ABSTRACT

Title of Document:	AT THE BRIGHTER MARGINS: TEACHING WRITING TO THE COLLEGE STUDENT WITH ATTENTION-DEFICIT/HYPERACTIVITY DISORDER
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Composition studies has paid a great deal of attention to student differences in identity, including gender, race, and socio-economic status. It has also considered the generic problems of writing anxiety and of so-called "basic writers." But composition studies has almost completely neglected the problems and needs of college students with Attention-Deficit/Hyperactivity Disorder (AD/HD). This dissertation argues that college students with AD/HD face a unique set of challenges as writers; these challenges need to be acknowledged, explored, analyzed, and addressed. The rhetorical construction of the individual with AD/HD is examined in both contemporary culture and in the document which authoritatively defines the disorder—the American Psychiatric Association's *Diagnostic and Statistical Manual for Mental Disorders-IV Training Revision* (2000). Results of a qualitative study of four current college students and of six college graduates all of whom have been diagnosed with AD/HD are presented. This study explored six

areas of inquiry in personal interviews with the participants: 1) How does the AD/HD

identity affect their self-image as individuals and as writers? 2) How does AD/HD affect

their writing process? 3) What positive experiences have they had with writing? 4) What

negative ones? 5) What coping mechanisms have they developed for the challenges

imposed by AD/HD on the writer? 6) What is or has been helpful to them in the college

English class? Further, this paper analyzes how impairment in executive functions of the

brain affect the writing of college students with AD/HD. Finally, pedagogy, which is

based on the principles of Universal Design for Learning, is suggested to address the

challenges faced by the college writer with AD/HD.

AT THE BRIGHTER MARGINS: TEACHING WRITING TO THE COLLEGE
STUDENT WITH ATTENTION-DEFICIT/HYPERACTIVITY DISORDER

By

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Dissertation submitted to the Faculty of the Graduate School
of the University of Maryland, College Park,
in partial fulfillment of the requirements for the degree of Ph.D.
2008

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Dedication

To my Mom and Dad, Gladys and J. Albert Graham

Acknowledgements

I would like to express my deep appreciation to my dissertation director, Jeanne Fahnestock, Ph.D., for her exceptional guidance, encouragement, patience, and support throughout my entire Ph.D. program. I would also like to thank my committee members, Shirley Logan, Ph.D., Jane Donawerth, Ph.D., Theresa Coletti, Ph.D., and Wayne Slater, Ph.D., for generously devoting their time and sharing their insights. A very special word of thanks goes to the participants in my study whose stories are at the heart of this project. Finally, I want to thank my children, Catherine Allen Cooper Forbes and Cary Graham Cooper, for inspiring me; my husband, Cary, for enduring this long journey with me; my extended family, friends, and colleagues for cheering me on; and Daisy, my black lab, for providing her constant companionship and unconditional love.

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Introduction

"I started to write, and then it hit me. The natural Gemini (My astrological sign) ADD is showing through.
that paper is all over the place."
--Andrew

One of the first assignments in my freshman composition class at Howard

Community College comes from Langston Hughes's poem "Theme for English B":

> *Go home and write*
> *a page tonight.*
> *And let that page come out of you—*
> *Then, it will be true.*

The "page" can be composed of words or images or any combination of the two: the most

important element of this assignment is that the students attempt to create a true reflection

of themselves on the "page." These pages are then posted on the walls outside my office

and shared with the entire class as a first step towards establishing a community of

learners. Andrew responded to this prompt by creating a collage[1] that includes the

following:

> I started to write and then it hit me. The natural Gemini (My Astrological sign) ADD is showing
> through. that paper is all over the place. I deleted it all, and sat quietly, thinking about what to put
> upon that blank, white screen in front of me. Eventually, words started to drip, and then coalesce
> into thoughts, and finally, a unifying theme.
>
> Sort of.

In class, Andrew had little difficulty expressing his interesting, perceptive, and

sometimes offbeat thoughts. But asked to put those ideas on paper, he hit a wall. As a

pre-teen, Andrew had been diagnosed with Attention-Deficit/Hyperactivity Disorder

(AD/HD), sometimes referred to as ADD, which is estimated to affect between 3 to 7%

of the school-aged population around the world. What he says in his "page" reveals some

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[1] See Figure 1: "Andrew's "My Page for English 102."

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My Name is Andrew

I started to write, and then it hit me. The natural Gemini (My Astrological sign) ADD is showing through. that paper is all over the place. I deleted it all, and sat quietly, thinking about what to put upon that blank, white screen in front of me. Eventually, words started to drip, and then coalesce into thoughts, and finally, a unifying theme.

Sort of.

CAREER: I've always wanted to be a mechanical engineer. I knew it from the time I was about 8 years old. Then, one day, I saw how much math was involved in mechanical engineering, and what the profession is really all about. It turned me off to the career. Eventually, I decided on product and/or industrial design. It's kind of like all the fun and creative parts of industrial design without the math and heavy calculation.

A phone I modeled after that Nokia model that EVERYONE has.
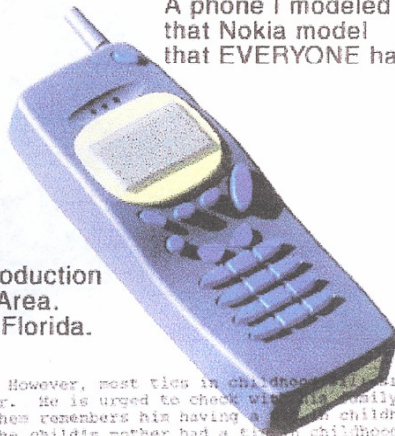
I've done some flyer work for a few production companies in the D.C. and Baltimore Area. I also did a flyer for an event down in Florida.

ur fingers taken simultaneously

LEFT HAND

I was one wierd kid. Wait, did I say was?

Am

Figure 1: Andrew's "My Page for English 102"

of the challenges AD/HD inflicts upon the individual. First, his identity is circumscribed

by AD/HD. The Gemini zodiac sign is that of twins: Andrew's "twin" is AD/HD. He

describes his first draft as being "all over the place." Effective organization of ideas is a

major problem the writer with AD/HD faces. When Andrew encounters difficulty with

his draft, he erases it all. Being impatient and unable to moderate a response to a

challenging situation are other problems for the writer with AD/HD. Finally, Andrew sits

quietly and allows his ideas to flow onto the page. But even then he is uncertain that he

has really found his "theme." His lack of confidence in his writing ability is revealed by

his comment "Sort of." The overall impression of his "page" is that the ideas are

"scattered." But Andrew does follow the style of Hughes' poem in his metacognitive

analysis. Hughes asks, "I wonder if it's that simple?" Andrew asks, "I was one weird

kid. Wait, did I say was? AM." AD/HD has caused Andrew, an intelligent and creative

student, to have serious and debilitating problems with written language output; there is

clearly a disconnect between his potential and his performance.

What is Attention Deficit/ Hyperactivity Disorder? From a scientific perspective,

AD/HD is the result of a complex neurological difference. AD/HD is "officially" defined

by the American Psychiatric Association in their 2000 *Diagnostic and Statistical Manual*

of Mental Disorders, Fourth Edition, Text Revision (*DSM IV-TR* 85-93). Three subtypes

of the disorder are recognized: Predominately Inattentive, Predominately Hyperactive-

Impulsive, and Combined Type (Appendix C). The essential feature of AD/HD is a

persistent pattern of inattention and/or hyperactivity-impulsivity that is more frequently

displayed and more severe than is typically observed in individuals at a comparable level

of development. For all types fulfilling the DSM-IV TR definition requires that some

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hyperactive-impulsive or inattentive symptoms must have been present before the age of

seven years and must have persisted for at least six months. Some impairment must be

evident in at least two settings (e.g., home and school). Further, there has to be clear

evidence that the symptoms are interfering with appropriate social, academic, or

occupational functioning. Finally, these symptoms are not related to another mental

disorder or retardation nor are they caused by brain injury. There is a separate category in

the *DSM IV-TR* for "disorders with prominent symptoms of inattention or hyperactivity-

impulsivity that do not meet the criteria for Attention-Deficit/Hyperactivity Disorder":

"Attention-Deficit/Hyperactivity Disorder Not Otherwise Specified." An example of this

type would be an individual whose symptoms appeared after the age of seven. Barkley

asserts that all "of this suggests that ADHD is probably the extreme end of a normal

psychological trait" (20). The diagnosis is based completely on the observation of

behavior; there is no definitive physiological test to determine AD/HD.

Attention Deficit/Hyperactivity Disorder qualifies as a disability because it

"substantially limits a major life activity such as learning" under the provisions of the

1973 Rehabilitation Act, Section 504 and the 1990 Americans with Disabilities Act

(ADA) under the category of "Other Health Impaired." While AD/HD can affect

learning, it is not itself a specific learning disability. However, from 20 to 30% of those

who are diagnosed with AD/HD also have a specific learning disability. An individual

with a specific learning disability is one who has a deficit in one or two areas (e.g.,

reading) while performing at or above average in other areas (e.g., math). AD/HD, on the

other hand, affects learning globally and compromises all cognitive functions.

The Rehabilitation Act applies to all colleges that receive Federal Funds, and the Americans with Disabilities Act applies generally to public and private colleges whether or not they receive Federal Funds. The Rehabilitation Act requires that students with AD/HD be provided with the academic adjustments and aids necessary to insure equal access to programs, courses, and resources. The Americans with Disabilities Act prohibits discrimination against otherwise qualified students with AD/HD and requires that reasonable accommodations be provided those students. But it is up to the student to disclose his disability. If the college is unaware of the disability, the college is not required to provide accommodations.

What do AD/HD and its prevalence have to do with college composition? Students with AD/HD like Andrew are in our college English classes; yet, Composition Studies has taken little notice of them. While we have a legal obligation to notice, our moral obligation to these students with AD/HD is even more compelling. In her article on learning disability and pedagogy, Linda White posits that issues surrounding learning disabilities are not often addressed in Composition Studies because of the tendency to view learning disabilities as the special "province of experts" (706). In fact, Sara Glennon, former Chair of Landmark College's[2] English Department, believes that few college English teachers are even aware of students with learning disabilities or with AD/HD in their classrooms, let alone the fact that these students learn differently and consequently need to be taught differently (Email). In *Learning Re-abled: The Learning Disability Controversy and Composition Studies* (the only in-depth analysis of the

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[2] Landmark College in Putney, VT, a two-year college offering the AA degree, is designed exclusively for students with AD/HD, dyslexia, or other specific learning disorders.

relationship between learning disabilities and composition studies),[3] Patricia Dunn

observes that "Composition Studies tends to discount neurological differences in people

and instead emphasizes socioeconomic factors as the primary cause of writing difficulty.

How we teach writing is a function of how we think people learn" (6). Thus, if we as

college instructors are unaware of people with AD/HD and how they learn, we are

probably missing the mark in how we are teaching them to write.

Certainly, composition teachers cannot be expected to diagnose AD/HD; we are

neither clinical psychologists nor physicians. In fact, because this disability is largely

invisible, we may not even recognize that a student in our class has AD/HD. But studies

have demonstrated that 4 to 12% of all school-age children suffer with AD/HD

(American Academy of Pediatrics 1159). Consequently, we can assume that as many as

4 to 12 % of the students in our college composition classes could be similarly affected.

While we composition teachers may not recognize the student with AD/HD, we certainly

can recognize and diagnose the writing/language problems presented and prescribe ways

to "fix" those problems.

My own son's experience is the exigence for this project. Now 30, he was not

"officially" diagnosed with AD/HD until he was a sophomore in high school. An

extremely bright and highly verbal student, he struggled with writing—in fact, I would

call him a tortured writer. But while the writing process was exasperating and even

painful for him, he did at times produce extraordinary written work. A poem[4] he wrote in

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[3] But even this work does not specifically address the impact of AD/HD on writing. Dunn states that it was
her intention to "do as complete a study as I could at that time on language-related learning disabilities….I
do think ADD is a worthy area of study" (Email).
[4] See Figure 2: "My Name is ADD."

My Name is ADD

By Cary G. Cooper

My name is ADD

Short for Attention Deficit Disorder

I will make you impulsive

you will do stupid things

I will distract you

Keep you from doing easy things

School work will come hard

daydreaming comes easy

I will make you hyper, maybe

I will give you tantrums

and energy you can't stop

I will make you creative

You will see what no one else sees

You will understand things in a different way

You can not cure me

You can only treat me

You will have me for life

My name is ADD

Figure 2: "My Name is ADD"

senior year of high school poignantly describes his struggle with AD/HD. What, I wondered, enabled him to successfully get his ideas on paper *sometimes*? And what at other times prevented it? Being aware of my son's struggle with writing made me more aware of my students who shared this challenge of writing with AD/HD.

Students with AD/HD do face a unique constellation of challenges when producing written language/text. In fact, the very process of writing pushes at these weaknesses. The executive functions which are most negatively affected by AD/HD are the very ones that are essential to producing writing.

Before we can consider the ways in which executive dysfunction impacts the writing process, we must understand what the executive functions are. Dr. Thomas E. Brown, a renowned AD/HD researcher, defines executive functions as "those higher-order systems of the brain that activate, integrate, coordinate, and modulate a variety of other cognitive functions" (*Attention Deficit Disorders* 26). Brown believes that the syndrome of AD/HD symptoms overlaps with impairments in executive functions (*Attention Deficit Disorders* 10). Executive functions can also be described as

> the planning and sequencing of complex behaviors, the ability to pay attention to several components at once, the capacity for grasping the gist of a complex situation, the resistance to distraction and interference, the inhibition of inappropriate response tendencies, and the ability to sustain behavioral output for relatively prolonged periods (Stuss and Benson qtd. in Reis, McGuire and Neu 126).

Russell Barkley, pre-eminent AD/HD expert, defines executive functions as those "self-directed actions of the individual that are being used to self-regulate. Most are private or covert (unobservable or cognitive) in form [i.e., thinking]" (56). They are the actions "we perform to ourselves and direct at ourselves so as to accomplish self-control, goal-directed behavior, and the maximization of future outcomes" (57). Furthermore, Barkley

theorizes that "the essential impairment in ADHD is a deficit involving response inhibition" (65). He believes it is control of this behavioral inhibition which fundamentally supports the effective working of four other executive functions: nonverbal working memory, internalization of speech (verbal working memory), the self-regulation of affect/motivation/arousal, and reconstitution (capacity to manipulate stored information).

There is an intersection between executive dysfunction and the constellation of problems with written output demonstrated by students with AD/HD. The actual problems observed on the page issue from AD/HD writers' difficulties in effectively organizing and planning over time; inhibiting impulsive action; effectively performing set-maintenance and set-shifting; mentally manipulating information and working with more than one set of information at a time; absorbing new information in an organized, coherent manner; drawing on previously learned information to perform goal-directed activities. Other observable problems in the writing process include inconsistent performance, poor time management, and procrastination. Assignments are often submitted late, or not at all. Extremely poor handwriting often interferes with the basic process of transcribing ideas to the page. Writers with AD/HD are also likely to suffer from perfectionism and writer's block, and are easily distracted from the task. They may not understand the assignment to begin with, and may produce a great paper on a completely unrelated topic. Or they could choose a topic that is too broad or too complex for the time and space of the assignment. Sophisticated and unusual ideas are often inadequately developed with poor or non-existent transitions. Extremely complex sentence structures and sentence fragments may appear side-by-side. Spelling is often

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poor and, sometimes, bizarre. They are impatient, avoid tasks requiring sustained effort, and lose things necessary for the task.

Writers with AD/HD also have positive traits—a high energy level, intelligence, high verbal ability, a unique perspective, an intensity about interests, creativity, and responsiveness to structure. However, they do lack the ability to consistently translate these assets into positive outcomes even though the raw materials for success are there. Further complicating the picture is the fact that there is a situational variability of AD/HD symptoms both within an individual and across individuals. Brown explains:

> The executive functions—paying attention, organizing, recalling, etc.—are intact; they are simply not responsive to higher-order processing. That is, the individual is not able readily to activate, deploy, and utilize these functions as needed. They are not readily turned off or on when needed; they are not responsive to "willpower" (*Attention Deficit Disorders* 26).

The behavior of students with AD/HD is often misinterpreted by teachers as indicating laziness or arrogance because they are bright and can do well *sometimes* and on *some* tasks. Russell Barkley observes, "ADHD is not a disorder of knowing what to do, but of doing what one knows….ADHD, then, is a disorder of performance more than a disorder of skill; a disability in the 'when' and 'where' and less in the 'how' and 'what' of behavior" (*ADHD* 314).

This dissertation argues that students with AD/HD face a unique set of challenges as writers. Their challenges need to be acknowledged, explored, analyzed, and addressed.

Overview of the Chapters

Chapter 1 presents a review of the literature on teaching writing to college students with AD/HD.

Chapter 2 examines the rhetorical construction of the individual with AD/HD and the problems inherent in the "official" *Diagnostic and Statistical Manual IV-TR* (*DSM IV-TR*) definition of AD/HD and the diagnosis that depends on it. The evolving understanding of AD/HD over time and the shifting descriptive terms attached to it are analyzed. Even now, the *DSM IV-TR* is undergoing revision; the *DSM V* is scheduled for publication in 2012. Russell Barkley takes issue with the current *DSM IV-TR* definition of AD/HD because he believes that it is not supported by research and that it puts the emphasis in the wrong place—on *inattention*. He contends that AD/HD is far more than an attention disorder. Instead, he proposes extending his hybrid model of executive functions to AD/HD. Barkley believes that understanding "time and how one comes to organize behavior within it and toward it, then, is a major key to the mystery of understanding ADHD" (338).

Chapter 3 presents the results of my qualitative study of four current college students and of six college graduate professionals who have been diagnosed with AD/HD. This study examines these questions: 1) How does the AD/HD identity affect them as individuals and as writers? 2) How does AD/HD affect their writing process? 3) What positive experiences have they had with writing? 4) What negative ones? 5) What coping mechanisms have they developed for the challenges imposed by AD/HD on the writer? 6) What is or has been helpful to them in the college English class?

Chapter 4 examines executive dysfunctions, AD/HD and the writing process. Brown's and Barkley's theories on executive dysfunction predict numerous cognitive deficits to be associated with deficits in behavioral inhibition in AD/HD. This chapter

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investigates how these cognitive deficits impact the writing process for the student with AD/HD.

Chapter 5 describes pedagogy that may be helpful to writers with AD/HD. Specific techniques and assignments are described to address the specific challenges faced. Theoretical underpinning is provided for the pedagogy suggested. Chapter Five also interrogates possibilities for further study. It is important to remember that while the challenges the writer with AD/HD faces are constant and debilitating, they are shared to some degree by others who have no diagnosed disability. The AD/HD writer's problems are at the extreme end of a spectrum of problems encountered by most writers. Because we are still learning about AD/HD itself, we should continue to investigate the impact of AD/HD on the writing process. In addition, we need to remember the principle of universal design: what is essential for some can be beneficial for all. The writing pedagogy that is especially helpful to the student with AD/HD can also be helpful to the "normal" writer.

Chapter 1: Review of the Literature

"[AD/HD] feels like bad vision except turned inward."
--Melissa

Composition studies has paid a great deal of attention to student differences in identity, including gender, race, and socio-economic status. It has also considered the generic problems of writing anxiety and of so-called "basic writers." But composition studies has almost completely neglected the problems and needs of college students with Attention-Deficit/Hyperactivity Disorder. In fact, not much has been done in any field on the impact of AD/HD on writing in any age group. Thomas E. Brown, one of the pre-eminent researchers on AD/HD, asserts that there "has not been much research on students who have problems with written expression, but preliminary studies indicate that persons with ADHD demonstrate a disproportionately high incidence of impairment in this respect" (*Attention Deficit Disorder* 51).

This literature review organizes the work that has been done on AD/HD and writing into five categories. The first centers on the work done under the auspices of the Conference on College Composition and Communication (CCCC), the most influential professional organization for college faculty who teach writing. The second looks at the area that has produced the most research on AD/HD and writing—studies on children eight to sixteen years of age. The third focuses on the only college level composition studies work that specifically addresses the needs of students with AD/HD. The fourth reviews studies on the writing difficulties experienced by learning disabled college students because writers with AD/HD may share some of the same problems. Finally, the fifth concentrates on Patricia Dunn's 1995 *Learning Re-abled: The Learning Disability*

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Controversy and Composition Studies, the only in-depth analysis of the relationship between learning disabilities and composition studies.

