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Helping Students with Attention Deficit Disorder Succeed in a College Mathematics Class

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Section 504 of the Rehabilitation Act of 1973 directs postsecondary institutions to provide educational opportunities to qualified students with disabilities. Increasingly, individuals with disabilities are attending college and voluntarily disclosing their disorder in order to take advantage of the services available to them mandated by law. (Goldstein, 1996)

Attention Deficit Disorder (ADD) is a neurobiological condition that causes difficulties with impulsiveness, concentration, retention of information and simple facts, organization, staying on task, and paying attention to details. So many of us have had students in our mathematics classes who have exhibited one or more of these behaviors that we can inadvertently overlook the ADD student. It is tempting to conclude students with ADD are unable to master sophisticated mathematical concepts.

In spite of the special student services available to them on most campuses, some ADD students fail to disclose their disability to their instructors or to the college, because they fear they will not be believed, understood, and/or that the instructor won't understand the condition. Unfortunately, some students resort to behaviors to hide their disability only to exacerbate their problem of performing inadequately in class.

Highly intelligent non-hyperactive ADD students can do quite well in elementary and secondary school. This is true particularly if both the home and school environment were well structured. For some, schoolwork was not very challenging and they could depend on the teacher to repeat important information many times. ADD symptoms tend to intensify when the demands on performance exceed the student's ability to function. For some people this debilitating stage may not occur until they are faced with a more demanding but less structured academic environment such as a college mathematics class. (Nadeau, 1996)

Helping the adult student learn mathematics becomes

particularly challenging when the individual suffers from ADD coupled with low self-esteem. Many non-hyperactive children with ADD go undetected until the disorder is diagnosed in adulthood. Over the years, these students can develop self-doubt in their academic abilities because throughout their schooling they were told they were not trying hard enough or they lacked motivation.

So what can we do as instructors when ADD students enroll in our college classes? Foremost, instructors must believe ADD students can be successful in their courses. Since these students have made it to college, they have managed their problems with procrastination, distractibility and disorganization to some degree. If I have not been informed that a student has ADD, I simply ask the student, if I suspect something is not right. This is only after I feel I have established a rapport with the student and the student feels safe to communicate openly with me. After the law was enacted, I was fortunate to be teaching at a college that trained faculty on how to recognize learning disabilities.

An effective strategy I found that worked for me is to provide the ADD student with a structured framework in which to achieve the course objectives. In spite of their constant struggle to stay focused, the ADD student can develop a cognitive processing system that enables them to move information stored in short term memory to long term memory. The challenge for them is to get the information in their long term memory within the course deadlines. Often it is suggested to allow ADD students to take untimed tests. This accommodation assumes the student is retaining all the information he needs for the test by the time the test is given. Having to meet these deadlines may cause a high degree of anxiety in the student. This level of stress interferes with learning and delays even longer what he is expected to know. The structured framework provided the ADD student should detail specific measurable expectations the student must demonstrate in order to pass the course. I

also discuss with students ways in which they feel they can best demonstrate what they must learn. An untimed test is frequently requested because it is most commonly recommended by Special Student Services. However, this option may be inadequate. When and where the ADD students take a test are as important as how much time they have to complete it. The environment must be conducive to concentrating. Even taking an exam, timed or untimed, in class with other students can be distracting to some ADD students. Another strategy to assess knowledge is to have the student tape record his responses to test or homework questions.

He submits you both the tape and written work that illustrates what he has recorded. Giving the student an oral exam where your direction keeps her focused is also effective.

Permitting ADD students to learn at their own rates within the framework enhances their opportunity to pass the course. This means the time lines for completion of the course work for your ADD student can be very different from deadlines set for each assignment or test you have given the rest of the class. Students should be expected to attend class even if they are learning or retaining information at a slower rate than you are teaching it, as it facilitates them staying on

task. Strategies such as allowing and encouraging ADD students to tape your presentation enables them to replay it until they are able to process the information as described above. Accommodating them with a note taker is quite helpful because the student can then focus all of his or her attention on visualizing and listening to what you are saying and writing. Ideally, important information, like due dates and expectations, should always be in writing. Sending an email to relay a message to an ADD student has its advantages over making a telephone call.

At first some of the suggestions can seem time consuming. However, if your college is receiving federal funding of any sort, it should have in place services that can assist you in accommodating the ADD student's needs. Another strategy is to call the ADD student's major advisor who can be quite helpful with suggestions on how to structure the course work.

If we take seriously the needs of students with ADD, we are challenged to rethink our whole class structure, how we test, and deadlines we impose. Becoming sensitized to differences between our teaching style and how students learn is another possible outcome. Our response to this new awareness can benefit all of our students, whether they have ADD or not.

REFERENCES

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NUMBERS - 1

Numbers are such simple little things
Surely known before time begins.

We start by counting fingers and stones
In answer to how many of those.

Then, we number things in measuring
Answering how big and in comparing.

Eventually numbers become symbolic
And finally ensconced and mystic.

This lead us to philosophize
Pondering numbers --- what are they?
Concepts, things, or social entities.