Helping Students with Brain Injury

Executive functioning affects a student's ability to work in a systematic and orderly manner. Difficulties in executive functioning result in impaired reasoning, abstract thinking, problem solving, and simultaneous processing (for example, listening and taking notes at the same time). It also affects the ability to set goals, self-monitor, initiate, plan, and shift ideas to find alternative solutions to a problem, or shift to a different subject, book, etc.

The following are sample strategies you can use. It is important to remember that all brain injuries are unique and that all students have different strengths and weaknesses, therefore different strategies may or may not work depending on the student, the class, and the time of day, among other factors. It is important to remain flexible in trying different strategies until you find one that works for that student, and to always keep in mind the ultimate goal of moving students towards independence. Once you have found a strategy that works use it consistently and share it with others who work with that student.

Difficulty with…	Strategy/Accommodation	Example
ORGANIZATION		
Organizing materials needed for class, homework, reports		Dave forgets to bring his calculator and notebook to math class.
	➢ Notebook or graphic organizer with schedule, calendar, folders, paper, index divisions, homework page	➢ Dave uses a graphic organizer that includes a calculator and other school tools.
	➢ Note taker or teacher prepared notes, including board assignments	➢ Dave keeps a homework pad for all assignments, including what is needed for each class.
	➢ Step cards for retellings, math calculation, etc.	➢ Dave has note cards outlining the steps for math formulas.
	➢ Different colored folders for different subjects	➢ Bob uses different colored notebooks and folders for different subjects.
Deciding which of many steps goes first, second, etc.		Nancy does not know where to start before beginning her book report.
	➢ Creating flow charts for tasks (task analysis – what to do 1st, what to do 2nd, what to do if something doesn't work, etc.)	➢ Nancy has written instructions for assignments, broken into Step 1, Step 2, etc.
	➢ Customized organizational system	➢ Nancy outlines her report bulleting out key items.
	➢ Graphic organizers for written expression, note-	➢ Nancy uses note cards for oral reports.

	taking, math work	
PLANNING		
Planning and budgeting time for homework, projects, tasks		Lisa has difficulty preparing to work on her history project, and waits until the last minute to get started.
	➢ Self-monitor the amount of time it is taking to complete reading, tests, homework	➢ Lisa's parents and teacher help time him on projects for a month so she gains a better understanding of the time it takes to do homework, reading, tests.
	➢ Benchmark calendar for projects (what will be done by the end of week 1, week 2, etc.)	➢ Lisa develops a written timeline on her calendar for what parts of the project need to be done and when.
	➢ To do list on the board or on a card on their desk or attached as a laminate to the zipper on their backpack	➢ Lisa works with her aid to develop a normal timeline for completing projects.
	➢ Cueing, beeper watch, cue cards	➢ Lisa's beeper watch goes off when it is time to start homework.
	➢ Set up chart with goals; use a timer to help pacing; reinforce task completion	➢ Lisa creates a checklist for what steps need to be completed to finish her project.
PROBLEM SOLVING		
Coming up with solutions to problems, including alternative solutions if the first does not work		➢ Dave becomes frustrated at not having a calculator and doesn't think to ask the teacher to borrow one.
	➢ Model and role play problem solving	➢ Dave's aid walks him through different ways to resolve the problem of forgetting a pen, pencil, calculator, etc.
	➢ Use a problem solving model (define the problem, generate solutions, look at pros and cons for each solution, check results to see which solution is more viable)	➢ Dave writes down possible solutions and the pros and cons for each possible solution.
	➢ Provide a checklist of steps for solving problems	➢ Dave writes down a timeline and steps to take in order to complete a project.
Using effective strategies to compensate for areas of weakness		Lisa has a post-it reminding her to bring the calculator but doesn't think to check the post-it before class.
	➢ Help to develop meta-cognitive skills (self-talk	➢ Lisa walks through the steps she normally takes to

	and self-analysis) ➢ Positive feedback followed by constructive feedback and solutions for fixing the problem ➢ Use of errorless learning (design tasks to ensure success and then the level of challenge can be increased gradually) to avoid frustration and a feeling of failure	prepare for a project, developing a timeline to meet the project deadline date. ➢ Lisa's teacher praises her for coming up with a new realistic timeline for projects. ➢ Lisa's teacher gives her a smaller project before assigning a more difficult one.
COGNITIVE RIGIDITY		
Shifting to a new topic		Sue has difficulty shifting from science to history.
	➢ Summarizing at the end of a topic and concretely stating when you are moving to a new topic ➢ Provide warning time for transitions, especially for changes in routine to allow the student to prepare for and expect the transition ➢ A brief break before tasks and warning times when tasks will change	➢ The teacher cues Sue to move on to her science book and put away her history book. ➢ The aid gives Sue a 5 minute warning before science ends. ➢ Sue takes a 5 minute break for the next subject begins.
Getting stuck in one mode of thought or thinking (perseveration)		Dave is still focused on forgetting his calculator.
	➢ Generating alternative solutions to different problems and practicing them	➢ Dave brainstorms solutions to what to do if he forgets his calculator (ask a friend to borrow one, ask the teacher to borrow one, etc.).
REASONING/ABSTRACT THINKING		
Answering open-ended essay questions, particularly "why" and "how" questions		➢ Lisa has difficulty with essays in her history class, and doesn't know where to begin. ➢ Tim remembers the key facts of the war but cannot answer why it occurred.
	➢ Have the student paraphrase what they have read or what has been discussed ➢ With "why" and "how" questions use examples or rephrase the questions ➢ Explain abstract language and concepts, and verify understanding	➢ At the end of each chapter Lisa's teacher asks for a summary of what has been read. ➢ Tim's essay questions provide examples. ➢ Sue's teacher asks her to explain what has been discussed in her own words in order to clarify that