Composition studies has given very little attention to AD/HD and writing at its most important annual meeting: the Conference on College Composition and Communication (CCCC) Convention, most likely because of a lack of proposals. A review of the CCCC programs since 2000 reveals only four presentations focusing on AD/HD and writing, one in 2005, two in 2006, and one in 2008.

In 2005 in San Francisco, my own presentation, "The AD/HD Student and College Composition: Unlocking the Gate," described the challenges faced by the college writer with AD/HD and argued (as does this dissertation) that composition studies needs to acknowledge these students and address their needs (Cooper).

In 2006 in Chicago, Sara Glennon and Lesle Lewis of Landmark College presented "Invisible Papers, Invisible Challenges: Coaching College Writers with AD/HD," asserting that understanding the cognitive problems of students with AD/HD will help instructors understand their writing challenges. The students with AD/HD they studied presented a paradox: they had strong SAT verbal scores, could write well, and were confident about their writing skills; yet, they repeatedly failed English courses because they simply did not submit the required work. This failure occurred in spite of the fact that they often were active class participants, knew the material well, and cared tremendously about their writing. In other words, they are good writers who do not or cannot perform when necessary. One of Lewis's students expressed it this way: "Thinking is like flying and writing is like crashing." Glennon and Lewis described the Landmark College Academic Coaching Program and explained how it works to address

the complex problems of these writers with AD/HD. This coaching approach is designed to help students produce writing that truly reflects their own way of thinking. The coaching process is "co-active," based on the belief that the student is not broken and that any change will be more lasting if the student comes up with the solution himself or herself. The coach has two major responsibilities in the process: ask questions and make observations. The coach helps the student to set short and long term goals. Glennon stressed that writing courses should be designed so that process and metacognition (thinking about the process of learning) are emphasized. It is important for the teacher to remember that the challenges the writer with AD/HD faces are not always visible; the writer with AD/HD may encounter these challenges before or outside of the process of producing text.

The third presentation, also in Chicago in 2006, was "Ensuring the Intellectual Access to the Process: The Coalition Between Learning Disabled Students and Project-Based Writing" by Zach Hickman of University of Miami, Florida. Students with AD/HD were included in the "learning disabled" category even though approximately only 25% of those diagnosed with AD/HD also have a diagnosed learning disability. Because Hickman strongly suggested that AD/HD may not be a "real" disorder at all, what he had to say about AD/HD and writing was problematic.

In 2008, Sara Glennon and Jill Hinckley of Landmark College presented a workshop entitled "Dynamic Classrooms for Dynamic Learners: Guiding the Potential of Students with AD/HD." This "workshop was designed to help current college writing faculty, administrators, disability services, and faculty working with first- and second-year students to manage the increased instructional challenges brought about by students

who learn differently and who succeed more easily with less traditional college teaching practices" (NCTE). Based on their research, Glennon and Hinckley presented their "Six Principles of Best Practice" in teaching writing to college students with AD/HD.

Evidence of CCCC's increased awareness of disabilities is provided by its position statement on "Disability in CCCC," issued in 2006, which states in part that "CCCC recognizes that students, staff, and faculty on college campuses include people with a wide range of visible and invisible disabilities—cognitive, learning, emotional, psychological, and physical." Further, CCCC affirms "the centrality of disability to the human experience and the value of disability as a critical lens." CCCC promises to do the following for people with disabilities: "enhance the conditions for learning and teaching," "support a wide range of research," and "promote professional development" (NCTE "A Policy on Disability in CCCC").

Another positive sign is the new Special Interest Group (SIG) which has been approved by CCCC for 2008—"Disability Studies." Also, in the 2008 CCCC program, "Disability" is listed as an interest emphasis along with "Class," "Gender," "Race/Ethnicity," and "Sexuality" (NCTE *CCCC Online 2008 Program*). But in spite of CCCC's increased awareness of disabilities in principle and in general, in reality it has virtually overlooked AD/HD, in particular. For example, since 2003, there have been a total of 153 disability-oriented presentations at CCCC, but only four of these have focused on AD/HD (NCTE).

When research has been conducted on AD/HD and writing, the most frequently studied component of writing has been the problems children with AD/HD have with handwriting. Studies have documented that the handwriting of children with AD/HD is

significantly less mature than that of their peers, displaying problems in letter formation, alignment, and neatness (Reid and Lienemann 53). Poor spelling is also a problem. These problems with transcription and spelling are serious for two reasons: "they can influence perceptions of how well a student writes and interfere with the execution of composition processes" (Reid and Lienemann 54).

In 2006, Reid and Lienemann were able to find only two studies on other aspects of writing in children with AD/HD. The first was by Mayes, Calhoun and Crowell (2000) who studied 86 students eight to sixteen years old who had AD/HD with a learning disability or AD/HD without a learning disability (54). The Wechsler Individual Achievement test was used to assess their writing; the Wechsler Intelligence Scale for Children III was used to assess their IQ. The researchers looked for a discrepancy between IQ and achievement as the basis for their conclusions about the composition skills of these children. They found that students in the AD/HD with a learning disability group had a higher degree of impairment in written expression than did the AD/HD without a learning disability group, although they also had a degree of impairment. There was no control group in this study.

The second study, published in 1994, by Resta and Eliot studied the written expression of twenty-one children between the ages of eight and thirteen with AD/HD. They used the Written Language Assessment test to evaluate the writing skills of these children with AD/HD. Students wrote on an expressive topic, a creative topic, and an instructive topic. Resta and Eliot reported that the writing skills of the children with AD/HD were significantly below those of the control group in terms of word complexity, written language, productivity, and general writing ability.

In 2001, Susan de la Paz reported on her study using the self-regulated strategy development approach to instruction to help three middle-school students: two with AD/HD and one with a learning disability. The self-regulated strategy development technique teaches students strategies to follow for writing and for reflection on their writing process. De la Paz notes that prior to this study, interventions aimed at improving academic outcomes of students with AD/HD have not targeted composition. More than twenty studies using self-regulated strategy development have been published, but those studies focused on "normal" students and learning disabled students, not on students with AD/HD. She hypothesizes that "with respect to teaching elements of the writing process, one may be able to apply forms of instruction that have been successful with students with learning disabilities" (38).

These studies demonstrate that self-regulated strategy development techniques have been successful in teaching students to self-regulate their writing performance and have resulted in substantial improvements in the quality and quantity of their writing. De la Paz's study sought to discover whether the self-regulated strategy development instructional techniques would have similar positive results with students who have AD/HD and/or specific language impairment.

First, the students in this study were taught a specific strategy for planning expository essays before beginning writing. This strategy employs the mnemonics of PLAN and WRITE to help the students remember the steps, prompt them to plan before writing and remind them to reflect on the qualities of good writing while composing. The first four steps consist of the planning strategy, PLAN: 1) Pay attention to the prompt; 2) List main ideas; 3) Add supporting ideas; 4) Number your ideas. The writing strategy,

WRITE, includes the next five steps to help the student to remember to reflect and to continue the planning process while composing: 5) <u>W</u>ork from your plan to develop your thesis statement; 6) <u>R</u>emember your goals; 7) <u>I</u>nclude transition words; 8) <u>T</u>ry to use different kinds of sentences; 9) <u>E</u>xciting, interesting, $100,000 words (40).

The self-regulated strategy development approach includes several stages of learning: 1) describe the writing strategy; 2) teach (or activate) background knowledge; 3) review the student's initial writing ability; 4) model the writing strategy; 5) assist the student during collaborative practice; and, 6) support the student during independent practice (41). Altogether, this instruction method provides a scaffold for the student's learning from the introduction of the self-regulated strategy development concept to the student's independent and competent use of the strategy.

The scoring procedure used by de la Paz included evaluating the written plans for completeness and accuracy. The evaluation of the essays produced was based on the number of words written, the number of functional essay elements present, the number of non-functional elements present, and the overall quality of the essay (holistically scored). Functional elements include the categories of premise, reasons, and conclusion. Non-functional elements include information that is repeated unnecessarily, is off-topic, or is inappropriate for an expository essay.

De la Paz reports that before learning the self-regulated strategy development technique, students did little or no planning before writing. But after learning to plan, these students produced good writing plans and substantially better papers (44). A month after the instruction, the students' essays continued to be qualitatively and quantitatively better than those they produced before learning the self-regulated strategy development

technique. De la Paz concludes that the self-regulated strategy development technique could be helpful to students with AD/HD and language impairments because it helps them have a more sophisticated approach to the writing assignment and helps them improve the quality, length, and structure of their essays.

Reid and Lienemann studied three elementary school children with AD/HD who were instructed in the self-regulated strategy development technique for story planning and writing. Then they were given picture story prompts and told to plan their story (narrative), include all the parts of a good story, and write as much as they could. The stories were evaluated on the number of story parts included and the number of words written. Before the self-regulated strategy development instruction, the students' performance was inconsistent in that stories ranged from being nearly complete to having only a few of the parts necessary for a coherent story. After students learned and practiced the self-regulated strategy development technique, their stories improved significantly, more than doubling in length and consistently including all of the story parts. The template helped the students be consistent in their performance. The students were also able to set goals for themselves and to monitor their progress toward those goals. Reid and Lienemann conclude that self-regulated strategy development interventions are "well-suited" for students with AD/HD because the template reduces the burden on working memory, enabling them to focus on the task at hand. In addition, the self-regulation components help to remind the students of their goals and to persist with the task by providing them with feedback.

Re, Pedron, and Cornoli's 2007 study in Italy of three groups of elementary school children who exhibited AD/HD symptoms (as described by their teachers) and

who had difficulties with expressive writing demonstrates that while these children can usually produce many ideas, they are often unsuccessful at producing text that is adequate and well-organized. Their difficulties with organization and planning, as well as with spelling, also have the effect of limiting the number of ideas they express in writing. The study asked students to respond to a prompt (either pictorial or verbal) by writing an expressive essay. In comparison to the control group, and despite having an adequate standard of general abilities, the students with AD/HD scored lower in all areas being assessed, wrote less, and made more errors. The writing was assessed on its adequacy (in relation to the task request), structure (organization), lexicon (quantity of different words), and grammar (correct punctuation, subdivision in paragraphs, correct verb tenses, and correct gender and number in nouns, verbs and adjectives). None of the students with AD/HD in this study took medication for AD/HD symptoms.

I have found only one college level composition studies work that specifically addresses the needs of learning disabilities and writing students with AD/HD: *Teaching Writing to Students with Learning Disabilities: A Landmark College Guide* (2001) by MacLean Gander and Stuart Strothman. Landmark College, Putney, Vermont, is a two-year college offering the AA degree and is designed exclusively for students with AD/HD, dyslexia, or other specific learning disorders. Gander and Strothman's book is the result of the U. S. Department of Education's Title VII demonstration grant program, "Ensuring Students with Disabilities Receive a Quality Higher Education."   Lynne Shea, the Director of Landmark College's National Institute for LD/ADHD Research and Training, expresses the underlying philosophy of this project: "While our focus is always on exploration and innovation—establishing what works for individuals—our practices

are all founded on one basic principle: our students can learn, given the right instructional model and educators who will work to discover how to support individual learning" (vi).

Gander and Strothman assert that a primary purpose of their text is to take a first step at creating "an integrated theory of writing that genuinely addresses the needs of students with learning disabilities and incorporates the perspectives of those who teach writing to them" (14), something that does not currently exist. (They seem to recognize AD/HD as a unique disorder, but nevertheless include it in the broad category of "learning disorders.") Toward this end of creating theory, they begin by presenting a brief overview of the learning disabilities field and the conflicts within it. They explain that the current learning disabilities field's cognitivist orientation and the composition field's current social constructivist orientation cause the two to ignore one another almost entirely. It would be to the advantage of both, they argue, to work together:

> In fact, the two fields possess very little common ground, even though the domain they share—writing, learning, and students with learning problems—is quite broad. It may be argued that the practical experience and theoretical frames of the composition field, as derived from direct work with students who experience difficulty in learning to write effectively, could provide rich and deep contributions to the understanding of how learning disabilities affect writing ability. Likewise, the understanding within the LD field of how "normal" processing may be impaired in various ways, and particularly of how best to address these learning issues at a practical level, could contribute in significant ways to the corps of disciplinary knowledge within the composition field (30).

Their suggested pedagogy is based on the concept of the "interactive developmental paradigm," which posits that there are elemental functions (coming from general neurocognitive processes) involved in learning. In information processing, those neurocognitive processes include "attention, memory, language, visual-spatial ordering, temporal-sequential ordering, fine and gross motor skills, higher-order cognition, and social cognition" (10). Some specific elemental functions occurring under the attention process would include, for example, self-monitoring, tempo control, and planning.

Developmentally appropriate or deficient academic performance is the result of the ways these elemental functions interact. It is possible, Gander and Strothman claim, to analyze an individual academic task and identify the elemental functions it demands, to assess performance in relation to these functions, and to develop teaching strategies to address any weaknesses. By using this developmental model and understanding how students and how academic demands change, and "by seeing learning problems as based in a complex and interconnected array of cognitive functions and processes, it is possible to avoid the sort of reductionism and simple-mindedness that the unitary label, 'learning disabilities,' often fosters" (11).

Gander and Strothman echo the lament that composition studies has largely overlooked the needs of students with learning disabilites and AD/HD: "The questions of how to understand the writing difficulties of students with learning disabilities, and how to best serve them in the writing classroom or tutorial, are fundamentally marginalized" (30). They do examine the usefulness of four composition theories to the study of writing problems of learning disabled students and students with AD/HD: expressive, cognitive, critical, and social constuctivism. They point out that while the non-evaluative and pressure-free approach of expressive theories, like Murray's and Elbow's, may be helpful in freeing the learning disabled writer or writer with AD/HD, it may also create anxiety in these students who need structure to direct their learning and writing. For example, highly articulate students with AD/HD may not have a problem with "expression," but rather with selecting and organizing the many ideas they produce. While the student-centeredness of expressivist theories may be a positive for learning disabled students and students with AD/HD, the unstructured classroom may not be. Finally, Gander and

Strothman note that Murray and Elbow assume that their processes will work in the same way for all students. The cognitivist theories (Flower and Hayes, Bereiter and Scardamalia) are helpful in that they examine writing from a developmental standpoint and are the most closely aligned with the learning disabilities field. The critical theory of Paulo Freire can be applied to learning disabled and AD/HD students, Gander and Strothman suggest, if such students are considered to be the "historically oppressed and disenfranchised" in composition studies. However, these students may not respond positively to a destabilized classroom that calls everything about teaching and learning into question because "the student with learning disabilities often relies on the familiar, consistent structure of the classroom's social hierarchy as a learning framework" (24). Social constructivist theory (e.g., Patricia Bizzell and Geoffrey Chase) focusing on clashing worldviews is relevant for three reasons: 1) learning disabled students often have great difficulty adapting to change; 2) learning disabled students are often literal thinkers, having difficulty with abstract ideas; 3) some learning disabled students lack intellectual curiosity in canonical areas.

Gander and Strothman provide frameworks for diagnosing writing problems in learning disabled and AD/HD students and tips for effective writing instruction, including teaching writing as a process. They also include practical suggestions for teaching strategies for sentence, paragraph, and essay skills. Chapters are also devoted to critical writing and multi-modal teaching techniques. While all of this information seems helpful, no empirical evidence is provided to attest to the validity of either their assumptions about learning disabled and AD/HD student writers or about the effectiveness of the recommended pedagogy for these particular students. It is assumed

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that Gander and Strothman have based their conclusions on their experience with learning disabled and AD/HD students at Landmark College.

Because so little research has been conducted on college student writers with AD/HD, it may be instructive to look at the studies that have been conducted on the writing difficulties learning disabled college students experience since writers with AD/HD may share some of the same problems. Also, it is estimated that as many as 25 percent of those who are diagnosed with AD/HD also have one or more learning disabilities[5]. But the research on learning disabilities is also scant. In a review of the literature published between 1990 and 2000 on college students with learning disabilities and writing difficulties (LD/WD), Li and Hamel found only 38 articles in 67 peer-reviewed journals that addressed this topic. *None* of these articles specifically addresses AD/HD and writing difficulties. Included in the list of journals are those most often referred to by teachers of writing—*College Composition and Communication, College English, English Journal* and *Teaching English in the Two-Year College.* Li and Hamel identify four major topics that are addressed in these articles: 1) overview of assistive technology for students with LD/WD; 2) empirical studies of the effectiveness of assistive technology for college students with LD/WD; 3) characteristics and error patterns in the writing of college students with LD/WD; and, 4) instructional methods (29). Li and Hamel cite Carolyn O'Hearn's 1989 article in *College English* bemoaning the lack of research on college writers with LD: "the relative absence of scholarship in this area is indeed unfortunate because composition is crucially important to the success

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[5] Dyslexia is the most common language-based learning disorder. Other learning disorders include dysgraphia, dyscalculia, auditory and visual processing disorders, and non-verbal learning disorders.

or failure of the LD college student" (29). Unfortunately, Li and Hamel have found that this need has not been addressed in the intervening years.

Li and Hamel identify two problems with the research that has been done on students with learning disabilities and writing difficulties: the term "writing disability" has not yet been clearly defined and the diagnostic criteria for learning disabilities and writing difficulties differ across the studies.

Six of the articles Li and Hamel found focus on the available assistive technology. Word processing has been shown to alleviate the "mechanical" burden of producing text. In addition, software that combines visual and auditory input offers cues to the writer for help with such things as word choice, organizing, outlining, generating topics, and grammar correction. There are also speech recognition systems and speech synthesis programs available. Multi-media technology (e.g., PowerPoint) can also be used as an alternative to traditional writing processes and formats. Only four empirical studies have addressed how effective this assistive technology is in helping students write, and these have been inconclusive.

Seven articles (six of which are research reports) discuss the characteristics and error patterns of college students with learning disabilities and writing difficulties. These studies demonstrate that these students make significantly more mechanical errors (spelling, punctuation, capitalization) and have more problems with content (planning, organizing, coherence) than "normal" writers. In addition, these students have more problems with the writer-audience relationship.

The remaining twenty-two articles present instructional strategies to help the student with learning disabilities and writing difficulties. Four categories of instructional

strategies are identified by Li and Hamel: 1) instructional strategies involved in different writing stages; 2) professional and peer tutorial support; 3) whole language approach to writing; and, 4) other accommodations and support. A number of recommendations emerged from these studies. First, provide more time and more opportunities to the students to write on self-selected topics that are meaningful and authentic. Teach reading, writing, listening and speaking in an integrated way (the Landmark College Method). Teach to the student's strengths rather than focusing on remediation of weakness. Employ various modalities for teaching (e.g., visual and auditory). Be empathetic and give positive feedback. Use collaborative learning and peer evaluation to help strengthen the social skills of the student with learning disabilities and writing difficulties. Focus on writing as a process. Incorporate reflective portfolios into the course design because these allow writing to be examined over time. Base the writing course design on "write to learn" principles, rather than those of "learn to write." Make classroom modifications that will be helpful to the student with learning disabilities and writing difficulties (e.g., taped texts, note takers, words processors, speech-recognition computers).

Based on their review of these articles, Li and Hamel make a number of recommendations for future research on the college student with learning disabilities and writing difficulties. First, a clear definition of the "learning disability" term is needed. There also need to be constant standards either in regard to the sample selection and/or to the instruments used to measure writing performance. More research is needed on assistive technology to determine which types are most effective for which kinds of writing. College faculty across disciplines need to be made aware of the special needs of

learning disabled students and the ways to meet those needs. Especially important, note Li and Hamel, is the need for empirical studies about learning disabilities and writing difficulties in college. None of the twenty-two articles on instructional support was an empirical study; instead, they provided lists of "what to dos" and "how to dos" (44). Attention must also be given to college writing teachers who may be overwhelmed with the number of students they have. How can they provide the level of individual attention and support the learning disabled student seems to need? Questions also need to be asked about the way writing is being taught in college: "Is writing as it is currently conceived the only valid way of processing and expressing university level knowledge?"(45) The cognitive process needs to be studied as do the writing problems learning disabled students have. An examination of how well students with learning disabilities and writing difficulties perform in collaborative settings needs to be undertaken. There is also a need to look at the transfer of writing skills and techniques learned in the writing class to other content areas. Finally, Li and Hamel assert, it is necessary to look at the internal factors that directly or indirectly affect the writing performance of students with learning disabilities and writing difficulties (e.g., fears, anxieties, motivation, perseverance, and internal control).

