collaborative brain injury intervention: Positive everyday routines*. San Diego, CA: Singular Publishing Group.

Ylvisaker, M., Szekeres, S., & Feeney, T. (1998). Cognitive rehabilitation: Executive functions. In M. Ylvisaker (Ed.), *Traumatic brain injury rehabilitation: Children and adolescents* (2nd ed., pp. 221-269). Boston, MA: Butterworth-Heinemann.

BRIEF®2 Self-Report Item Response Table

Item	Response	Item	Response	Item	Response	Item	Response
1	Sometimes	15	Sometimes	29	Often	43	Sometimes
2	Sometimes	16	Sometimes	30	Sometimes	44	Sometimes
3	Often	17	Never	31	Sometimes	45	Never
4	Never	18	Never	32	Sometimes	46	Never
5	Sometimes	19	Sometimes	33	Sometimes	47	Sometimes
6	Never	20	Sometimes	34	Sometimes	48	Never
7	Sometimes	21	Sometimes	35	Sometimes	49	Never
8	Often	22	Sometimes	36	Never	50	Sometimes
9	Often	23	Sometimes	37	Never	51	Sometimes
10	Never	24	Sometimes	38	Sometimes	52	Sometimes
11	Sometimes	25	Sometimes	39	Sometimes	53	Never
12	Sometimes	26	Never	40	Never	54	Never
13	Never	27	Sometimes	41	Never	55	Sometimes
14	Never	28	Sometimes	42	Sometimes		

*** End of Report ***