WHY
Does Sam Struggle with School Projects?

Executive Functions and Academic Achievement

by Eran Grayson, MA

WHY DO MANY STUDENTS, including those with average and above intelligence and no diagnosed or known learning or developmental disability, struggle with academic performance? While there is no simple response to this vexing question, the answer is often rooted in executive functioning deficits. Executive functions, often synonymous with the term self-regulation, are cognitive processes that manage and regulate an individual's behavior in order to meet the demands and expectations that are placed upon the individual.

The learning environment found in schools places acute demands on executive function skills, particularly in the areas of time management, planning, and organization, as well as other critical learning processes such as memory, attention, and emotional control. Thus, deficits in executive functioning therefore explain why many otherwise intelligent and capable students struggle with poor academic performance and underachievement.

In order to better understand the academic challenges faced by students with executive functioning deficits, it is helpful to experience what it looks like to complete school-based assignments from an executive functioning perspective. Perhaps nothing quite demonstrates the complexities and demands placed upon executive functions like a research project. What follows below are the primary executive functions and the demands that are placed upon them as a student works to complete a typical high school level research project.

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Executive Function:
PLANNING

The planning stage of a multi-step project will oftentimes set in motion a trajectory of success or failure. Effective planning results in reduced anxiety, steady progress, and successful task completion.

At a minimum, the demands on planning to complete a project include the ability to successfully:

- Break down the project requirements into discrete and manageable steps.
- Determine the order and sequence to completing the steps.
- Identify potential obstacles that might interfere with the student's ability to complete any of the required steps and how the student will overcome them.

What happens to the student with deficits in planning?

As a result of struggling to break down the project into individual and easy-to-manage steps, the student will likely see the project as a single massive obstacle and subsequently procrastinate on getting started, rush to complete the project at the last minute, or potentially not start on the project at all.

Executive Function:
ORGANIZATION

Organization is often erroneously thought of only within the context of effective management of physical materials, such as papers and supplies. The demands on effective organization extend beyond physical materials and include effective organization of information, however.

At a minimum, the demands on organization expect the student to:

- Effectively keep track of all sources and record which facts come from which source.
- Ensure materials and resources are effectively moved back and forth from school and home.

What happens to the student with deficits in organization?

Poor management of information can make research projects particularly challenging, as the student will find it difficult and time consuming to scour the many books and websites that were utilized in order to properly cite research findings. The student with poor organizational skills will also struggle with effective management of papers and materials, resulting in lost paperwork and misplaced items.

Executive Function:
TIME MANAGEMENT

Perhaps the executive function that gets the most attention when a deadline is not met is one's use of time. Individuals with ADHD have a tendency to overestimate how much time they have to complete an assignment while at the same time underestimating how long it will take to get the work completed.

At a minimum, the demands on time management expect the student to:

- Identify all time constraints that compete for the student's time in order to meet the deadline.
- Generate self-created deadlines in order to complete various milestones for the project.

What happens to the student with deficits in time management?

The student with deficits in time management will likely perceive the project and its deadline in isolation. What that means is that when considering how much time they have to complete the project, they will likely not consider the homework, tests, and projects in other classes that also compete for their time.

Executive Function:
TASK INITIATION

Task initiation refers to the ability to efficiently start working on a task. Successful application of this ability allows one to initiate a task without procrastination.

At a minimum, the demands on task initiation expect the student to:

- Effectively avoid distractions and not procrastinate.
- The further out the deadline, the more difficult it becomes to avoid procrastination.

What happens to the student with deficits in task initiation?

The student who finds this project to be a non-preferred task will likely either avoid working on the project altogether, or perhaps have the intention to work on the project, but will still find it difficult to actually get started due to engagement with more preferred tasks such as video games or social media.

HELPING
Students
With
EF Deficits

How to Help a Student with Poor Planning Skills

Addressing deficits in planning can help with diverse challenges such as difficulty with meeting deadlines, knowing where to start on a particular task or project, or knowing what to do next to move a project forward.

- Make sure the student keeps a planner and uses it every single day. I recommend using a large planner with plenty of space to write in versus the smaller planners typically issued to students for free by many schools.
- Model how to sequence and break complex tasks and projects into simple and easy to complete sub-steps.
- Ask the student to look at possible obstacles or sub-steps that might present them with difficulties as they carry out a task or project.
- Encourage the use of to-do lists.

How to Help a Student with Organizational Difficulties

Organizational challenges are often best addressed through the use of systems and routines that the help the student effectively keep track of papers and information.

- Create a simple and easy to use filing system to keep track of papers and assignments.
- Establish a routine around regular maintenance of the filing system to ensure papers are located where they are supposed to be.
- Assist the student with developing an easy-to-use system for keeping track of research information when working on a research project.
- Regularly check with the student that organizational systems and routines are effectively and consistently implemented.

Executive Function:
EMOTIONAL CONTROL

School projects can be time consuming, confusing, and frustrating as well as frequently ask students to step outside of their comfort zone to learn new things.

At a minimum, the demands on emotional control expect the student to:

- Effectively manage emotions when encountering frustrations during the course of the project.

What happens to the student with deficits in emotional control?

While frustration is par for the course for nearly all students when working on a research project, having executive functioning deficits tends to only increase the number of things that can go wrong. When a student exercises poor emotional control, they tend to more easily get overwhelmed and shut down.

AS CAN BE READILY SEEN, executive functions play a critical role in an individual's ability to effectively produce, meet demands, and get things done. Students who are otherwise intelligent and capable but also possess deficits in executive functioning can have a difficult time meeting academic demands. Fortunately, through effective use of tools, strategies, and proper support, students with executive functioning deficits are able to demonstrate their potential and successfully meet the demands and expectations that are placed upon them. ⦿

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How to Help a Student with Poor Task Initiation

Improved task initiation is often achieved through the implementation of routines and structure that support desired behaviors.

- Have the student complete their schoolwork prior to engaging in preferred tasks.
- Create and schedule routines around school work and chores and post the schedule in an area that is easily seen by the child. Create the schedule with input from the child to ensure buy-in.
- Create a distraction-free environment for academic work production. Effective apps for limiting electronic distractions include **Freedom** (**freedom.to/stayfocusd**) and **StayFocusd** (for Google Chrome only; **stayfocusd.com**).

How to Help a Student with Poor Emotional Control

Frustration and agitation are normal human emotional responses to stressful situations. How effectively a student *manages* an emotional response will be critical for successful peer relations in addition to productivity.

- Help the student develop self-calming strategies.
- Explore alternative and constructive ways the student can express their frustrations.

How to Help a Student with Deficits in Time Management

Effective time management begins with increasing one's awareness to the passage of time as well as the awareness to one's use of time.

- Encourage the student to use a time log.
- Use timers to manage the length of study breaks. The Pomodoro technique is an effective study strategy that involves studying for twenty-five minutes followed by a five-minute break. **Be Focused** (**xwavesoft. com/be-focused-pro-for-iphone-ipad-mac-os-x.html**) is a useful app that employs the Pomodoro technique.
- Help the student establish milestones with deadlines when working on projects.
- Identify time constraints that compete for the student's time in order to meet a deadline.