In their 2004 article in *College Composition and Communication* ("A New Visibility: An Argument for Alternative Assistance Programs for Students with Learning Disabilities")¸ Kimber Barber-Fendley and Chris Hamel also argue for a "new visibility" for learning disabled students in college writing classes. Their review of five major English journals (*College Composition and Communication, College English, Journal of Basic Writing, Teaching English in the Two-Year College,* and the *ADE Bulletin*) from

1979 to 2003 found only twelve articles on learning disablities. (*None* of these articles specifically addresses AD/HD.) These twelve articles, they assert, address the four major issues of learning disabilities in English studies: 1) identification of the learning disabled student; 2) explanation of accommodations; 3) recommendations on classroom learning disabilty teaching strategies; and 4) the need for awareness of learning disabilities. Barber-Fendley and Hamel conclude that composition studies has not appropriately attended to the learning disabled college writing student:

> At our worst, we have tried to exclude those with LD. At our best, we have tried to identify students with LD without having the knowledge to do so, to remediate them by addressing their grammatical habits, and to offer them accommodations we do not fully understand….As a field, we do not truly know what a LD writer is. We do not truly know how accommodations affect writing processes, and we have offered primarily minimum, uncritical research toward understanding complex LD issues" (512).

Certainly, this complaint is even more applicable to AD/HD.

Two of these articles stressing the need for awareness of disabilities appeared in *College Composition and Communication.* The publication of these articles is significant because it demonstrates that CCCC acknowledges the importance of disabilities. In the first, "Becoming Visible: Lessons in Disability" (February 2001), Brueggemann, White, Dunn, Heifferon, and Cheu assert that "we five composition teachers have joined our voices in a chorus—a chorus to break the silence" about disability in composition studies (368). Their goal is to disrupt the incorrect assumptions they believe most college composition teachers have about physical disabilities and learning disabilities. They advocate teaching writing in a way that will "enable" rather than marginalize the disabled student. The article begins with a statement of how difficult it had been to "get to this 'visible' moment" (368) in composition studies, which had previously largely ignored the issues surrounding disabilities and teaching writing. They stress that composition

teachers should try to "see differences in *abilities* (not *disabilities*)—like other differences of gender, race, ethnic backgrounds, and class—as generative in their place within writing classrooms" (392).

The second, "Learning Disability, Pedagogies, and Public Discourse" by Linda Feldmeier White (June 2002) also argues for more awareness of learning disabilities in composition studies and in the composition classroom. White examines the divisions and controversies in the Learning Disability field: how learning disability is represented in public and professional discourse; how the origin of learning disability is disputed (biological or social construction); and how methods of remediation (behavioral or holistic) are contested. She calls for a new approach to learning disabled students in the college classroom: "The accommodations that have developed for students with LD often reveal features of schooling that serve to invent or increase differences among students. We can create better assignments if we use the lens provided by LD to examine whether teaching practices that require accommodations are really necessary" (728). In other words, the best pedagogy is that which works for all students. Unfortunately, White devotes twenty-two pages of her article to a lesson on learning disability and only two pages to learning disability and composition. This is perhaps a testament to White's underlying assumption that people in composition studies know very little about learning disabilities.

Barber-Fendley and Hamel themselves believe that the "lack of LD visibility" has been "mainly due to LD's prominent system of accommodation that absorbs virtually all the intellectual dialogue about LD" (515). They advocate an alternative to the

accommodation system for the learning disabled students in composition classes,

challenging the metaphor of creating a "level playing field" with accommodations:

> The ability of this strong, controlling metaphor to morph into vague concepts of fairness has not only shaped public attitudes but has conditioned academics to see the only visible LD issue as accommodation and the debate over the 'fair' use of it. Because accommodation is explained, justified, rationalized, and defended as well as attacked, challenged, and criticized through the level playing field, this metaphor has become a stalemate battlefield, making fairness the unquestionable hero of both sides, setting them in opposition, in difference, and ultimately making the critical needs of students with LD silent and invisible (521).

Instead, they argue for implementing "alternative assistance" because it "could awaken a

new visibility for students with LD in our writing programs" by offering a new way to

allocate resources through the liberal theory of distributive justice (522). Alternative

assistance programs recognize that "fairness" is not an issue. Instead, help is provided to

those who need it where and when they need it. These programs are initiated by the

department or program rather than by the student and thus are not limited to classroom

practice. Consequently, Barber-Fendley and Hamel claim, an "underground help network

is produced so that students with LD have a real choice whether to self-disclose.

Assistive programs, designed by thoughtful and immersed scholars, teachers, and WPAs,

support LD students' inclusion in writing classrooms while maintaining their privacy and

dignity" (530). They believe that the first step in creating visibility for learning disabled

students in composition studies is for learning disability scholars and compositionists to

"boldly, assertively declare students with LD will receive alternative assistance, special

treatment, unique opportunities, singular advantages that mainstream students will not

receive" (532). Not only will learning disabled students be helped with this new

approach, but, they assert, as composition instructors work to find new ways to help these

learning disabled student writers, they will also be working to find new ways to help all student writers.

One of these articles focusing on classroom practices for learning disabled writers appeared in the December 2004 issue of *Teaching English in the Two-Year College*: Ricia Gordon recounts his experience with a small group of learning disabled students at Landmark College in his 100-level composition class. These students had recently completed a developmental writing course that they had to take because they had profound problems with reading comprehension, abstract thinking, and written expression.

To help this group complete the required 100-level writing course, Gordon developed and employed specific teaching strategies that he describes in this article. He began with a review of the learning disabled students' records. He found the following recurring weaknesses: 1) problems with working memory, short-term memory, and attention; 2) slow information processing; 3) problems with mechanics, vocabulary, and spelling; 4) weak decoding skills; 5) poor reading comprehension; 6) problems with abstract reasoning and verbal concept formation; 7) problems with sequencing and organization. The strategies he developed fall into four categories: reading for writing; prewriting; writing the paper; and assessing and revising.

To help students with reading comprehension, Gordon created a template to help students identify and label the parts of a reading assignment and then to write a one sentence summary of each part or "chunk."[6] On another form, students were required to

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[6] "Chunk" refers to a manageable and logical sub-section of a work in progress or of a completed work.

list the author's name, the title of the article, the thesis, and the main ideas. In addition, they identified the author's purpose and intended audience. Then they recorded any questions they had. The next step was to write a summary of the entire reading assignment. Finally, students were asked to bring particular types of questions to class for discussion—interpretive (how/why) or informational.

Because Gordon realized that generating text is particularly difficult for learning disabled students, he made this aspect of the writing process very explicit by creating activities that helped them think about their ideas prior to writing. They were taught to use Socratic questioning to help them focus first on a topic and then to generate ideas about that topic. In addition, Gordon presented model student essays that the class analyzed using a set of guiding questions. Finally, he provided a specific template for each writing assignment that broke the essay into parts.

For the writing phase, Gordon took the class to the writing lab where they worked on computers to write their first draft. He circulated while the students were working, giving support as needed to each individual. He also used the technique of asking students to talk about their ideas and then having them immediately write those ideas down. He also divided the paper into "chunks," requiring that certain parts be due in different classes. Gordon asserts that this technique of breaking the writing process into "micro-units" helps to relieve anxiety, make the writing project manageable, and improves the connections between the parts of an essay.

For the assessing and revising portion, Gordon first had the students complete a self-assessment questionnaire when they submitted their finished assignment. This questionnaire asked them to look at the writing process as well as the writing product.

During a revision period, students brought their work to class and completed a revision planning form using the grading rubric Gordon had provided. He met with students individually in conference to review the plan for revision.

Gordon found that the scaffolding he provided for these students did help them complete the course successfully. However, there were three persistent general problems: "breakdowns in integration and linkage of ideas, weaknesses in vocabulary, and difficulties understanding and using the standard forms of grammar and syntax" (163). Gordon recommends that college teachers working with learning disabled students should provide instruction that specifically addresses their needs, that is: 1) include instruction in vocabulary, grammar, and integration of ideas; 2) provide a variety of opportunities to read, think and write critically; require more papers to provide more practice and feedback; 3) encourage students to move beyond concrete, obvious analysis; 4) use a multimodal approach to teaching (e.g., film, video); 5) provide sufficient time and strategies for revision.

In *Learning Re-abled: The Learning Disability Controversy and Composition Studies* (1995), the only in-depth analysis of the relationship between learning disabilities and composition studies, Patricia Dunn examines the gap in composition pedagogy "through which a small but significant number of college students" with learning disabilities are falling (4). Dunn incorrectly conflates "learning disability" with dyslexia, asserting that her focus is solely on those students who are dyslexic, that is, as she defines them, those who have a difficulty with reading and/or writing that is unexpected given the individual's IQ and educational background. The National Institutes of Health reports that between 15 and 20% of the people in the United States have a language-

based disability. While dyslexia is the most common of these language-based disorders, it is only one type of learning disorder; others include dysgraphia, dyscalculia, auditory and visual processing disorders, and non-verbal learning disabilities. Dunn specifically states that her study does *not* address AD/HD (or dyscalculia). However, many of the issues she interrogates are also relevant to a study of AD/HD and college composition because as many as 25% of those who have AD/HD also have a co-morbid specific learning disability.

The basic learning disability controversy, as Dunn frames it, is similar to the controversy surrounding AD/HD: there are those who believe it is an "identifiable phenomenon caused primarily by biological differences, and those who believe that LD, if it exists, is caused primarily by social factors" (10). Experts disagree about the causes, manifestations, and treatment of learning disorders as they do about those of AD/HD. Dunn asserts that the college composition instructor should be educated about the talents, challenges and needs of these dyslexic students.

Dunn points out that the most influential voices in composition—Shaughnessy, Britton, Berthoff, Freire, Rose, Shor, Elbow, and Macrorie—have largely focused on sociological, rather than neurological, explanations for writing difficulties (46). Traditionally, composition studies has not dealt with learning disability or with learning differences.

Further, Dunn notes that incoming college students who are deficient in writing skills are often placed in "Basic Writing" classes for remediation under the assumption that these writers come from "*under*priviledged social backgrounds" (49). There is no

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allowance, she says, for students who are placed in developmental writing classes because of "multitudinous surface errors due to a neurological learning difference" (49).

In 1995, Dunn observes, the proposal form for the Conference on College Composition and Communication (CCCC) included a new interest emphasis, "Writing and Difference," which included issues of "race, ethnicity, class, gender, orientation, language, and nationality—but not learning difference" (51). Dunn asserts that a composition theory is needed to "account for those few students whose writing or reading problems cannot be fully explained by environmental factors" (57). She calls for more research in composition studies on learning disability and how it affects writing.

Dunn examines the theoretical assumptions of the experts who represent contemporary writing theory, beginning with Mina Shaughnessy's *Errors and Expectations* (1977). In this entire discussion, Dunn assumes that learning disabled writers are also "Basic Writers." This equation is not always true; many incoming college freshman with learning disabilities and/or AD/HD place in college-level writing classes based on SAT scores or on placement exam scores. Dunn posits that one of Shaughnessy's greatest contributions is that she tied the remediation of error to the reason the student is making the error. Where Shaughnessy fell short, Dunn believes, is that she attributed error primarily to the student's inexperience as a writer and did not consider the possibility of learning difference or "neurological difference" as a cause. Shaughnessy assumes a "natural" ability for language will develop in a student if given enough practice. This is not true for learning disabled students or for students with AD/HD.

Dunn notes that Bartholomae completely overlooks the learning disabled writer in his "The Study of Error" (1980) by eliminating "unruly or unpredictable language use" as

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a problem for Basic Writers. In fact, this unpredictability in language use happens all the time for learning disabled writers and is probably caused by a processing or retrieval difficulty. Patricia Bizzell incorrectly assumes, according to Dunn, that it is the clash between the student's home and academic cultures (different discourse communities) that is causing problems and does not consider learning disability as a cause. James Britton never questions the idea of writing development as a natural activity that occurs for all students in the same way, says Dunn. He believes that people learn to write implicitly and assumes everyone learns in the same way. Dunn points out that Janet Emig in her groundbreaking 1971 study, *The Composing Processes of Twelfth Graders*, probably inadvertently eliminated anyone who might have had a learning disability because her volunteers were "interested students who were 'good' at writing" (70). Dunn notes that in Emig's 1978 essay, "Hand, Eye, Brain," she does advocate having English professors learn about the physiology of writing; unfortunately, the Composition Studies field has largely ignored this advice. Ken Macrorie (1984 *Searching Writing)* is another theorist who assumes that the mind works in the same way for everyone. Peter Elbow's emphasis on fluency to overcome writing anxiety, Dunn agrees, will help learning disabled students as well as others, but Elbow's assumption that surface errors will disappear as the student gains confidence and fluency is simply not the case for the learning disabled writer. Ann Berthoff's concept of writing as a way of making meaning does not work for learning disabled students because writing simply may not be the best way for them to "make meaning." Dunn notes that even in Ira Shor's "liberatory classroom," the learning disabled student has been ignored. Here again it's believed that the students' writing will naturally improve if they are allowed to choose topics they are interested in and most

problems with "code or form" (72) will automatically disappear with practice and political commitment. There are no provisions made for the students who want to learn but whose learning disabilities make that very difficult.

Dunn concludes that learning disabilities specialists would agree with composition theorists that context and social situation are important in learning and that practice must be informed by analysis of how people learn. "However, its [Composition Studies'] glaring blind spot concerning learning disabilities has reached a critical point and needs to be addressed immediately in graduate schools, professional journals, and national conferences" (73).

Dunn's observations on learning disabilities and writing are based on her experience in tutoring her six year old dyslexic nephew and in interviewing three learning disabled students at Utica College who have been successful and who have an understanding of their strengths and weaknesses. She wanted to give voice to these students, to give them an opportunity to describe how their learning disability affects their lives. Dunn believes that young people with learning disabilities are being made to feel that their reading and writing difficulties are caused by a "moral flaw" of some kind (110). She asserts that this is the real disability—the learned idea that the learning disabled individual is somehow inferior to his/her peers. The learning disabled students interviewed have all been the victims of this useless advice: "If only you would try harder, concentrate more, spend more time, then you would be successful" (117). They are already trying harder, concentrating more and spending more time than other

"normal"[7] students, says Dunn, often without the expected accompanying success. They have all experienced social ostracism because of the learning disabled label. Ironically, this label is both friend and foe. While it helps to explain the difficulties they have with writing and provides accommodations for learning, at the same time it singles them out and identifies them as different, as the other.

These three students all agreed, Dunn reports, that they wished their professors would be more open-minded and more willing to learn more about learning disabilities and how they affect their learning and performance. Unfortunately, they have all experienced humiliation in a classroom where the teacher singled them out by drawing attention to their learning disability.

Dunn recommends rethinking the theory and practice of teaching writing in light of what we know about learning disorders. Then she describes pedagogy that will "fill the gaps" for learning disabled students. First, she calls for a change in attitude about learning disorders. Writing instructors need to be sensitive to the challenges their students face. Dunn provides a laundry list of some idiosyncratic features of writing that may be produced by those with learning disorders as well as some typical error patterns and some traits of the students themselves. What a teacher should do if these features are present in a student's writing is less certain because by law the college student must disclose the learning disorder; the teacher cannot initiate that conversation. Nevertheless, being aware that learning disabled students learn differently is important for the college teacher.

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[7] "Normal" is a problematic term because defining one group as "normal" necessarily defines others not in that group as "abnormal." It is impossible to define, for example, a "normal" writer. For want of a better term, "normal" is used in this paper to refer to the majority of students or writers, etc.

Probably the best way to handle this situation, Dunn believes, is to make alternative approaches to teaching and assessing writing available to the whole class. Her suggestions include the following techniques:

1. Move away from teacher-centered instruction (lecture) to student-centered instruction (hands-on learning);
2. If lecture is necessary, provide a multisensory link to the lecture (e.g., an outline) in advance;
3. Provide alternatives to timed in-class essay exams;
4. Break long, complex assignments (e.g., term papers) into smaller pieces and provide guidance along the way;
5. Review old material before introducing new ideas and help students to relate information to their lives;
6. Encourage the formation of study groups outside of class;
7. Always discuss and review required readings;
8. Provide scaffolding (e.g., templates) for writing assignments;
9. Use journals and freewriting;
10. Provide opportunities to share ideas orally as in peer review groups and peer tutoring;
11. Provide access to computers and computer-aided instruction;
12. Reinforce writing skills through support of Writing Across the Curriculum;
13. Use portfolio assessment;
14. Discuss, contextualize, and debate all pedagogy in the classroom (share the *why* with the students);
15. Explicitly teach heuristics.

Dunn ends with a challenge to broaden and enrich the "learning of all students and teachers by recognizing all the ways of knowing that will allow learning disabled people to become re-abled"(202).

Further evidence of the neglect of AD/HD in the fields of both Composition Studies and Disabilities Studies is presented in a very recent source, *Disability and the Teaching of Writing: A Critical Sourcebook* (2008). In the "Preface," editors Cynthia Lewiecki-Wilson and Brenda Jo Brueggemann state that this book "introduces writing instructors to the many ways that disability—as topic, theory, identity, and a presence in our classrooms—calls for new practices in the teaching of writing" (v). The editors also share that this book is "meant to serve as a resource for teacher-training classes, graduate seminars, and faculty-development workshops" (v). Finally, they say that they "believe

informed reflection and critical thinking are the best methods for negotiating the many

and different encounters with disability that a teacher may encounter" (v). Yet,

surprisingly, this book completely disregards AD/HD, a disability that affects as many as

nine percent of the population in the United States. In fact, the word "AD/HD" (or any of

its synonyms) is not even mentioned in its pages. Of the thirty-two essays in the book,

twenty-two discuss "disability" as a topic for the writing class, five focus on major issues

of disability, and five present the perspectives of teachers who have a disability. Only

one of these essays deals with learning disability and writing and that is a short excerpt

from Dunn's *Learning Re-abled*, from one of her college student interviews.

Brueggeman defends the decision she and co-editor Cynthia Lewiecki-Wilson

made not to include material regarding AD/HD and writing or AD/HD and the teaching

of writing. First, she states that if good "theory/practice material" in this area had been

published, they would have included it, but they didn't know of any. Second,

Brueggeman says, "the material in this book also aims to work from (and toward) a 'new

disability studies' perspective. At this point there is not much material out there on/about

ADHD that also comes from a disabilities perspective" (Email).

The need for research on AD/HD, writing, and the college student is clear. The

student with AD/HD needs to be moved from the margins to the center of Composition

Studies.

Chapter 2: The Rhetorical Construction of AD/HD

"Kids who have ADD and hide it very well are like ducks swimming on a lake. The ducks look
very serene on the surface of the water, but underneath their feet are going like mad."
--Melissa

In the past few years, Attention Deficit/ Hyperactivity Disorder (AD/HD) or ADD
or Attention Deficit Disorder has received considerable media attention. For example,
since 1994, *Time* has had five cover stories about AD/HD; *Newsweek* two; and *U.S. News
and World Report* one. But not all of this attention has been helpful. Many people think
that AD/HD is a fiction—a convenient fiction to enable lazy people to get by. Others
believe AD/HD is the result of poor parenting, inadequate teaching, lack of moral fiber,
emotional disturbance, cultural dysfunction, or the decline of the American character.
Some also believe that providing "accommodations" for college students who have the
disorder represents a lowering of standards in higher education.

This public skepticism about the validity of AD/HD, its diagnosis, and treatment
has been fueled by popular culture's negative portrayal of AD/HD. For example,
Wireless, a gift catalog, offers a sweatshirt with this logo: "They say I have A.D.D. but
they just don't understand. O Look! A chicken!" The shirt is described as "Short on
attention span. Long on style." This logo trivializes the AD/HD (ADD) diagnosis by
proclaiming what is perceived by some to be no more than an excuse for bad behavior:
"no one understands." It makes a joke of a very serious and debilitating disorder.

An example of this negative portrayal from TV is cartoon character Bart Simpson
who has AD/HD. A *Simpson's* episode entitled "Brother's Little Helper" (2001) begins
with Bart flooding the school gymnasium during the school's Fire Safety Day (Groening

12-13). At the subsequent conference with his parents, Homer and Marge, Principal

Skinner diagnoses Bart with AD/HD and suggests giving him an experimental,

potentially dangerous drug called *Focusyn* (focus in). Marge says Bart is just

rambunctious; Bart says he is just flamboyant. But the principal prevails by threatening

expulsion. Bart is given *Focusyn* (i.e., "Brother's Little Helper") which transforms him

into a model son and student, for a while. The "Pharm Team" (the drug researchers)

describes *Focusyn* this way: "It's not about slavery. It's about helping kids concentrate.