		she understands.
Generalizing concepts compared to recalling concrete details		When Nancy is asked to summarize a topic she provides key details rather than a story.
	➢ Use the SQ4R Method: Survey, Question, Read, Write, Recite, Review	➢ Before reading a chapter Nancy reads the outline, skims the chapter, reads the summary questions, then reads the chapter, writes a summary, re-reads the outline and reviews what she read with the teacher or aid.
INITIATION		
Student has difficulty beginning assigned tasks		Robert does not know where to begin so he never starts his science project.
	➢ Divide task into steps	➢ Robert divides his project into Step 1, Step 2, etc.
	➢ Provide time benchmarks	➢ Robert's calendar includes a minimum time of when the project needs to begin, when he needs to be halfway done, etc.
	➢ Model appropriate problem solving	➢ Robert's teacher walks the class through the steps to complete their projects, including a fill in the blank timeline.
	➢ Rewards for starting tasks	➢ Robert's parents reward him for meeting Step 1.
	➢ To do list as an initiator	➢ Robert writes a to do list for his upcoming project and checks it daily.
	➢ Environmental cues – for example, a timer or alarm to get started	➢ Robert sets his smartphone to provide reminders for the various steps to complete his project.
SELF-MONITORING		
Self-monitoring and reviewing work for errors		Nancy does not proofread her papers and often has multiple mistakes in her work.
	➢ Self-monitoring checklists , including proofreading, assistive technology, etc.	➢ Nancy keeps a checklist for all written reports, including spell check, grammar check, reading it out loud, having her parents read it, etc.
	➢ Proofreading (1st for fluency, 2nd for punctuation, 3rd backwards for spelling)	➢ Nancy proofreads all work prior to submitting it
	➢ Utilize assistive technology to edit	➢ Nancy utilizes spell check and grammar check on all reports
Self-regulating		➢ Andrew is constantly getting up from his seat, has

(movement, communication, behavior)		difficulty regulating the volume of his voice, and doesn't understand why classmates do not respond when he yells to be heard.
	➢ Clearly state, teach, and reinforce behavioral expectations	➢ Andrew's teacher reiterates the "class rules" and provides clear instruction when Andrew starts to get up or his voice begins to raise
	➢ Make the student aware of their issues with self-monitoring, including subtle cueing	➢ Andrew's teacher or aid taps him on the shoulder when he begins to fidget or raise his voice
	➢ Functional behavior assessment to determine triggers and precursors – being realistic about what behavior can and can't be changed	➢ Andrew's functional behavior assessment find that he has a harder time following "class rules" later in the day caused by cognitive fatigue

Adapting the strategies for the IEP

The IEP focuses on academic and/or functional areas affected in the school setting, with the goal of establishing measurable academic and/or functional goals. These goals include benchmark or short-term objectives, as well as criteria for measuring and evaluating the objective. It also includes modifications and supplementary aids, including assistive technology devices and services. As there have been numerous advancements in technology in recent years an assistive technology evaluation should be a consideration for all areas of impairment, including physical and cognitive impairments. *It is important to keep in mind that the IEP should be a fluid document, re-assessed regularly and able to be modified if strategies being utilized are not having the desired effect.*

Example:

Academic and/or Functional Area: Executive functioning

Annual Measurable Academic and/or Functional Goal: Student will initiate the task within 3 minutes of the initial instruction being given by June 30.

Benchmark or Short-Term Objectives: By November 30, student will initiate the task within 5 minutes with teacher cueing being given when needed.

Criteria: Teacher and teacher aide assessment.

Evaluation: 80% of intervals over a period of 5 days in a row using a data sheet provided for the teacher to track the intervals.

Modification/Supplementary Aid: Smart phone voice reminder for project due dates and project benchmarks.

Academic and/or Functional Area: _____

Annual Measurable Academic and/or Functional Goal: _____

Benchmark or Short-Term Objectives: _____

Criteria: _____

Evaluation: _____

Modification/Supplementary Aid: _____