This pill reduces class clownism 44%, with 60% less sass-mouth." Homer observes that

Bart has gone from "goofus to gallant." Bart himself observes that before taking the

medication, his energy was "all over the place. Now it's focused like a laser beam"

(Groening 12). In the end, however, Bart has a bad reaction to *Focusyn*, steals a tank

from the local Army base, drives it through town destroying things, and ends with

shooting down a satellite. Marge vows that she will never again force "strange drugs" on

Bart. Instead, he resumes his "normal" dosage of Ritalin.

Both Bart and his mother characterize his behavior as something innocent and

something to be expected of boys: in other words, "boys will be boys." Many who are

skeptical of the AD/HD Predominately Hyperactive Type diagnosis interpret the behavior

in this way rather than as symptoms of this serious disorder. This episode also reflects a

common fear about how AD/HD is diagnosed. Many people believe that teachers and

school administrators want a diagnosis of AD/HD primarily so that the misbehaving

children can be medicated in order to control them and thus make life easier for the

teachers. To these skeptics, giving psychotropic drugs to children *is* about slavery and is

dangerous. They fear that the side effects of these drugs could be disastrous. Using the

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term "Pharm Team" to describe the AD/HD researchers at the drug company further serves to bring into question the efficacy of using medication. "Pharm" could refer to "pharmacy," but it could also refer to "farm" phonologically. The "farm team" is the one that is not quite up to professional standards. Using this terminology to describe the researchers developing new drugs demeans the AD/HD research community. In addition, having the Pharm Team cite statistics that show that the innocent activities of "class clownism" and "sass mouth" will be largely eliminated with the use of the new drug reflects public skepticism about the need for medicating children in the first place.

Another cartoon example of a boy suffering with AD/HD is the highly intelligent and gifted, yet quirky, Calvin of Bill Watterson's comic strip *Calvin and Hobbes.* In one strip Calvin explains to his stuffed tiger companion, Hobbes, the value of the "short attention span of television": "As far as I'm concerned, if something is so complicated that you can't explain it in 10 seconds, then it's just not worth knowing anyway" (311). Calvin's short attention span is one symptom of AD/HD Predominately Inattentive Type that the general public is very much aware of. Calvin's very unusual way of looking at and understanding the world is also typical of someone with AD/HD. For example, in another strip we see the frowning Calvin sitting at his school desk staring in horror at an essay test question: "1. Explain Newton's First Law of Motion in your own words." In panel two, an exclamation mark appears above Calvin's head and a broad smile spreads across his face. Then in panel three we see Calvin furiously writing: "Yakka foob mog. Grug pubbawup zink wattoom Gazork. Chumble spuzz." In the final panel, Calvin leans back in his chair, arms behind his head, and explains, "I love loopholes."

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Another example of popular entertainment's negative portrayal of AD/HD is AJ

Soprano, the unfocused and directionless teenage son of HBO's fictional mobster Tony

Soprano. AJ is actually thrilled with the possible diagnosis of AD/HD because he

believes it will make life easy for him since he thinks he will no longer have to take tests.

The public is very suspicious of making academic accommodations for children like AJ

whose problems are largely invisible.

Characterizations like these, while possibly amusing, nevertheless serve to

trivialize AD/HD, its diagnosis, and treatment, and more significantly, to stigmatize

individuals who really do have AD/HD.

Like Calvin, we're all aware of the assault upon our attention in today's world.

Indeed, American life may be "ADD-ogenic" as Hallowell and Ratey suggest in *Driven*

to Distraction: "American society tends to create ADD-like symptoms in us all. The fast

pace. The sound bite. The quick cuts. The TV remote-control clicker" (12). *Wired*

magazine called AD/HD the "official brain syndrome of the information age" (Schwartz).

The 18 July 1994 cover of *Time* shouted, "Disorganized? Distracted? Discombobulated?

Doctors Say You May Have Attention Deficit Disorder. It's not just kids who suffer from

it." All of us have experienced these "symptoms" of lack of focus and short attention

span at one time or another, but only those with AD/HD must grapple with these

disabling and persistent challenges every day, all day, day after day.

Also contributing to the public's skepticism is the rapid increase in the past few

years in the number of children diagnosed with AD/HD and the rapid increase in the use

of medications to treat these children. According to the Centers for Disease Control and

Prevention (CDC), in 2003, 4.4 million children in the United States between the ages of

4 and 17 had been diagnosed with AD/HD by a health care professional. Of these children diagnosed with AD/HD, 56%, or 2.5 million, were receiving medication for the disorder. This use of drugs [amphetamine (Adderall), methylphenidate (Ritalin), and atomoxetine (Strattera)] to treat AD/HD in 4 to 17 year olds increased by 274% worldwide between 1993 and 2003, and spending on the drugs increased nine fold (NIMH "Global Use"). A 2007 study demonstrates that 8.7% of the 8 to 15 year olds in the United States have the symptoms of AD/HD, but only half of them had been diagnosed by a health care professional and treated (CDC). While it is clear that the number of people diagnosed with AD/HD is rapidly increasing, there is no clear answer as to *why* this increase is happening. Dr. Alan Zametkin wonders whether it is simply that the increase is attributable to an increased recognition of the problem or whether there is something in society itself increasing the disorder ("Where Have We Come in 70 Years?").

An extreme, negative public response to the very concept of AD/HD occurred in 2001 when class-action lawsuits were filed in Texas, California, New Jersey, Florida and Puerto Rico (Brown *Attention Deficit Disorder* 300). These lawsuits claimed that the American Psychiatric Association conspired with the support group CHADD (Children and Adults with Attention Deficit/ Hyperactivity Disorder) and the pharmaceutical company Norvatis to invent or exaggerate AD/HD as a disorder in order to increase sales for its product, Ritalin (methylphenidate). The American Psychiatric Association was also specifically accused of broadening the clinical diagnosis of AD/HD in its authoritative *Diagnostic and Statistical Manual IV-TR* in order increase the number of people who could be diagnosed with the disorder. All five lawsuits were withdrawn or

dismissed by the courts for lack of evidence and in some cases "with prejudice" because

the lawsuits were determined to be frivolous.

So much publicity about AD/HD has been negative, in fact, that in 2002 a

consortium of 84 international scientists felt it necessary to counter the "periodic

inaccurate portrayal of attention deficit hyperactivity disorder (ADHD) in media reports"

(International Consensus)[8].

The statement asserts in part:

Leading international scientists…recognize the mounting evidence of neurological and genetic
contributions to this disorder (ADHD). This evidence, coupled with countless studies on the harm
posed by the disorder and hundreds of studies on the effectiveness of medication buttresses the
need in many…cases for management of the disorder with…medication combined with
educational, family and other social accommodations….

This is in striking contrast to the wholly unscientific views of some…media accounts that ADHD
constitutes a fraud, that medicating those afflicted is questionable, if not reprehensible, and that
any behavior problems associated with ADHD are merely the result of problems in the home,
excessive viewing of TV or playing of video games, diet, lack of love and attention, or
teacher/school intolerance….

To publish stories that ADHD is a fictitious disorder or merely a conflict between today's
Huckleberry Finns and their caregivers is tantamount to declaring the earth flat, the laws of gravity
debatable, and the periodic table in chemistry a fraud. ADHD should be depicted in the media as
realistically and accurately as it is depicted in science—a valid disorder having varied and
substantial adverse impact on those who may suffer from it through no fault of their own or their
parents and teachers…(International Consensus).

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[8] This group of scientists includes the following: Russell Barkley, Professor of Psychiatry and Neurology,
University of Massachusetts Medical School; Joseph Sergeant, Chair of Clinical Neuropsychology, Free
University, Amsterdam; Alan Zametkin, Child Psychiatrist, Maryland; Steven Faraone, Associate
Professor of Psychology, Harvard; Joseph Biederman, Professor and Chief Joint Program in Pediatric
Psychopharmacology, Massachusetts General Hospital and Harvard Medical School; Stephen Houghton,
Professor of Psychology, The University of Western Australia; Rosemary Tannock, Professor of
Psychiatry, Brain and Behavior Research, Hospital for Sick Children, Toronto; Salvatore Mannuzza,
Research Professor of Psychiatry, New York University School of Medicine; Lily Hechtman, Professor of
Psychiatry and Pediatrics, McGill University and Montreal Children's Hospital; Avi Sadeh, Director,
Clinical Child Psychology Graduate Program, Tel-Aviv University; Thomas E. Brown, Assistant Professor
of Psychiatry, Yale University School of Medicine; Kevin Murphy, Assistant Professor of Psychiatry,
University of Massachusetts Medical School.

Thomas E. Brown also argues that the "widespread ignorance" about AD/HD

must be dispelled because it

> unnecessarily increases the frustration and pain of those many children, adolescents, and adults who suffer not only from ADD [AD/HD] impairments but also from the blame and criticism of those who continue to believe that ADDs result from lack of willpower rather than from disorders of brain neurochemistry that unfold developmentally in interactions with the individual's environment" (*Attention Deficit Disorders* 58-59).

Further, these negative attitudes and misinformation about AD/HD may discourage

individuals from seeking the treatment and care they need. In 1999, the Centers for

Disease Control cited AD/HD as a "major public health problem" because of its

prevalence, chronicity, and significant impairment in academic performance, social

relationships, and general quality of life (CDC).

What scientific evidence does exist for AD/HD? In 1990 researchers at the

National Institutes of Mental Health, led by Dr. Alan Zametkin, demonstrated for the first

time that there are differences between the brains of people with AD/HD and the brains

of people without this disorder (1361-6). Using PET scans, they recorded the AD/HD

brain metabolizing glucose at a lower rate than the "normal" brain. The decrease in

metabolic activity was largest in the prefrontal cortex, the site of executive functions

(Hallowell and Ratey 275). Magnetic resonance imaging (MRI) has also shown

differences in the brains of children with and without AD/HD (Castellanos, et al 607-16).

In fact, all of the many neuro-imaging studies conducted since 1990 confirm the findings

of significant physiological differences in the AD/HD brain and in the way it processes

stimuli (Zametkin "Where Have We Come in 70 Years?"). The latest National Institutes

of Health study, published online by the Proceedings of the National Academy of

Sciences (6 Nov. 2007), reports neuroanatomic documentation of a delay in the

maturation of the brains of AD/HD children, especially in the prefrontal cortical regions important for control of cognitive processes (executive functions). The median age for maturity in the AD/HD group was 10.5; while for the control group it was 7.5. In spite of this three year developmental lag, the AD/HD brains follow a normal pattern of growth. It should be noted that this study focused on only one aspect of brain development and did not explain why as many as 70% of the children with AD/HD continue to experience symptoms as adults.

Simply put, the evidence compiled to date demonstrates that the AD/HD brain is different and does work differently. Russell Barkley and Thomas Brown, preeminent AD/HD researchers, theorize that this difference in brain structure is manifested in a developmental impairment of executive functions, the wide range of central control processes of the brain (Barkley 46; Brown "DSM IV: ADHD and Executive Function Impairments" 910).

Despite the many research studies on AD/HD, past and present (in January 2007 NIH listed 85 current scientific research studies on AD/HD), there are still legitimate questions to be answered about this complex disorder. Significantly, the cause of AD/HD is unknown and the exact mechanisms underlying AD/HD have not yet been identified "in part due to the extraordinary complexity of the attentional system" (Hallowell and Ratey 269).

> The attentional system involves nearly all structures of the brain in one way or another. It governs our consciousness, our waking experience, our actions and reactions. It is the means through which we interact with our environment, whether that environment is composed of math problems, other people, or the mountains on which we ski (Hallowell and Ratey 269).

While no specific genetic marker has yet been identified for AD/HD, a familial propensity for AD/HD has been demonstrated. Current thinking is that AD/HD could be

caused by a number of genes each having a "defect" (Zametkin "Where Have We Come

in 70 Years?). There is also concern about prescribing stimulant drugs to children

because these drugs may have side-effects (sleep disturbance, reduced appetite, and

suppressed growth), and the long-term health effects of these drugs is unknown (CDC).

Of further concern is the protocol for accurately diagnosing AD/HD. There is no single

objective test that can definitively diagnose AD/HD. The neuroimaging techniques which

can be helpful in research cannot at this time be used reliably for diagnosis. [9] Instead, the

diagnosis must depend on the "judgment of a skilled clinician who knows what ADHD

looks like and can differentiate it from other possible causes of impairment" (Brown

Attention Deficit Disorder 182). Knowing "what AD/HD looks like" depends on knowing

the "official" definition of the disorder. Today the authoritative definition is contained in

the American Psychiatric Association's *Diagnostic and Statistical Manual IV-TR (2000)*.

In other words, individuals with AD/HD are in a sense "rhetorically constructed," defined

by an interpretation of what they do and how they do it in particular situations. The

definition of AD/HD has evolved over the last 105 years as the understanding of the

disorder has evolved. And the definition will no doubt continue to be revised as new

knowledge and understanding of the etiology, diagnosis, behavioral characteristics,

assessment procedures and treatment of AD/HD are discovered.

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[9]However, a recent study (2007) published in *Psychiatry Research* (Quintana, et al 221-222) reports that a
Quantitative EEG performed on 26 subjects, from 6 to 21 years old, correctly identified the presence or
absence of AD/HD (which had also been independently determined by a separate comprehensive
psychiatric evaluation) in 25 of 26 cases.

History of the Evolution of the AD/HD Concept

Clearly, AD/HD is not a new phenomenon. What is new is that it is being acknowledged and the problems associated with it are being attended to. It is theorized that AD/HD has existed as long as humankind has existed. Until the late nineteenth century, however, the disorder went unrecognized. At that time, the expectations for a child's behavior in polite society were being more clearly defined. In addition, at about the same time compulsory education in the United States and England began requiring all children to perform in the environment of the highly structured classroom. It is not hard to imagine that AD/HD behaviors which would have been unremarkable for the child working in the fields would become problematic for the child learning in the classroom.

In 1845, the symptoms of AD/HD were specifically detailed in print for the first time in German physician Heinrich Hoffman's illustrated book of poems for children, *Der Struwwelpeter (Shock-headed Peter)*. These poems are intended to frighten children into good behavior by threatening them with the consequences that befall the disordered and disorderly.[10] The symptoms of AD/HD Predominately Hyperactive Type are described in "The Story of Fidgety Philip," and those of AD/HD Predominately Inattentive Type in "The Story of Johnny Head-in-air." Dr. Hoffman describes Fidgety Philip's inability to sit still at the dinner table: "He wriggled/ And giggled, / And then, I declare, /Swung backward and forward/ And tilted his chair." The "naughty, restless child, / Growing still more rude and wild" falls over pulling off the tablecloth and spilling the plates, utensils, and bread on the floor. Philip is a "sad disgrace" because he chooses

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[10] The English translation was published in Philadelphia in 1894.

to ignore his father's instruction and misbehave. Johnny Head-in-air, on the other hand, comes to disaster because he chooses to look at the sky, the clouds, and flying birds instead of paying attention to what is going on around him. As he walks to school, he bumps into a dog and falls over, falls into the river, has to be rescued, and loses his writing book. Even the fishes in the river laugh at poor Johnny. In these poems the AD/HD symptoms are seen through the prism of morality and are judged to be moral failings, for which the usual "treatment" is ridicule, shame, and physical punishment.

In his 1892 *Talks to Teachers,* William James also recognized the symptoms of inattention typical of AD/HD, but did not apply a moral lens to his observation:

> There is unquestionably a great native variety among individuals in the type of their attention. Some of us are naturally scatterbrained, and others follow easily a train of connected thoughts without temptation to swerve aside to other subjects. This seems to depend on a difference between individuals in the type of their field of consciousness. In some persons this is highly focalized and concentrated, and the focal ideas predominate in determining association. In others we must suppose the margins to be brighter, and to be filled with something like meteoric showers of images, which strike into it at random, displacing the focal ideas, and carrying association in their own direction. Persons of the latter type find their attention wandering every minute, and must bring it back by a voluntary pull ("Attention").

Significantly, James notes that individuals differ in "their field of consciousness." This observation can be related to the effect of the difference in brain function in individuals with AD/HD that Dr. Alan Zametkin would demonstrate nearly a hundred years later. The metaphor of brighter margins that are filled with "meteoric showers of images, which strike into it a random, displacing the focal ideas, and carrying association in their own direction" provides a powerful and accurate depiction of what we now know as the attention problems associated with AD/HD.

In 1902, the *Lancet* published British pediatrician George Frederick Still's three lectures to the Royal Academy of Physicians in London, the first scientific description of AD/HD's chief characteristics. Dr. Still described 20 children in his clinical practice who

demonstrated an "abnormal incapacity for sustained attention, restlessness, fidgetiness, violent outbursts, destructiveness, noncompliance, choreiform[11] movements, and minor congenital anomalies" (qtd. in Stefanatos and Baron 6). Still detected in his patients a "morbid defect of moral control" over their own behavior, the cause of which he attributed to a genetic dysfunction and not to poor child rearing. He observed a failure of will to direct or focus the attention. Having a deficit in "volitional inhibition," he believed, made these children aggressive, passionate, lawless, inattentive, impulsive and overactive" (Barkley 4). Still concluded that these children had a deficit in the "control of action in conformity with the idea of the good of all" (qtd. in Stefanatos and Baron 6). In other words, he argues that individual morality is a developmental phenomenon. He believed that at a certain age there are certain biological standards for moral conduct. (A basic assumption of AD/HD diagnosis today is that certain behaviors should be expected at certain ages. Deviation from these expectations signals a dysfunction.) Still cautions not to conflate an inferior moral sense to an inferior intelligence (Rafalovich 27). (Today we know that having AD/HD is not related to how intelligent one is.) Still's work is also significant to the evolving understanding of AD/HD because he proposes that *children* be the object of study.

Hallowell and Ratey note that Still's observations supported William James's theory that the deficits in "inhibitory volition, moral control, and sustained attention" were "causally related to each other through an underlying neurological defect" (272). James also suggested that there was a "possibility of either a decreased threshold in the

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[11] Choreiform movements are involuntary, rapid, jerky and purposeless movements that may be subtle or that may run together (such as tapping the foot or bouncing the leg).

brain for inhibition of response to various stimuli, or a syndrome of disconnection within the cortex of the brain in which intellect was dissociated from 'will' or social conduct" (272).

The study of the survivors of the encephalitis epidemic of 1917-1918 in the United States focused attention on the fact that the constellation of behavioral problems identified by Dr. Still (i.e., hyperactivity, impulsivity, anti-social behavior, and emotional instability) could be caused by brain infection in childhood (Stefanatos and Baron 6). In 1924, Roger Kennedy observed that these children "are apparently acting in response to a most urgent stimulus, which they are powerless to resist" (qtd. in Rafalovich 32). In 1934, Eugene Kahn and Louis H. Cohen published their research demonstrating a "biological cause for the hyperactive, impulse-ridden, morally immature behavior" of these survivors (Hallowell and Ratey 272). Another line of evidence connecting an organic disease and AD/HD symptoms was discovered in 1937 by Charles Bradley, who reported positive results in using a stimulant (Benzedrine) to treat children with behavioral disorders caused by the encephalitis. He could not explain why this drug helped calm hyperactive children; he could only document its success (Hallowell and Ratey 273).

The concept of a brain-injured child syndrome arose from these cases and others in which children suffered brain damage from birth trauma, head injury, exposure to toxins, and infections (Barkley 5). Later, this concept would be applied to children manifesting similar symptoms but without evidence of any brain injury. At first it was called "minimal brain damage"; and then later in the 1950s, "minimal brain dysfunction" (Barkley 5). Later theories emerging from these focused more on the symptoms of

hyperactivity and poor impulse control. The disorder was then labeled "hyperactive child syndrome."

In 1952 the American Psychiatric Association published the first edition of its *Diagnostic and Statistical Manual: Mental Disorders* (*DSM-I*), the intent of which was to provide a uniform system for both diagnostic and research purposes. In 130 pages it describes 106 mental disorders. It wasn't until the first revision of the *DSM-I* in 1968 (i.e., *DSM-II* which contained 182 categories) that a disorder resembling AD/HD appeared in its pages under the new category of "Behavior Disorders of Childhood and Adolescence." It was called "hyperkinetic reaction of childhood." The complete entry in the *DSM-II* reads as follows:

> This disorder is characterized by overactivity, restlessness, distractibility, and short attention span, especially in young children; the behavior usually diminishes in adolescence. If this behavior is caused by organic brain damage, it should be diagnosed under the appropriate non-psychotic organic brain syndrome.

There are three important distinctions in this definition in *DSM-II*. First, it includes attentional problems along with hyperactive problems which were already the focus of the scientific literature of the time (Barkley 6). Second, it asserts that the condition is usually benign because it will diminish in adolescence. Third, it recognizes that the disorder may not be caused by brain damage. In spite of the standardization presented in *DSM-I* and *DSM-II*, reliability in diagnosis of mental disorders continued to be a problem (McCarthy and Gerring 156).

To correct this problem of poor reliability in diagnosis, in 1980 the American Psychiatric Association published *DSM-III*, "a dramatically different diagnostic manual" representing a paradigm shift to a biomedical model of mental disorders (McCarthy and

Gerring 156).   This edition, 494 pages long, introduced a number of "important

methodological innovations, including explicit diagnostic criteria, a multi-axial system,

and a descriptive approach that attempted to be neutral with respect to theories of

etiology" (American Psychiatric Association *DSM-IV* xvii-xviii). Before *DSM-III* there

were no standardized definitions of mental disorders. The rise of psychopharmacology in

the 1950s, however, made such a system of diagnosis necessary. Prior to this time,

because mental disorders were treated either by institutionalization or by talk-therapy, a

definitive diagnosis was relatively unimportant. Significantly, *DSM-III* claims to be

"grounded in empirical evidence" (xvi), but, in fact, "most of the diagnostic categories

were not fully validated by research" (McCarthy 359). It lists 265 mental disorders.

     DSM-III has been identified as the charter document for the mental health

profession:

> The charter document of a social or political group establishes an organizing framework that
> specifies what is significant and draws people's attention to certain rules and relationships. In
> other words, the charter defines as authoritative certain ways of seeing and deflects attention away
> from other ways. It thus stabilizes a particular reality and sets the terms for future discussions.
> (McCarthy 359).

As McCarthy points out, the *DSM* classification system "shapes reality" for the clinician

(359). It establishes "certain ways of seeing" and directs understanding of what counts as

relevant information and then its diagnostic principles control the interpretation of that

information. From this focal point of diagnosis, thinking about the treatment of a patient

goes backward in time to uncover the mechanisms and cause of the problem and then

forward in time to plan treatment (Feinstein qtd. in McCarthy 360). Since its creation in

1980, the *DSM-III* has been an extremely influential and powerful charter document

because all mental health professionals must use it for diagnosis. And a *DSM* diagnosis

also determines which treatments will be reimbursed by insurance companies, who will be eligible for accommodations in school, and what those accommodations will be. In addition, *DSM* guides the education of students and the research that is done in the mental health field.

The shift to a biomedical model for mental disorders in the *DSM-III* can be understood in the following terms: there are two fundamental and competing conceptual models of mental disorders--the interpretation of meaning model and the biomedical model. The interpretation of meaning model views each patient as an individual who has a story to tell about unconscious conflicts which have resulted in symptoms. The key to understanding and helping the patient is to listen to the story and then look behind the symptoms to uncover the cause. This interpretation of meaning is based on the principles established by Freud, Jung or Adler.

In contrast, the biomedical conceptual model of mental disorders, which underlies *DSM-III* and the subsequent revisions of the *DSM*, views the patient as part of a group of people with the same impairments that need to be explained and treated. "In this model mental disorders are understood, like physical diseases, as discrete entities, generic across cultures, which are clearly bounded from each other and from normal conditions" (McCarthy and Gerring 150). But a single cause is not ascribed to a mental disorder like it is to a physical illness. Instead, psychiatry assumes that most mental disorders have several interrelated causes: biological, psychological, genetic, environmental, and/or social. The biomedical way of thinking calls for identification by symptoms to be followed by an explanation of those symptoms. The identification of the cluster of symptoms indicating distress or impairment in functioning leads to the diagnosis of a

mental disorder. A complete explanation of the cause may not be possible, however, because of the lack of knowledge about the etiology of most mental disorders.

The *DSM* does not identify the cause nor does it recommend treatment. A mental disorder does not have one specific treatment as a physical illness might. Instead, treatment is usually some combination of drugs and therapy which will vary from case to case even with the same diagnosis, or it may even vary for an individual case at different times. For example, the dosage of a drug (such as Ritalin) for a child diagnosed with AD/HD Combined type may be determined by trial and error. The physician will begin by prescribing a low dosage and observe the effects over a one or two week time period. Then the dosage may be adjusted or an entirely different drug may be tried. As the child matures, the efficacy of the original drug may diminish. Then a different course of treatment would be tried. Similarly, behavioral modification therapy that may be effective for a child when young may not work when the child reaches adolescence.

There are three major components in the *DSM*: the diagnostic classification, the diagnostic criteria set, and the descriptive text. Each diagnostic label has a specific diagnostic code which is used for collecting data and for billing. (These codes are derived from the ICD-9-CM, the coding system used by all health care professionals in the United States.) The categories of mental disorders established in *DSM-III* are based on selectivity and exclusivity. The symptoms listed in the diagnostic criteria set define what the clinicians will look for and what they will ignore. This set determines which characteristics are necessary for a diagnosis and how many of those characteristics are sufficient for diagnosis. For example, the *DSM-III* description of symptoms of Attention Deficit Disorder with Hyperactivity lists five examples of inattention, six examples of

impulsivity, and five examples of hyperactivity. At least three of these inattentive symptoms, three of the impulsive symptoms, and two of the hyperactive symptoms must be present for a diagnosis of Attention Deficit Disorder with Hyperactivity. In addition, the symptoms must have appeared before seven years of age, have lasted for at least six months and may not be due to Schizophrenia, Affective Disorder, or Severe or Profound Mental Retardation.

The goal of the multi-axial system, introduced in *DSM-III,* is to elicit as much information about the patient as possible. Axis I records the diagnosis of the mental disorder. Axis II records only the diagnosis of adult personality disorders and childhood developmental disorders of language, reading, math and articulation. Axis III records physical illness. Axis IV records the clinician's judgment on the severity of the psychological stressors in the patient's environment. Axis V records the clinician's judgment about the patient's highest level of functioning in the last year.

The descriptive text portion of *DSM* includes a statement about the essential features of the disorder and a narrative description of the typical symptoms. The following types of information are presented in this section: "Diagnostic Features," "Subtypes and/or Specifiers," "Recording Procedures," "Associated Features and Disorders," "Specific Culture, Age and Gender Features," "Prevalence," "Course," "Familial Pattern," and "Differential Diagnosis" (American Psychiatric Association Website "DSM").

DSM-III radically redefined the AD/HD disorder, changing its name from "hyperkinetic reaction of childhood" to "Attention Deficit Disorder" (ADD) and expanding its definition (Appendix A). Attention Deficit Disorder is described as a

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multidimensional disorder with inattention as the central feature in the category of

"Disorders Usually First Evident in Infancy, Childhood, or Adolescence." Two distinct

forms of Attention Deficit Disorder are noted: one with hyperactivity and one without

despite the fact that there was at that time no empirical research to support this distinction

(Stefanatos and Baron 7). In fact, the American Psychiatric Association states in *DSM-III*

that it is "not known whether they are two forms of a single disorder or represent two

distinct disorders" (41). Interestingly, this question remains unresolved today. The

American Psychiatric Association's rationale for changing the name to Attention Deficit

Disorder is that "attentional difficulties are prominent and virtually always present among

children with these diagnoses. In addition, though excess motor activity frequently

diminishes in adolescence in children who have the disorder, difficulties in attention

often persist" (American Psychiatric Association 41). A third sub-type, "residual," is

also identified for those individuals who once met the criteria for Attention Deficit

Disorder with Hyperactivity, but who no longer demonstrate hyperactive symptoms

although symptoms of attentional deficits and impulsivity persist. The essential

diagnostic criteria for Attention Deficit Disorder is that the "child displays, for his or her

mental and chronological age, signs of developmentally inappropriate inattention,

impulsivity, and hyperactivity" (American Psychiatric Association *DSM-III* 43).

Typically the symptoms are variable according to situation and time: "It is the rare child

who displays signs of the disorder in all settings or even in the same setting at all times"

(42).

In 1987, the disorder was again renamed and redefined in *DSM-III-R (DSM-III*

Revised which added 30 new diagnostic categories) where it became "Attention-deficit

Hyperactivity Disorder" (ADHD). This shift came as a result of the growing concern that

the Attention Deficit Disorder label moved emphasis away from the symptoms of

hyperactivity and impulsivity which were not only basic symptoms of the disorder, but

which were necessary to distinguish it from other conditions (Stefanatos and Baron 7). In

addition, empirical evidence clearly demonstrated that hyperactivity and impulsivity

made up a "single behavioral dimension" (Stefanatos and Baron 7). A separate section

was created for Attention-deficit Disorder without signs of hyperactivity or impulsiveness

called "Undifferentiated Attention-deficit Disorder" even though *DSM-III-R* notes that

there is insufficient research to guide its diagnostic criteria. This reformation marks a

significant shift to a one dimensional classification system where everyone diagnosed

with the disorder shares a number of characteristics, but no single characteristic is

essential for diagnosis. A single list of items incorporating all three symptoms is

provided. Eight out of fourteen possible criteria listed must be present and lasting at least

six months for a diagnosis of Attention-deficit Hyperactivity Disorder (Appendix B).

Six of these criteria are new or refocused; eight are retained from the *DSM-III*

description. Given these requirements, it would be impossible to diagnose ADHD with

exclusively inattentive or exclusively hyperactive-impulsive symptoms. Further, these

criteria are listed in "descending order of discriminating power," indicating, for example,

that it is more significant if the child "often fidgets with hands or feet or squirms in seat"

(Criteria #1) than if the child "often does not seem to listen to what is being said to him"

(Criteria #12). A new "Criteria for Severity" (Mild, Moderate, or Severe) was also added

in *DSM-III-R* based on the number of symptoms observed and on the degree of

impairment suffered in school and social functioning. Significantly, a diagnosis of "Mild" severity indicated "minimal or no impairment" functioning in school and social settings.[12]

The next update of the *DSM,* the *DSM-IV*, published in 1994, preserves the name of the disorder but adds a slash [/] delineating the two main manifestations of the disorder and hence alluding to the separability of symptoms: "Attention-Deficit/Hyperactivity Disorder" (AD/HD). "Deficit" is also capitalized adding importance to this element of the disorder. Three specific subtypes are identified: predominately inattentive, predominantly hyperactive/impulsive, and combined. For the first time it was possible to diagnose a subtype of AD/HD that consisted primarily of hyperactive-impulsive behavior without significant inattention. This categorization of three subtypes was supported by research which demonstrated that AD/HD is "best viewed as a unitary disorder with different pre-dominant symptom patterns" (American Psychiatric Association 775). This marks the beginning of conceiving AD/HD as a single disorder with three distinct subtypes. In order to reduce false positive diagnoses, the requirement that symptoms be present in two or more situations (e.g., school, home, or work) was added to *DSM-IV* (Appendix C).

A fourth possible type is described as "Attention-Deficit/Hyperactivity Disorder NOS (Not Otherwise Specified)." This apparently catch-all category is "for disorders with prominent symptoms of inattention or hyperactivity-impulsivity that do not meet the criteria for Attention-Deficit/Hyperactivity Disorder" (American Psychiatric Association 93). Two examples are provided: 1) individuals who have the required AD/HD symptoms

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[12] For a diagnosis of AD/HD, *DSM-IV* (1994) requires "clear evidence of clinically significant impairment in social, academic, or occupational functioning" (American Psychiatric Association *DSM-IV* 84).

but whose age of onset was after 7 years of age; 2) individuals with clinically significant

impairment" because of attentional problems, whose symptoms do not meet the "full

criteria of the disorder" but whose behavior is "marked by sluggishness, daydreaming,

and hypoactivity" (American Psychiatric Association 93). These defining features

represent an extreme case of AD/HD Primarily Inattentive Type.

In *DSM-IV* AD/HD is listed under the category of "Disorders Usually First

Diagnosed in Infancy, Childhood, or Adolescence" [italics mine]. This title represents a

change from the category used in *DSM-III-R*: "Disorders Usually First *Evident* in

Infancy, Childhood, or Adolescence." The shift in wording from "First Evident" to "First

Diagnosed" is significant because it recognizes the possibility that AD/HD might not be

"evident" until after adolescence, while it is still usually first diagnosed in infancy,

childhood, or adolescence.

DSM-IV cautions that its diagnostic categories, criteria, and textual descriptions

are intended for use by "individuals with appropriate clinical training and experience in

diagnosis" and that *DSM-IV* should not be "applied mechanically by untrained

individuals….in a cookbook fashion" (American Psychiatric Association xxxii). The

purpose of *DSM-IV* is to "provide clear descriptions of diagnostic categories in order to

enable clinicians and investigators to diagnose, communicate about, study, and treat

people with various mental disorders" (American Psychiatric Association xxxvii).

The primary goal of the currently used edition of the *DSM, DSM-IV Text Revision*

(*DSM-IV-TR)* 2000 (Figure 3 and Appendix C) was to update the descriptive text and

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correct factual errors that had been identified in *DSM-IV*.[13] Diagnostic criteria for

AD/HD remain virtually the same in *DSM-IV-TR* as in *DSM-IV* with only a few very

minor changes in word choice. The descriptive text, however, was revised. A fuller

explanation of the differences among the subtypes is provided as is additional updated

information about associated features, specific age features, and prevalence rates

(American Psychiatric Association *DSM-IV-TR* 830).

It should not be surprising that the portrait *DSM-IV-TR* paints of the individual

with AD/HD is a negative one given that a "mental disorder" is defined as a

clinically significant behavioral or psychological syndrome or pattern that occurs in an individual and that

is associated with present distress…or disability (i.e., impairment in one or more important areas of

functioning) or with a significantly increased risk of suffering death, pain, disability or an important loss of

freedom (American Psychiatric Association xxxi). This focus on "mental *disorder*" precludes the

inclusion of any of the positive descriptors commonly associated with the individual

with AD/HD: creative, perceptive, imaginative, independent, risk-taking, energetic,

intuitive, spontaneous, original thinker, curious, inventive, sensitive, having a unique

perspective.

Another complicating factor in defining the individual with AD/HD is the

dynamic nature of this disorder: the symptoms and severity of the symptoms vary not

only from person to person but also vary in the same person at different times and in

different situations. *DSM-IV-TR* notes:

> Symptoms typically worsen in situations that require sustained attention or mental
> effort or that lack intrinsic appeal or novelty….Signs of the disorder may be minimal or absent
> when the person is receiving frequent rewards for appropriate behavior, is under close supervision,

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[13]The next full-scale revision (*DSM-V*) is not expected before 2012.

A.   Either (1) or (2):
    (1)   six (or more) of the following symptoms of **inattention** have persisted for at least 6 months to a degree that is maladaptive and inconsistent with developmental level:

    Inattention
    (a)   often fails to give close attention to details or makes careless mistakes in schoolwork, work, or other activities
    (b)   often has difficulty sustaining attention in tasks or play activities
    (c)   often does not seem to listen when spoken to directly
    (d)   often does not follow through on instructions and fails to finish schoolwork, work, chores, or duties in the workplace (not due to oppositional behavior or failure to understand instructions)
    (e)   often has difficulty organizing tasks and activities
    (f)   often avoids, dislikes, or is reluctant to engage in tasks that require sustained mental effort (such as schoolwork or homework)
    (g)   often loses things necessary for tasks or activities (e.g., toys, school assignments, pencils, books, or tools)
    (h)   is often distracted by extraneous stimuli
    (i)   is often forgetful in daily activities

    (2)   six (or more) of the following symptoms of **hyperactivity-impulsivity** have persisted for at least 6 months to a degree that is maladaptive and inconsistent with developmental level:

    Hyperactivity
    (a)   often fidgets with hands or feet or squirms in seat
    (b)   often leaves seat in classroom or in other situations in which remaining seated is expected
    (c)   often runs about or climbs excessively in situations in which it is inappropriate (in adolescents or adults, may be limited to subjective feelings of restlessness)
    (d)   often has difficulty playing or engaging in leisure activities quietly
    (e)   is often "on the go" or often acts as if "driven by a motor"
    (f)   often talks excessively

    Impulsivity
    (g)   often blurts out answers before questions have been completed
    (h)   often has difficulty awaiting turn
    (i)   often interrupts or intrudes on others (e.g., butts into conversations or games)

B.   Some hyperactive-impulsive or inattentive symptoms that caused impairment were present before age 7 years.

C.   Some impairment from the symptoms is present in two or more settings (e.g., at school [or work] and at home).

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[14] The *DSM-IV* "Diagnostic Criteria for Attention-Deficit/Hyperactivity Disorder" (1994) is virtually the same as that in *DSM-IV-TR* except for two very minor changes in word choice.

D.   There must be clear evidence of clinically significant impairment in social, academic, or occupational functioning.

E.   The symptoms do not occur exclusively during the course of a Pervasive Developmental Disorder, Schizophrenia, or other Psychotic Disorder and are not better accounted for by another mental disorder (e.g., Mood Disorder, Anxiety Disorder, Dissociative Disorders, or a Personality Disorder).

Code based on type:

Attention-Deficit/Hyperactivity Disorder, Combined Type: if both Criteria A1 and A2 are met for the past 6 months.

Attention-Deficit/Hyperactivity Disorder, Predominantly Inattentive Type: if Criterion A1 is met but Criterion A2 is not met for the past 6 months

Attention-Deficit/Hyperactivity Disorder, Predominantly Hyperactive-Impulsive Type: if Criterion A2 is met but Criterion A1 is not met for the past 6 months

Coding note: For individuals (especially adolescents and adults) who currently have symptoms that no longer meet the full criteria, "In Partial Remission" should be specified.

Attention-Deficit/Hyperactivity Disorder Not Otherwise Specified
This category is for disorders with prominent symptoms of inattention or hyperactivity-impulsivity that do not meet criteria for Attention-Deficit/Hyperactivity Disorder. Examples include

1.   Individuals whose symptoms and impairment meet the criteria for Attention-Deficit/Hyperactivity Disorder, Predominantly Inattentive Type but whose age at onset is 7 years or older.

2.   Individuals with clinically significant impairment who present with inattention and whose symptom pattern does not meet the full criteria for the disorder but have a behavioral pattern marked by sluggishness, daydreaming, and hypoactivity.

Figure 3: *DSM-IV-TR*

is in a novel setting, is engaged in especially interesting activities, or is in a one-to-one situation (American Psychiatric Association 86-87).

For example, a college student with AD/HD may be able to sustain attention on a writing project when very interested in the topic, but may resist even beginning work on a writing assignment where the topic is uninteresting. Or signs of the disorder may not be apparent when the individual with AD/HD is working one-on-one with a writing tutor instead of working alone. Individuals with AD/HD may avoid school tasks and then devalue their importance, often as a rationalization for failure (American Psychiatric Association 91). Also, whether AD/HD becomes a serious problem for the individual (or *how* serious it becomes) can depend on the environment. For example, a young woman with AD/HD may be able to excel academically in high school largely because her mother organizes everything for her and directs her actions. When she goes off to college and must operate in an environment devoid of that support system, she may be unable to cope with the academic demands and consequently experience academic failure.

The *DSM-IV-TR* Diagnostic Criteria for AD/HD requires that six of eighteen possible symptoms be present for at least six months to "a degree that is maladaptive and inconsistent with developmental level" (American Psychiatric Association 92). These eighteen symptoms are listed in two categories: 1) Inattention (nine symptoms); and, 2) Hyperactivity-Impulsivity (nine symptoms total: six under Hyperactivity and three under Impulsivity). The six symptom selection creates six possible combinations of symptom types: 1) Inattentive only; 2) Hyperactivity only; 3) Inattentive, Hyperactivity, and Impulsivity Combined; 4) Inattentive and Impulsivity without Hyperactivity; 5) Inattentive and Hyperactivity without Impulsivity; 6) Hyperactivity and Impulsivity

without Inattentive. *DSM-IV-TR*, however, lists only three possible diagnoses: AD/HD Combined Type, AD/HD Predominately Inattentive Type, or AD/HD Predominately Hyperactive-Impulsive Type. Furthermore, these symptoms must clearly cause "significant impairment" in functioning in the social, school, or work setting. Some of the symptoms that caused this impairment must have been present before the age of seven and that impairment must be present in at least two environments (e.g., school, work, and/or home). Finally, these symptoms cannot be caused solely by a Pervasive Development Disorder, Schizophrenia, or other Psychotic Disorder and are "not better accounted for by another mental disorder" (American Psychiatric Association 93). The symptoms listed are those commonly observed in children eight to fourteen years old (the age range during which most people are diagnosed with AD/HD) and these symptoms are usually most evident in the school setting. The adverb "often" is listed in all eighteen symptoms indicating that these behaviors are exhibited more frequently and are more debilitating in individuals with AD/HD than in others at the same stage of development.

The symptoms of "Inattention" reveal that individuals with AD/HD "often" do not listen, follow instructions, maintain focus, or persist until work is completed. Their work is "often" messy and full of careless errors. They may frequently shift from one uncompleted activity to another. "Tasks that require sustained mental effort are experienced as unpleasant and markedly aversive. As a result, these individuals typically avoid or have a strong dislike for activities that demand sustained self-application and mental effort or that require organizational demands or close concentration" (American Psychiatric Association 85). Clearly, writing would fall under this category of "disliked" activities. AD/HD sufferers are disorganized and often misplace materials necessary for

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completing a task. They are easily distracted by irrelevant stimuli that others easily ignore (e.g., air conditioning fan, conversation outside the classroom, jet flying overhead). They are often forgetful about daily activities (e.g., turning in homework, taking lunch to school, going to a dental appointment). Socially, their inattention can be manifest in behaviors such as abruptly shifting the topic of a conversation, not listening to what someone has just said, or not following the rules of a game.

The symptoms of "Hyperactivity" reveal that individuals with AD/HD "often" have difficulty remaining seated or sitting still when that is expected. They fidget with objects, or tap their hands or feet excessively, or move around a room inappropriately. They seem to have excess energy and to be driven. They often get up from the table during meals, while watching TV, or while doing homework. They often talk excessively and make noise during quiet activities. In adolescents and adults, the symptoms of hyperactivity may manifest in "feelings of restlessness and difficulty in participating in quiet sedentary activities" (American Psychiatric Association 86)

The symptoms of "Impulsivity" reveal that individuals with AD/HD are often impatient, have trouble delaying a response, and interrupt or intrude on others. They "typically make comments out of turn, fail to listen to directions, initiate conversations at inappropriate times…grab objects from others, touch things they are not supposed to touch, and clown around" (American Psychiatric Association 86). In addition, they may engage in potentially dangerous activities without considering the possible consequences.

DSM-IV-TR lists a number of other behavioral features associated with AD/HD: low tolerance for frustration, outbursts of temper, "bossiness, stubbornness, excessive and frequent insistence that requests be met, mood lability, demoralization, dysphoria,

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rejection by peers, and poor self-esteem" (American Psychiatric Association 87-88). The greatest impairment is often in academic achievement. Others often interpret the inability to apply oneself to tasks that require sustained effort as an indication of laziness, lack of a sense of responsibility, and a defiant attitude. Because of the shifts in the degree of severity of symptoms at different times and in different situations, others may believe the problematic behaviors to be simply willful. On average, those with AD/HD have less schooling than their peers and have lower achievement in the workplace. The IQ of those with AD/HD is on average a few points lower than their peers. However, "great variability in IQ is evidenced: individuals with Attention-Deficit/Hyperactivity Disorder may show intellectual development in the above-average or gifted range" (American Psychiatric Association 88). Those who have AD/HD Primarily Inattentive Type and AD/HD Combined Type are likely to have the most problems in school and have the greatest academic deficiencies. Those with AD/HD Primarily Hyperactive-Impulsive Type are more likely to experience peer rejection and accidental injury.

The symptoms of AD/HD are most prominent during the elementary school years, the time when most children are diagnosed as they experience difficulty in adjusting to school. On the other hand, children with Primarily Inattentive Type often may not be diagnosed until late childhood. As children with AD/HD mature, the symptoms become "less conspicuous" (American Psychiatric Association 89), especially those indicating hyperactivity. AD/HD is more frequent in males than in females with the ratio ranging from 2:1 to 9:1 depending on the type. The occurrence of AD/HD Primarily Inattentive Type is more similar in males and females; whereas, more males have AD/HD Primarily Hyperactive-Impulsive Type than females do. The prevalence of AD/HD is estimated at

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3%-7% in school-aged children. Thomas Brown's research has shown that 4.5%-9% of school-aged children have AD/HD Primarily Inattentive Type; 1.9%-4.8% have AD/HD Combined Typed; and only 1.7%-3.9% have AD/HD Primarily Hyperactive-Impulsive Type (*Attention Deficit Disorders* 8). There is only limited data on the prevalence in adolescence and adulthood (American Psychiatric Association 90). AD/HD is more common in first-degree biological relatives of children with AD/HD than in the general population (American Psychiatric Association 90). Finally, *DSM-IV-TR* asserts that there are "no laboratory tests, neurological assessments, or attentional assessments that have been established as diagnostic in the clinical assessment" of AD/HD (American Psychiatric Association 88-89).

Thus, in order to establish a diagnosis, it is necessary to evaluate each individual comprehensively, rule out other possible causes for symptoms and identify co-existing conditions. This diagnostic procedure is multifaceted. Clinical psychologists, clinical social workers, nurse practitioners, neurologists, psychiatrists and physicians are qualified to complete the evaluation and make a diagnosis. This evaluation generally requires more than one visit to a clinician; in fact, two to three visits are often required. In addition, the evaluation should include a history and clinical assessment of the individual's academic, social, and emotional functioning and developmental level. Clinicians often use rating scales and checklists to obtain this information from parents and teachers. The most commonly used rating scales are "Child Behavior Checklist," "Teacher Report Form," "Conners Parent and Teacher Rating Scales," "Barkley Home Situations Questionnaire," and "Barkley School Situations Questionnaire" (CHADD). A

medical exam by a physician is important to rule out other medical problems that may be causing symptoms similar to those of AD/HD.

The American Academy of Pediatrics has discovered that wide variations exist in practice patterns about diagnostic criteria and methods for AD/HD among pediatricians and family physicians (1159). Consequently, in 2000, the American Academy of Pediatrics made recommendations for the assessment and diagnosis of children 6 to 12 years of age with AD/HD for use by primary care clinicians. The intention was to provide a framework for diagnostic decision making. There are six recommendations:

1) In a child 6 to 12 years old who presents with inattention, hyperactivity, impulsivity, academic underachievement, or behavior problems, primary care clinicians should initiate an evaluation for ADHD;
2) The diagnosis of ADHD requires that a child meet DSM-IV criteria;
3) The assessment of ADHD requires evidence directly obtained from parents or caregivers regarding the core symptoms of ADHD in various settings, the age of onset, duration of symptoms, and degree of functional impairment;
4) The assessment of ADHD requires evidence directly obtained from the classroom teacher (or other school professional) regarding the core symptoms of ADHD, the duration of symptoms, the degree of functional impairment, and coexisting conditions. A physician should review any reports from a school-based multidisciplinary evaluation where they exist, which will include assessments from the teacher or other school-based professional;
5) Evaluation of the child with ADHD should include assessment for coexisting conditions;
6) Other diagnostic tests are not routinely indicated to establish the diagnosis of ADHD (1158).

Because of current and future research and its discovery of new knowledge about AD/HD, the authoritative definition of AD/HD set out in *DSM-IV-TR* is not likely to remain unchanged in *DSM-V* (expected in 2012). In fact, a number of problems with the *DSM-IV-TR* Diagnostic Criteria for AD/HD have already been identified. The CDC notes that the scientific investigation of AD/HD has been "significantly slowed by the lack of a single, consistent, and standard research protocol for case identification." Stefanatos and Baron point out that the *DSM-IV-TR* criteria may "often fail to capture the full spectrum of the disorder, and fail to lead to appropriate alternative diagnostic

considerations" (23). Further, AD/HD often becomes a diagnosis of exclusion once competing and potential causes are considered and discarded (23).

It is problematic that the diagnostic criteria are to be applied to individuals of all ages because the symptoms listed may not apply to children outside the age group of four to sixteen. This leads to an over-diagnosis in children under four and an under-diagnosis in adolescents and adults. For this reason, Barkley proposes an entirely new list of symptoms for diagnosing adults with AD/HD, critiquing the current symptoms presented in *DSM-IV-TR* because they were developed solely on children (Barkley and Murphy). Further research is also needed to clarify the developmental course of AD/HD symptoms (American Academy of Pediatricians 1168). Another problem surfaces with the requirement that establishes the age of onset at seven: this reduces the accuracy of identification. Brown, Barkley, and Biederman believe the age of onset criterion should be broadened to recognize that many AD/HD impairments are not evident until years later (Brown *Attention Deficit Disorders* 15). An additional difficulty in making a diagnosis of AD/HD is that the behaviors fall on a spectrum and must be determined to be "inappropriate" by the subjective judgment of observers/reporters. "There are no data to offer precise estimates of when diagnostic behaviors become inappropriate" (American Academy of Pediatricians 1168).

Another problem with diagnosis is the significant heterogeneity within each type of AD/HD. Further, criteria are static and no allowance is made for a reduction of symptoms over time (Stefanatos and Baron 16). For example, hyperactive-impulsive symptoms are likely to decrease or even disappear as the child matures, while inattentive symptoms tend to persist into adulthood. Barkley notes that an additional reason to

adjust the diagnostic criteria for age is that many adults who appear to have "outgrown" the disorder may, in fact, have simply outgrown the diagnostic criteria. Also, *DSM-IV-TR* fails to acknowledge gender differences in the manifestation of symptoms. In the field trials for *DSM-IV* AD/HD symptoms, 80% of the subjects were male children. Barkley notes that the requirement for duration of symptoms of at least six months is too short and should be 12 months or longer. For example, children often need more than six months to adjust to a new classroom structure. Brown notes that chronic problems with the regulation of emotion are not currently included in the *DSM-IV-TR* definition, but should be part of the core component of the disorder (*Attention Deficit Disorders* 913). Requiring that symptoms be present in two or more settings may tend to reduce the diagnosis for AD/HD. Teachers and parents often disagree on their assessment of a child's behavior perhaps because teachers often see maladjusted behaviors in the classroom that parents do not see in a less-structured home setting. Finally, further research should examine the diagnostic process itself: "Because no pathognomonic findings currently establish the diagnosis, further research should examine the utility of existing methods, with the goal of developing a more definitive process" (American Academy of Pediatrics 1168).

In their summative assessment in 2002, both Barkley and Brown theorize that AD/HD is a "complex cognitive disorder" increasingly being "recognized as a developmental impairment of executive functions of the brain" (Brown "DSM IV" 914). Brown points out that except for AD/HD, there is in "DSM-IV no diagnostic category for developmentally based impairment of executive functions in persons of normal intelligence" (*Attention Deficit Disorders* 24). Barkley and Brown also both believe that

the symptoms of inattention and those of hyperactivity-impulsivity should be separated.

Barkley goes so far as asserting that the *DSM-IV-TR's* definition incorrectly puts the emphasis on inattention. Further, he believes that AD/HD Primarily Inattentive Type may be a disorder that is entirely different from AD/HD Combined or AD/HD Primarily Hyperactive-Impulsive Type (Brown *Attention Deficit Disorders* 173). Barkley elevates behavioral inhibition as the primary executive function with the other executive functions (non-verbal working memory, verbal working memory, self-regulation of affect/arousal, and reconstitution) being dependent upon behavioral inhibition. Brown, on the other hand, conceptualizes six clusters of executive functions impaired in AD/HD which are interrelated and work together in various combinations: activation, focus, effort, emotion, memory, and action.

The rhetorical construction of the individual with AD/HD is ongoing and dynamic because the definition of AD/HD is undergoing constant revision as more is learned about this complex and debilitating disorder. The most promising theory to explain the complex and sometimes contradictory symptoms of AD/HD is that of executive function impairment. By studying how AD/HD impacts the executive functions, we may learn how to help those with AD/HD to realize the possibilities of their "brighter margins" and thus to reframe their rhetorical identification in a positive light.

Chapter 3: The Study

"[The challenge of writing with AD/HD] is kind of like being in a box. It's a clear box, but you're stuck in it. You can see out. You know there are possibilities, but you just can't seem to break out of it."
--Amy

Methods

This qualitative study of current college students and college graduates who have been diagnosed with AD/HD and who have been required to complete college writing assignments was conducted in order to learn more about the effect that AD/HD has on the writing process and how best to help individuals deal with that effect.

Quintilian reminds us that teachers need to begin where the student is: "Let him that is skilled in teaching ascertain first of all, when a boy is entrusted to him, his ability and disposition" (25). As Janet Emig demonstrates in her ground-breaking 1971 study, *The Composing Processes of Twelfth Graders,* the most revealing information about where our students are as writers can come from the individual students themselves. Furthermore, Dr. Thomas E. Brown of Yale University, a leading expert in AD/HD, asserts that listening to the individual with AD/HD is "central to learning about and coming to understand the sufferer" (VideoCHADD). Unfortunately, few have listened to the voices of people with AD/HD telling their stories. Speaking about learning disabled students in general, Patricia Dunn asserts that it "should go without saying that the personal experience of our students matters, that what they say about themselves is credible, that their stories are true, that what they know about the way they learn, what they must do as they read, write, and study, is informed by years of life experience" (97).

Procedures

In order to gather testimony from college students and college graduates with ADHD, data was collected from two sources: 1) Preliminary Questionnaires; and, 2) Personal Interviews. Participants completed an informed consent form (Appendix D). They were advised that their information would be kept confidential, and that they could decline to answer any question or stop participation in the study at any time.

Prior to the personal interview, each participant completed the Preliminary Questionnaire which provided basic background information. There was one questionnaire for the current college students (Appendix E); and one questionnaire for the college graduates (Appendix F).

The Personal Interviews followed a predetermined series of questions about the participant's experiences as a writer with AD/HD. These questions were given to the participants in advance of the interview for their information. They were not required to prepare in advance for the interview. There was one set of questions for the current college students (Appendix G) and another for the college graduates (Appendix H). Each interview lasted approximately one hour. The interviews were audio-taped in order to accurately record the responses to the questions. All but two of the personal interviews were conducted in the researcher's office at Howard Community College. One of the other two interviews was conducted by phone; one was conducted in a restaurant.

In all cases, the participants' confidentiality was insured. Names were not included on the preliminary questionnaire, interview or other collected data. Instead, a code was placed on the collected data. Through the use of an identification key, the researcher was able to link the preliminary questionnaire, interview or other data to the

participant's identity. Only the researcher has access to the identification key.

Transcripts were made of the audiotapes and were labeled with the identification code.

After the transcripts were completed, the audiotapes were destroyed. In the report of the

study, the names of the participants were changed.

Participants

Current college students were recruited at Howard Community College to be

participants in the study through Student Support Services and the English/World

Languages faculty and through fliers posted around campus (Appendix I). The researcher

personally knew the college graduates who were recruited to participate in the study.

Participants were selected because they have been officially diagnosed with AD/HD, are

at least 18 years of age, and are currently enrolled in college or are college graduates.

Four current college students and six college graduates were interviewed in this

qualitative study. The intention in choosing these two groups of individuals with AD/HD

was that, first, the current college students would have immediate experiences with

writing that they could share. Second, it was assumed that by virtue of the fact that the

second group were college *graduates*, they could share the successful writing strategies

and techniques they have developed, as well as the coping mechanisms they use to deal

with the challenges that AD/HD imposes on them as writers.

While neither gender nor race/ethnicity is relevant to this study, it should be noted

that these participants are not statistically representative of the AD/HD population

according to gender or according to race/ethnicity.

Four males and six females were interviewed in this study. In childhood, males

are diagnosed with AD/HD two to three times more often than females. In one study of

AD/HD patients seen in a clinic, the male to female ratio in clinic-referred cases was 10:1; in community-referred cases, the male to female ratio was 3:1 (Biederman, et al. 36). This discrepancy in diagnosis can be attributed to these facts: 1) girls are more likely to have AD/HD Predominately Inattentive Type; 2) girls are less likely to have a learning disorder; 3) girls are less likely to manifest problems in school or at home; 4) girls are less at risk for co-morbid conditions (Biederman, et al. 39-40). By the late teens, there is gender parity in diagnosis.

Seven of the study participants are white and three are Asian. That there are no African American or Hispanic participants in this study is simply the result of chance; no African American or Hispanic students or graduates with AD/HD volunteered to be interviewed. It should be noted, however, that African American and Hispanic children are diagnosed with AD/HD at lower rates than white children. The 2005 study, "Racial and Ethnic Differences in ADHD and LD in Young School-Aged Children: Parental Reports in the National Health Interview Survey," demonstrates that African American children compared to white children were less likely to have a parental report of ADHD without a learning disability (2% vs. 4%) as were Hispanic children (1% vs. 4%) (Pastor and Ruben 385). "The association between parental reports of ADHD and a child's race and ethnicity was not explained by racial and ethnic differences in birthweight, family income, and health insurance coverage" (Pastor and Ruben 390).

Findings

Preliminary Questionnaire: Current College Students

Jon[15]

Jon, a 22 year-old white male, is a full-time student at Howard Community College. He also works part-time as a mechanic. He first became aware of symptoms of AD/HD in elementary school and he was first diagnosed with AD/HD Hyperactive-Impulsive Type at that time. Ritalin was prescribed but he no longer takes it because he believes he has to "learn when it is appropriate to act up or not." Jon's educational goal is to earn an Associate of Arts degree in General Studies. His career goal is to become a police officer. If that does not work out, he would like to be a mechanic. He did not take the SAT.

Nick

Nick, a 25 year-old white male, is a part-time student at Howard Community College working on his Associate of Arts degree. Also employed full-time, he is married with two children. He previously attended a university, but dropped out to get married. He was first diagnosed with AD/HD Inattentive Type and Dyslexia when he was seven years old. He, himself, was not aware of any symptoms of AD/HD before he was diagnosed. His mother, however, noticed problems and had him tested. After diagnosis, he took Ritalin regularly, but hated how it "robotized" his emotions. He stopped taking Ritalin a few years ago, but now faithfully takes Adderall once a day. His educational goal is to earn a Master of Arts degree in history and then teach in college to "help others further their learning." He scored 1100 on the SAT that he took in high school: 700 Math; 400 Verbal.

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[15] The names of all the participants in the study have been changed to ensure confidentiality.

Kristen

Kristen, a 20 year-old white female, is a full-time student at Howard Community College in her sophomore year. She transferred to there after four semesters at a university. She was first diagnosed with AD/HD Inattentive Type, learning disabilities, and anxiety when she was seven in second grade. She herself first became aware of symptoms of AD/HD early in high school. She has been prescribed Ritalin which she takes only before doing work or going to classes. At other times she doesn't need the extra help to concentrate on tasks. She would like to go to medical school with the goal of working with children as a psychiatrist in private practice. She scored 1310 on the SAT in her junior year in high school.

Mary

Mary, a 19 year-old white female, is a sophomore in the Howard Community College James Rouse Scholars Honors Program. She was diagnosed with AD/HD Inattentive Type and Bipolar II at age 16 at the beginning of her junior year in high school. Now that Mary knows about the symptoms of AD/HD (as of her diagnosis three years ago), she feels as if she's almost always had them: "I have always been able to hyper-focus on something, and I've always had the distractibility, impulsivity, restlessness and other such symptoms, but typically they've been much more prevalent whenever I'm hypo-manic." Mary has been prescribed Adderall XR which she takes regularly. While she has not yet decided on a major, she is leaning toward liberal studies or interdisciplinary studies. Her educational goal is "at least a master's degree." She took the SAT in 2006 at the end of her junior year in high school. Of a total possible score of 2400, she scored 2050: 690 Critical Reading; 610 Math; 750 Writing.

Preliminary Questionnaire: College Graduate Professionals

   Ryan

   Ryan, a 27 year-old Asian male, is married with one child. He was diagnosed with AD/HD Inattentive Type when he was six years old. He himself became aware of the symptoms of AD/HD when he entered college. In elementary school, he regularly took the prescribed Ritalin; however, he no longer takes medication because he believes he no longer needs it. He took the SAT when he was 17 and scored 820. He graduated from Howard Community College with an AA in Elementary Education when he was 21 years old. He then transferred to a university with a major in Sports Management and a minor in Business. He is still attending this university six years later. He has worked for the YMCA for eight years and is currently an Aquatics Director.

   Melissa

   Melissa, a 32 year-old white married female, was first diagnosed with AD/HD Inattentive Type when she was 26 and in graduate school. As far as recognizing the symptoms of AD/HD, Melissa states: "I have always been aware of them, as long as I can remember. They were given a name when I got diagnosed, but the symptoms were always very real for me as a kid/student." She has been prescribed Ritalin, which she takes regularly. She took the SAT in high school, scoring 1090. She graduated in four years from a selective private college with a BA in Psychology and French. Then she worked in daycare for one year before going on to graduate school, where she earned an MA in Instructional Systems Design (Foreign Language). (It is very unusual for someone with AD/HD to be able to even learn a foreign language, let alone major in foreign language and earn an MA!) While in graduate school, Melissa taught part time, tutored

and completed her student teaching. Then she taught full-time in public school while attending graduate school part-time. Following this experience, she went back to being a full-time student, but that did not go well. It was at this point that she was diagnosed with AD/HD. After being put on medication, she started working multiple jobs (waiting tables, tutoring) in addition to taking classes. She finished her MA degree within the year. She currently teaches French in a private middle school.

Amy

Amy, a 33 year-old Asian female, was first diagnosed with AD/HD Inattentive Type when she was 19. She had become aware of symptoms of AD/HD at the beginning of college. At the time of her diagnosis, Amy was prescribed Ritalin. She took it on and off for about five years, but has not taken any medication for the last nine years. She took the SAT in high school, scoring 1280. She attended a small four-year college for one year and then transferred to Howard Community College which she attended for two years. Then she transferred to a university where two years later she earned a BA in Graphic Design and Art History. She has also attended massage therapy school. Since graduation she has worked as a graphic designer/web designer, art director, and massage therapist. Currently, she is working as a "temp" and has a renewed interest in graphic design.

Kate

Kate, a 46 year-old white female, was first diagnosed with AD/HD Inattentive Type when she was 43. She became aware of AD/HD symptoms after being treated for depression and anxiety. At the time of her diagnosis, she was prescribed Ritalin which she continues to take regularly. She took the SAT in her senior year of high school and

scored 1000 (500 Math; 500 Verbal). She attended a small four-year private liberal arts college and graduated in five years after taking her junior year off to travel in Europe. She earned a BA in Women's Studies and History. As the first ever Women's Studies major at her college, she created her major, including classes as well as the thesis project and focus. Two years after graduation she attended a university for two years to take literature classes. Then she taught English in China for two years. She entered graduate school after returning from China, earning an MA in English. Currently she is a Ph.D. candidate in Language and Literature (ABD). She has worked as a tutor, editor, book store clerk, bike messenger, and adjunct college faculty and is now a full-time Assistant Professor of English at a community college.

Lauren

Lauren, a 30 year-old Asian female, was first diagnosed with AD/HD Inattentive Type and Learning Disabilities in elementary school. She also has Parietal Lobe Epilepsy. Currently she takes Keppra and Lamictal for her epilepsy; these drugs also control the symptoms of AD/HD. Lauren was not aware of any AD/HD symptoms in elementary or middle school. But in high school, she became more conscious of it: "High school was extremely difficult for me. I always felt that I, personally, had to work twice as hard just so that I could keep up. And it became harder as I entered college." Lauren did not take the SAT. It took Lauren eight years to earn her AA in Early Childhood Education at HCC: "I was 29 years old, and it felt like I was at the top of the world." Her goal is to earn a BS in Elementary Education although she has not yet enrolled in a university. Lauren has been a kindergarten teacher at a private learning center for two years.

Stefan

Stefan, a 34 year-old married white male, was first diagnosed with AD/HD Combination Type at age 8. He himself was unaware of the symptoms of AD/HD, but his parents were. He learned about the symptoms from consultation with his doctor and other professionals. As a child he took Dexedrine Spansule. After 8th grade, he no longer took medication: "I maybe could have used medication in high school, where I had some hyperactivity problems, but in college I had a 'wake up call,' and since then have discovered ways to focus and be disciplined." Stefan took the SAT his junior year in high school, scoring 880. He graduated with honors with a BA in History and Political Science in four years from a small private liberal arts college. He has also earned an MA in History. Since college graduation, Stefan has worked as a branch operations manager for a research company; a communications director for a U.S. Congressional campaign, for two mayoral races, and for a medical fundraising campaign; and as a communications director for a government consulting firm. He is currently a Development Communications Specialist for a hospital system.

Rationale for the Interview Questions

The interview questions were designed to elicit detailed information about the individual's perception of how AD/HD affects the ability to produce writing. Some of the questions are intentionally redundant. It was hoped that offering more than one way to look at a particular issue would increase the likelihood that the participant would recall more specifics and thus give fuller answers.

Seven of the questions examine the affective impact of AD/HD: 1) Describe how

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AD/HD feels to you [1[16]]; 2) How would you describe yourself as a student? [2]; 3)

What's your first memory of writing? [6]; 4) How do you *feel* about writing today?[7] ;

5) How do you feel when you are first given a writing assignment? [16 Student; 13

Graduate]; 6) Do you ever feel that your skills are not up to the writing assignment? [20

Student; 19 Graduate]; 7) When you are having a hard time writing, what kinds of

thoughts run through your head? Do you think negatively about your writing? [29

Student; 28 Graduate]. An individual's self-image as a writer has a significant impact on

how readily and confidently that person can write. Often the college writer with AD/HD

has had negative experiences with writing in the past.

Three questions explore the participant's response to past course work: 1) Which

English courses did you take in high school? [3]; 2) What courses were easiest for you in

high school? In college? [4] ; 3) What courses were most difficult for you in high school?

In college? [5]. An affinity for a specific area of study (e.g., math/science) might be

significant.

Four questions assess the participant's comfort level with different types of

writing: 1) Do you keep a journal, or have you ever kept one? Do you or have you ever

written for fun (poetry, stories, song lyrics, etc.)? [10 Student; 8 Graduate]; 2) How

successful are you at writing essay exams or in-class essays (that is, writing in a timed or

structured environment)? [11 Student] *or* How much writing does your current position

demand? What kinds of writing do you regularly do on the job? [10 Graduate]; 3) What

kinds of writing assignments are you most comfortable with? [14]; 4) What kinds of

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[16] These bracketed numbers refer to the specific questions in the "Interview Questions for Students with AD/HD" and in the "Interview Questions for College Graduate Professionals with AD/HD." See Appendices G and H.

writing assignments are most difficult for you? [15]. Being most comfortable with a specific type of writing (e.g., creative writing) might be significant.

There is one question about medication: If you take medication for AD/HD, how does it affect your writing process? [13 Student; 12 Graduate]. It is likely that taking medication increases the participant's ability to focus and thus would make writing easier.

The student participants were asked three questions about assistance with and feedback on their writing: 1) What kind of help with your writing do you find most helpful? [8]; 2) What kind of feedback did you receive on your writing in high school? [9]; 3) Have you ever been graded on your writing process itself? [32]. Knowing what helps them improve their writing would be helpful.

Two questions inquire about a specific, challenging writing experience: 1) What metaphor would you use to describe the challenges or problems you have with writing? [33 Student; 31 Graduate] ; 2) Can you tell me about an experience you have had that describes the challenges you face when you're writing? [34 Student; 32 Graduate]. The metaphor and the narrative offer the participants a more creative way to express their feelings about writing and the writing process.

The remaining fourteen questions focus on different aspects of the writing process. Two questions seek to reveal the participants' understanding of their own writing process: 1) How would you describe your writing process? [12 Student; 11 Graduate] ; 2) How conscious are you of your writing process? [30 Student; 29 Graduate]. It is likely that being aware of their own writing process would be helpful in producing text.

Three questions ask about specific writing strategies that have been successful: 1) What specific writing strategies and/or techniques did you develop in college (or since college) to help you successfully complete your required writing tasks? [9 Graduates] ; 2) What kinds of writing techniques do you use when you have to write a paper? [22 Students; 21 Graduates] ; 3) What writing strategies worked or didn't work the last time you wrote something? [31 Student; 30 Graduate]. An awareness of what works and what doesn't work for the individual writer should be helpful.

Three questions are concerned with invention. 1) Can you talk about your ideas more readily (with more comfort and ease) than you can write about them? [18 Student; 17 Graduate]. It is widely assumed that AD/HD people can talk about ideas more easily than they can write about them. 2) Do you ever put incomplete thoughts or fragments of ideas on paper before writing the first draft? [23 Student; 22 Graduate]. It is predicted that writers with AD/HD are not likely to put incomplete thoughts on paper before writing a draft. They are more likely to simply begin writing. 3) Are there any rules that you always try to follow when writing? [21 Student; 20 Graduate]. This question is based on two unrelated assumptions: 1) the writer with AD/HD likes to have a definite structure to follow when writing (e.g., the 500 word theme template); and 2) the ability of the writer with AD/HD to produce text may be curtailed by excessive concern with rules (e.g., never begin a sentence with "and").

Three questions relate to organization: 1) Do you use an outline of some sort? What other organizational techniques do you use, if any? [24 Student; 23 Graduate] ; 2) Do you have trouble sticking to your thesis and/or outline? [25 Student; 24 Graduate]; 3) Does your subject tend to grow and change as you're writing? [26 Student; 25 Graduate].

It is assumed that the writer with AD/HD has great difficulty in arranging ideas logically and coherently. Providing context and continuity are two common weaknesses in writers with AD/HD. It is also assumed that the writer with AD/HD is less able to make adjustments in the original plan when they are needed or when an idea better than the original has surfaced.

Two questions focus on revision: 1) How often do you get to the revision step? [27 Student; 26 Graduate]; 2) How do you go about revising your writing? [28 Student; 27 Graduate]. It is assumed that many writers with AD/HD never get to the revision step because they procrastinate and have no time left for revision. Another assumption about revision is that the writer with AD/HD gets tired of working on a project and simply cannot bear to revisit it for revision.

There is one question on procrastination: How do you feel about deadlines? Do they help or hinder you? [17 Student; 16 Graduate]. It is assumed that many writers with AD/HD do procrastinate for a number of reasons. A poor sense of time is a major factor as is inability to focus on a project. In addition, perfectionism may interfere with the individual's ability to produce text.

Finally, there is one question about writer's block: Do you ever feel that your writing is "blocked"? What do you do when you're in that situation? [19 Student; 18 Graduate]. It is assumed that writers with AD/HD often experience writer's block in part because they are unable to shift gears when needed. Once they decide on a path, it is very difficult for them to modify that plan even if it is clearly not working.

Interviews: Current College Students

The current college student participants were asked the following questions in the

individual interviews. Their responses are summarized and reported question-by-question.

1.   Describe how AD/HD feels to you.

All four students reported negative feelings associated with AD/HD. Jon and Nick, who were both diagnosed in elementary school, stated that it is only after thinking over after a bad day that they become aware of the effects of AD/HD. Jon recalled teachers asking, "Did you take your medication today?" on the days when he had not taken it. When he answered, "No," the teacher would then typically point out specific disruptive things he had done in class when he was "bouncing off the walls." Jon said he could definitely recognize the bad behavior after these things were pointed out to him. Nick described his experience this way:

> I don't necessarily know it's [AD/HD] there. It's more upon after reflections. Either it's everything feels important and everything must get done and thus a lot of things get started and nothing really gets completed and then it's really frustrating and then very overwhelming. Or I get so hyper-focused on one individual thing that the concept of time is gone and the concept of everything else around me—people can be having full conversations with me and I don't hear a word of it. It kind of fluctuates between the two. For the most part I don't actually realize it's happening until after the fact.

Kristen and Mary both report a sense of having their attention drift off and having to willfully pull themselves back to the task at hand. Kristen says, "It's constantly having to work against myself to get myself in line." Mary points out that "whenever I'm concentrating on something that I'm not really that interested in, I'll find something that's just suddenly more interesting to me and I'll just go with that for a while, and then something else for a while, and then I'll get back to the thing eventually…." Getting back to the task at hand is very hard for both of them.

2.   How would you describe yourself as a student?

Jon sees himself as an average student who has to work very hard in school, yet he tries to do only the bare minimum of what is required. He feels much more comfortable and successful when he is working with his hands, moving around, and doing something physical: "It's easier to do stuff like that, you know, instead of sit at the computer all day and type."

Nick, Kristen and Mary see themselves as smart and hardworking students who enjoy learning if they're interested in the subject; otherwise, they tend not to do their best. Nick describes his situation this way: "Smart, interested, but not always 100 percent committed….If it's a class I can't really get involved in or it's something that's cut and dry, I tend to zone out and tend to do worse…." Kristen has very high standards and pushes herself very hard; however, she states, "I am one of those people who dives into it at the very beginning; then I get bored halfway through." Mary has a very hard time getting motivated, but if the topic is something she's interested in, she will "hyper-focus on it" and just immerse herself in the reading.

3.   **Which English courses did you take in high school? Can you tell me about them?**

Jon remembers that he was in review classes until his senior year when he was in an average class. The only English class that he enjoyed was in seventh grade where he was allowed to write creatively about any subject he liked. He wrote some stories about himself and his friends going into spooky houses. He says, "that was probably the writing I liked to do the best. I mean, just if I can make up stuff, because you know, it's kind of easier, because I don't necessarily have to do research."

Nick was in "typical English," average classes. He notes that he was fortunate in

his first two years of high school because he was "able to squeak by because the teacher was more interested in us getting out what we wanted to say rather than writing the perfect paper."

Both Kristen and Mary remember reading a lot in their high school English classes. Both were in honors classes. The English course Kristen most enjoyed made connections between the literature studied and the historical/cultural time period. She liked getting the "big picture." Both remember reading a lot of Shakespeare.

4.   What courses were easiest for you in high school? In college? Why?

There was no consistency in the responses to this question, other than the connection between being interested in a course and thus finding it "easy." Jon likes math because working with numbers rather than "letters and stuff" appeals to him and is fairly easy for him to do.

Nick finds any course that focuses on performance and/or talking to be the easiest for him. His favorite classes in high school were drama, public speaking and choir; in college, his favorite class was philosophy because it involved a lot of debate, "everyone understood there was no right or wrong, but a lot of devil's advocates." This philosophy class really made him think.

Kristen, who has always been interested in science, enjoyed biology the most in high school. She notes, however, that "I don't think anything is ever easy for me. I have to work really hard to do well in most things that I try." In college, she found psychology to be "pretty easy" because she had taken a similar course in high school.

Because she was very interested in these courses, Mary found French, art, and history to be easier for her in high school. In college she has enjoyed art, history and

philosophy.

5.   What courses were most difficult for you in high school? In college? Why?

Again, there was no consensus on which particular courses were most difficult. Jon found history to be the course he disliked the most both in high school and in college because it requires so much reading. Reading comprehension is a challenge for him.

For Nick, foreign language and computer language were the most difficult courses in high school because he had so much trouble "wrapping my brain around a different way of communicating." He does not feel that any of his college courses have been really difficult. Rather his success has depended on whether or not he applied himself to the task: "If I'm not hooked, I won't necessarily try as hard."

In both high school and college, the most difficult course for Kristen has been chemistry. She has no problem understanding the concepts; however, she falters when she has to complete the detail-oriented problems. Remembering a negative sign or putting the decimal point in the right place are details that she has a hard time attending to.

Similarly, Mary has trouble with math and science courses. Like Kristen, she understands the big concepts involved, but has difficulty with the details of the mathematics.

6.   What's your first memory of writing?

Nick and Mary have negative memories of first learning to write. Nick remembers a "horribly tedious process" of using a worksheet with a line of text and then copying the words below on the blank lines provided. Mary focused on how difficult it was learning to write her name in cursive. While her teachers stressed the importance of good cursive

handwriting, she found the physical act of writing daunting. Her teachers criticized her handwriting and the way she held her pen. To this day, she does not write in cursive.

Jon and Kristen recall early positive experiences with creative writing. Jon's was in seventh grade when he was allowed to create free-flowing stories. Kristen remembers as a young child writing a description of walking across a field and climbing a tree to watch the sunrise. Her mother was very excited about this piece.

7. **How do you *feel* about writing today?**

Jon's and Mary's feelings about writing are dependent on the type of writing that they are required to do. Jon is comfortable with creative writing assignments but finds research papers very difficult and stressful. He tries to choose a topic that will be the easiest thing he can do, with the most information readily available.

Mary enjoys writing personal responses to readings and to specific pieces of art as she does in her Art History class. This format makes it easy for her to organize her thoughts. She has also developed comfortable techniques for writing research papers. But persuasive papers are difficult for her. If she feels that she does not have enough time to complete the writing assignment, then she feels anxious.

Nick states, "I definitely see the value in it [writing] but I find it very hard to bring myself to actually do it. From a lot of my previous prejudices toward it." Some of those "previous prejudices" are related to his poor handwriting. In third grade, Nick's teacher handed a paper back to him and said, "If you ever hand in something handwritten again, I will fail you." He was ashamed and embarrassed, but he could not disagree because he often has difficulty reading his own handwriting. His mother had a word processing typewriter on which he taught himself to type. He was turning in typed work

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in elementary school long before anyone else was doing it. Today he uses a laptop for taking notes in class as well as for writing. He has a hard time using a desktop computer for writing because it is so stationary; he needs to move around while composing.

Kristen uses writing as a release for her feelings, "to get everything out there." She also has positive feelings and a sense of accomplishment about writing when she has submitted a lab report: "there's that complete organization and everything is just laid out really nice."

8.   What kind of help with your writing do you find most helpful?

For Jon the most helpful assistance is the one-on-one conference where a tutor reads his work and talks to him about its strengths and weaknesses. Nick finds peer review very helpful. He also regularly has someone else read his papers and give him feedback. He also seeks help with spelling because Spell-Check does not catch all of his spelling mistakes.

In elementary school, Kristen's parents hired a tutor to help her with her writing. She worked with that same tutor through middle school. "I probably wouldn't be in school if it wasn't for, you know, somebody like that." Her dad also helps her by reviewing her work and giving her feedback.

Mary asserts that she hasn't sought a lot of help with her writing. She believes that she can communicate "a lot better in writing than I do talking." She doesn't feel that she needs help with her writing.

9.   What kind of feedback did you receive on your writing in high school?

In his remedial classes in elementary and middle school, Jon worked one-on-one with a teacher who would "sit next to us, read it, and then maybe point out some mistakes

that we made,….or say 'Hey, maybe you can do it this way.' Stuff like that." He doesn't remember writing any papers in high school.

Nick doesn't remember anything in particular. Kristen also had a difficult time recalling the feedback she received, other than "commas…I always get that stuff."

Mary remembers being asked to support her ideas with details. The "handwriting thing" also was an issue in in-class writing. Having to write by hand is a big impediment for Mary: "It's just hard. I'm trying to think what I'm going to write, but since I'm writing it by hand, I can't redo it. Like I can't go over it and reorganize, rearrange things." Having a limited amount of time in class for writing also presents a formidable challenge for her.

10. **Do you keep a journal, or have you ever kept one? Do you or have you ever written for fun (poetry, stories, song lyrics, etc)?**

Jon has never kept a journal or written for fun. Nick tried a blog once, but found it really annoying reading others' posts as well as writing his own.

Kristen and Mary have both kept a journal and written for fun. Kristen occasionally writes in her journal when she is "upset or worried about something or just thinking about something a lot when it's stuck in my head." She has also written poetry and song lyrics. Mary used to keep a journal faithfully when she was depressed (before her diagnosis with Bipolar II). "At that point I wrote sad things. I think I'm over that now, which is good. I'm kind of glad I don't write poetry anymore because it was a way to express sadness and I don't really want to do that anymore." Instead of writing in her journal now, Mary talks "with my friends, like online, in writing, and that's sort of my journal."

11.   How successful are you at writing essay exams or in-class essays (that is, writing in a timed or structured environment)?

Jon has not had the experience of writing an essay exam or an in-class essay in a timed environment. He thinks this is because he was in "lower classes."

Nick has been given extended time for essay exams or in-class essays, but it has always been much more time than he needed. When he took the SAT he was given extra time, but actually finished at the same time as the other students. He went through the math portion quickly and then spent a lot of time on the verbal section.

Kristen has also been given extended time and a quiet testing space because of her documented disability. She finds that writing in a timed environment is very difficult because she has difficulty managing her time. She will get so involved in the first question, for example, that she will run out of time to answer the rest of the questions. She states, "It makes a huge difference for me to have the extra time or be in a quiet room. At the same time you don't want to be, you know, the weird kid that sits off by herself or the kid that has to leave the classroom every time. I guess you have to kind of swallow your pride in a lot of ways."

Mary, on the other hand, has not had extended time for essay exams or in-class essays even though writing in a timed environment is very difficult for her. She remembers taking the AP literature test (score of 2) and the AP English grammar test (score of 3). She was pleasantly surprised at her scores. Writing by hand was very difficult as was time management. She felt confident on the English sentence skills/grammar test, but the essays were extremely difficult to complete. In a regular college class, she feels more comfortable doing a timed writing because she knows what

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to expect ahead of time.

12.   How would you describe your writing process?

In spite of varying degrees of confidence in their writing abilities, all of the participants have a clear understanding of their own writing process.

When Jon receives a writing assignment, the first thing he does is determine how long it has to be. Then he tries "to figure out the best approach to it." Jon uses the "500 word theme" template as his guide for developing any piece of writing. He comes up with a thesis and then develops an outline with three main topics and three supporting facts under each topic. He says he is bad at expanding ideas. He confesses that he is a procrastinator who waits "until the last minute to do everything."

Nick typically thinks about an assignment for about twenty minutes after he receives it. Then he forgets about it until he has an opportunity of an hour or two to sit down and "then churn it out—get whatever thoughts came to mind and kind of form them up." Outlines and prewriting techniques don't work for him. He just sits down at the computer and just "opens the flood gates" and catches as much as he can. Once he has these ideas down on paper, he will then do some restructuring by cutting and pasting.

For Kristen, the first step in her writing process is putting it off. When she does begin writing an essay, she always leaves the introduction for last. It's easier for her to just get all of her ideas down on paper and then figure out how she will organize them. She looks at the ideas she has generated and tries to put them in groups. Then she has to "figure out, you know, what am I going to do with this?" On the other hand, writing lab reports is easy for her because the structure is already provided by the required format of the lab report. When writing these lab reports, she usually jumps around from section to

section.

Mary's process depends on the assignment. If it's something short that is due in just a few days, she will skip her brainstorming step and just write a list of things she wants to include. That's enough to get her started on writing the paper without an outline. If the assignment is a long research paper, then her process is altered. She will brainstorm and then write an outline to help her stay on task. Researching helps her structure her paper. Then she just sits down at the computer and writes. As she's writing, she revises all along, moving things, reorganizing, cutting and pasting.

13.   If you take medication for AD/HD, how does it affect your writing process?

Jon does not take medication. Because Nick takes Adderall every day, he can't tell a difference. When he was taking Ritalin, he noticed that the medication inhibited his writing, but was helpful when he was doing math problems or memorizing facts.

Kristen finds that the medication helps her to focus her attention on the work at hand. She feels that she could write the same quality of paper without medication, but it would take her longer because she would be distracted from the task.

For Mary, Adderall makes her writing "more hectic" because she hyper-focuses. If she doesn't take the medication, or if the dosage has worn off, however, then she finds it difficult to do anything at all.

14.   What kinds of writing assignments are you most comfortable with?

Jon and Kristen are most comfortable with creative writing assignments. Nick is confident that he can write whatever assignment he is given; however, he doesn't like writing narratives or fiction. If he has a choice of topics, he will "choose something different from what everyone else is doing so that the person grading will be interested

and take note of my ideas."

Mary enjoys response papers. In addition, as long as she has enough time and space, she feels she is good with research papers. If she can choose her own topic, then she is really happy.

15.   What kinds of writing assignments are most difficult for you?

For Jon and Kristen research papers are the most difficult. If Kristen is interested in the topic, such as "science stuff," then she enjoys doing the research. Nick also finds research papers difficult because of the problem of pulling in other people's text without plagiarizing. He fears doing it wrong. For Mary, the in-class writing assignments are the most difficult.

16.   How do you feel when you are first given a writing assignment? Does your response depend on what kind of assignment it is or on what the writing situation is?

Jon's response is related to the kind of writing assignment he's given. If it's a creative writing assignment, then he feels comfortable. If it's a long research-type assignment, then he feels anxious.

The only thing that affects Nick's feelings is how long the paper has to be. He is comfortable writing two to five pages, but longer than that is a problem which makes him nervous. He worries that he won't be able to "stretch" what he has to meet the page requirement. Typically, when he has a great idea, he rushes right to the end and "misses a lot of the fluff that builds up the story." He just wants to get to the end.

If Kristen has a short assignment that she can "bang out" quickly, then she is comfortable. But if she has a longer assignment, then she feels stressed and anxious. She worries about planning it out, fitting it in a schedule, and finishing on time.

Mary also is anxious when presented with a big assignment. If she feels she has enough time to complete it, then she's OK. Also, if she can choose her own topic, then she feels more comfortable and confident.

17.   How do you feel about deadlines? Do they help or hinder your production of writing?

Describing himself as a procrastinator, Jon says, "If I don't have a deadline, then I am never going to do it." So in that sense, deadlines are helpful to him. However, deadlines also make him nervous.

Nick finds deadlines to be helpful: "Usually the closer I am to it, the better I write. I definitely work better under pressure."

Kristen is also someone who works best under pressure, but she is not sure whether deadlines help or hinder her writing. She knows that if she is up against a deadline, she will be able to focus, avoid wasting time, and complete the writing. At the same time, however, she knows that if she allows herself time to edit her work, then her writing will be much better.

Mary finds deadlines both helpful and hindering. If she waits until the last minute, she becomes frantic. Pacing herself helps her complete the assignment on time.

18.   Can you *talk* about your ideas more readily (with more comfort and ease) than you can *write* about them? Why do you think that is?

Jon, Nick and Kristen definitely believe that they can talk about their ideas with more comfort and ease than they can write about them. Mary, however, believes that she is better at writing.

Jon tends to give shorter answers when he is writing than when he is talking. Also, because he doesn't type very fast, he finds it difficult to capture all of the ideas

coursing through his mind: "I can probably say it faster than I can type it."

For Nick as well, it is more difficult to get the information out while writing. He says, "Speech has always been the easiest thing for me. I was holding full conversations before I was walking."

Kristen can also talk more readily than write. She wonders if that is because she is using a different part of her brain. When she was little, she would dictate to her parents and they would write down everything she said. Then she would take what they had recorded and use that information to construct her essays. When she has to write a paper on a subject, she is likely to have a lot less to say than if she is talking about the subject.

Mary believes that because she is such a "visual" person, it is easier for her to write about her ideas than to talk about them. When she is talking, she has a tendency to go off on tangents and lose her train of thought. It is easier for her to organize her thoughts when she can see them on the page. Mary knows, "If I'm talking though, I can't keep track of what I just said. It's way too hard."

19.   Do you ever feel that your writing is "blocked"? Do you fear being "blocked"? What does that feel like? What do you do when you're in that situation?

The only time Jon feels blocked is when he is writing an in-class assignment and he can't remember what he had prepared.

Nick has experienced being blocked: "It's just an emptiness." Usually he just lets his ideas flow onto the page. He doesn't "tweak" them too much as he's writing. But sometimes he has "nothing" and doesn't know where to go. When that happens, he leaves the writing for another time. He doesn't worry about being blocked.

Kristen doesn't worry about being blocked either, although she definitely

experiences this problem occasionally. If she is up against a deadline, then she can usually produce text. But if she has more time, then sometimes she feels like she just "doesn't want to touch it or deal with it." At those times, she will get up, move around, and do something else and then come back to the writing later.

If Mary is facing a big writing project, then she often feels blocked because she doesn't know where to begin: "I'm not really sure where to start and I'm scared I won't be able to finish." She wonders if she is afraid that the writing won't be what she wants it to be. Often she sits and stares at the computer for a while. When she finds herself in this situation, she will leave and come back to it later. That usually helps free up her ideas. Another technique that works for Mary is to brainstorm or to generate questions that she needs to answer in her paper. Just getting something down on paper helps.

20.   Do you ever feel that your skills are not up to the writing assignment? Why is that?

Jon sometimes feels frustrated and lacks confidence in his writing ability, especially comparing himself to other students in his class. However, when he has finished an assignment, he doesn't necessarily think it was difficult.

Nick has also felt frustration. He has always felt that he was having more difficulty than the average student in both reading and writing. He was "pulled out of class" for special help in elementary and middle school. He was bothered by the fact that he wasn't doing the same level of work as the rest of the class: "It was a little diminishing. It took a while to get over it. I'm not sure I'm over it yet."

Kristen usually feels confident that she has the skills to do the work. But then she worries that she is going to work hard on the project and it's not going to turn out the way

she wants it to. She fears the let-down.

Mary feels that she has the skills necessary to be successful; however, she does sometimes worry because she doesn't know where to begin a writing assignment. The hardest thing for her is tying paragraphs together: "It's very difficult for me, probably because of AD/HD, to get two ideas to mesh."

21.   Are there any rules that you always try to follow when writing? If so, what are they?

The only rule Jon follows is to avoid using "you." Nick says, "No, I'm very bad at following rules." Kristen follows some standard "rules," such as never use "I" in a science report or avoid passive voice, but doesn't necessarily worry about them. These are just things that she double-checks when revising her work.

Mary seems to be more rule-driven. She's very good at grammar and punctuation and knows the rules by heart. She never begins a sentence with a preposition. She has, however, relaxed her adherence to the "500 word theme" rule that requires three supporting details for each main idea because she found that she could often achieve her goal with just two or even one good support.

22.   What kinds of writing techniques do you use when you have to write a paper?

Jon did not think that he had any "writing techniques" to speak of.

Nick tries to focus on the discussion or debate issues that are part of an essay assignment. He then takes those issues and makes a statement about them. He tries "to catch as much of what my brain has to say as I can before I move on to the next topic." He also always has at least one other person review his paper before he turns it in.

Kristen likes to work in the morning because it's quiet then. For long papers she

always writes an outline. But it's not a "pretty outline." Instead, it may take the form of ideas scribbled down as they pop into her head. She also tries to break things down in a long assignment and set little deadlines for herself.

Mary always needs an outline if she's doing a long paper or a research paper. She then uses the outline as a departure point for developing her points. For a short paper, she just sits down and writes.

23.   Do you ever put incomplete thoughts or fragments of ideas down on paper before writing the first draft? Why or why not?

Jon puts his ideas into a single word or phrase outline. Then he uses that outline as a guide for expanding his ideas.

Nick does not put down incomplete thoughts. For him "it's all just the first draft."

Kristen always puts incomplete thoughts or fragments of ideas down on paper because it helps her to have her ideas in front of her. Then she knows where she is going and she "can just fill in details as long as I understand what I have to write about."

Similarly, having "just itty bitty fragments" down on paper helps Mary to get started writing.

24.   Do you use an outline of some sort? What other organizational techniques do you use, if any?

Jon always uses an outline; Nick never uses an outline.

Kristen doesn't use a traditional outline, but she does jot down ideas. She will print out her paper so that she can look at its organization and edit it.

Mary uses a webbing technique where she draws a large circle on the paper with lines emanating from it "like a spider web with little circles and more from there." Then she fills in the spaces with her ideas, support, etc. This visual representation helps her see

relationships between ideas.

25. **Do you have trouble sticking to your thesis and/or outline? Why do you think that is? If you don't have this problem, how do you stick to your plan?**

Jon reports that if he has good ideas, he then can stick to his outline. Nick rarely has any difficulty in sticking to his thesis.

Kristen believes that that is what her outline is for--to help her maintain her focus. As she reads over what she has written, she will notice that she is going off on a tangent. Then she will refer to her outline to get back on task. Or if this new idea is particularly good, then she will revise the outline to include it.

Mary believes that if she has a good thesis, then she will have no problem sticking to it.

26. **Does your subject tend to grow and change as you're writing? Why do you think that is? If not, how do you keep your subject from changing? How do you stay focused on your topic?**

Neither Jon nor Nick has this problem.

Kristen sees this "growing and changing" as a positive thing. She thinks that when she does it "correctly," her ideas help to "fill out" the outline and they build on themselves for a more effective paper.

Mary recalls her fifth grade teacher chiding her for "killing the prompt" and writing something completely different than what the assignment called for. She is aware of going off on tangents, so she frequently rereads what she's written looking for things that "don't fit." Then she will revise appropriately.

27. **How often do you get to the revision step?**

Jon always tries to do a separate revision step because his teachers require it. He

admits, however, that if they didn't require it, he probably would not do it on his own.

Nick does not revise as a separate step. Instead, he continuously revises as he's writing. When he has finished writing, then that's it.

Kristen always includes a revision step in her writing process.

Mary revises "all the time." "I've got to go back all the time, just look at it again, to make sure everything fits….I need to revise or it just doesn't work."

28.   How do you go about revising your paper? How do you know when your paper does not need revising?

Jon has had to participate in peer revision groups in class as part of this revision step. He did not find this helpful because he did not feel comfortable offering advice to other writers when he doesn't think of himself as a "great writer."   He doesn't like the revision step because he thinks that it is hard enough to write just the paper, let alone go back over it and change things.

Nick goes back and reads the paper aloud to make sure that all the words make sense and that he hasn't left anything out. Then he has someone else read it and comment on it. If he can't figure out how to spell a word, he'll recast the sentence using a word he can spell. He knows he's finished revising when he's handed it in. The deadline usually determines the end of his revision step.

Kristen feels compelled to go over her writing three or four times with someone else and to read it over at least twice by herself. Her pattern for doing this review varies: sometimes she does each review at a different time and sometimes she reads through twice in a single sitting. She reads aloud to ensure that "everything sounds nice." She feels that her writing always could use more revision, but she stops when she runs out of

time, becomes frustrated, or feels that she's done as much as she wants to.

If Mary is writing a short paper of one or two pages, then she will write the entire thing before she revises. If it's a longer assignment, then she stops to revise after she has written a few pages. Introductions are particularly difficult for Mary. She tries to live up to the credo of her high school English teacher: "If your paper were to catch fire, make the introduction the paragraph you'd rush to save first." She reviews her paper to make sure that "everything ties in." Mary believes that if her introduction and conclusion are solid and she's covered everything, then the paper is basically done. She'll then just go through it again to catch "little grammar things."

29. **When you are having a hard time writing, what kinds of thoughts run through your head? Do you think negatively about your writing (e.g., "This isn't good enough;" "This is too hard. I give up")?**

Jon says that he gets frustrated and wants to quit all the time: "I say, man, I just want to stop going to school," but his goal of becoming a police officer spurs him on.

Nick does not engage in this negative thinking. If the ideas aren't coming, then he knows that it isn't the right time to write. He'll then do something else and come back to the writing later.

Kristen often feels frustrated with herself, but she doesn't think negatively about her writing. When that happens, she will take a break and come back to the writing in a few hours.

In the past when Mary was suffering from depression, she would get blocked and would just give up and stop writing. Now that she is on medication, she doesn't do that anymore. Now she is more easily motivated, especially because she's in classes that she enjoys. She knows that "if I think this isn't good enough, I can just fix it. It's not that big

of a deal for me anymore."

30.   How conscious are you of your writing process? For example, when you start writing, do you think about what you're going to do first? Or do you immediately begin to write?

Jon has a very definite writing process that he follows consistently. He creates an outline following the "500 word theme" template and then expands his ideas.

Nick, on the other hand, just begins to write. He tries to find a good starting sentence, but if he can't get a good introduction in the first ten minutes, then he will begin writing the first point in his essay. He is confident that he knows what to do to write a paper.

Kristen finds it hardest just to get started, but, she says, "If I can just get in there and do something at first, then I can have some momentum to go with." She isn't sure whether or not she organizes her ideas beforehand, but she definitely picks "out something on purpose to start with." She follows the same process every time.

Mary's process depends on the assignment. If it is a short paper, she doesn't think about the writing process; she just writes. If it is a long research paper, she plans first. She makes an outline to guide both her research and writing. She feels that she has internalized her writing process through so much practice.

31.   What writing strategies worked or didn't work the last time you wrote something?

Jon's most recent writing assignment was an in-class essay. He used the "500 word theme" template to structure his paper. He divided his subject, self-segregation, into three parts: high school, college, business. Then he found three supporting details for each main part. He was allowed to bring his outline to class for the in-class writing.

He was able to write a "C" essay using this technique.

Nick, who found his writing technique in high school, says, "It's been so long since something hasn't worked."

Kristen's most recent writing assignment was a lab report for her cell biology class. She found this relatively easy to complete because the requirements of the assignment were concrete and specific and the lab report structure was pre-determined and straightforward.

For her art history class, Mary recently had to write a personal response to a 20th century painting. She began by writing a bulleted list of her ideas about and impressions of the painting. Then she organized those thoughts into a narrative about the painting. She felt confident in this assignment because it was specific and based on her own opinions.

32. Have you ever been graded on your writing process itself? If so, did it help? If not, do you think being graded on your writing process would be helpful to you? Why or why not?
In a developmental college writing class, Jon has had the experience of having to write an outline and have it graded before proceeding with writing the paper. It wasn't particularly helpful to Jon because he feels confident in his ability to write an outline.

Nick has never been graded on his writing process, but he was required in some high school classes to submit notes, an outline, a first draft, a first revision, a second draft, etc. to make sure that the students were doing all of these steps. For Nick this "extremely tedious" process was not a helpful strategy. "It just seemed like busy work."

Kristen also had to submit an outline and a draft of her papers in high school. She did not mind doing it because she believed that she needed to "have that under my belt by

the time I got to college."

Mary recalls being graded on her writing process in fifth grade, but not since then. Once she understood the concept of a writing process that included revision and it became instinctive, she found any discussion of writing process annoying: "I know this. Why are you telling me this?"

33. **What metaphor would you use to describe the challenges or problems you have with writing? (For example: "It's like trying to rake leaves when it's really windy."[17])**

Jon: "I'm really good with my hands….I can just look at that [something that needs to be assembled] and I'll know where things can go and how to put it together. That's easy for me as long as it's not writing."

Nick: "Opening the flood gates and having nothing be there."

Kristen: No response

Mary: "I feel sometimes that my thoughts are all just out there and I have to bring them in."

34. **Can you tell me about an experience you have had that describes the challenges you face when you're writing?**

Jon repeats his negative experience in having to write an in-class essay. Despite the fact that he prepared in advance by trying to write the essay at home, when he got to class he couldn't remember what he had written at home. The consequence was that he

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[17]   This quote is from a student at Landmark College as reported by Lesle Lewis in her presentation with Sara Glennon, "Invisible Papers, Invisible Challenges: Coaching College Writers with AD/HD," at the College Composition and Communication Conference, Chicago, IL, 24 Mar. 2006.

was unable to think on his feet, and he was unable to successfully complete the in-class essay.

Nick relates an experience he had in a human sexuality class in college. The assignment was to read a book about homosexuals and then write a ten-page paper about the subject. The problem was not with the writing assignment but with the book, which he thought was a poorly written, terrible story. Because this starting point for the assignment was weak, he had a lot of difficulty with the writing assignment.

Kristen remembers a writing experience that began negatively but ended very positively. In her senior year, she was not getting along with her parents. She felt that she was in the midst of a "big turmoil." To deal with her feelings she wrote extensively in her journal about her unhappiness and about leaving home. She also wrote about happier subjects. Later she shared some of this writing with her mother. For graduation her mother made her a quilt with her words and quotes from important people in her life embroidered around the edges of the quilt.

Mary's experience occurred in her high school senior year English class. Her teacher was passionate about writing and literature and she responded well to his attitude. She really liked writing for that class because she knew what she was doing. However, she was disappointed when she'd often get a "C" on a paper. Her teacher's comments often said "more details." She thought, "but I have details." If she gets discouraged by the grades she's earned, it's more difficult for her to keep trying.

Interviews: College Graduate Professionals

The college graduate professional participants were asked the following questions in the individual interviews. Their responses are summarized and reported question-by

question.

1.   Describe how AD/HD feels to you.

Five of the six college graduates expressed negative feelings about AD/HD. It makes Ryan feel anxious. He finds it difficult to just sit still; he has to move around or do something. For Melissa, AD/HD feels like "bad vision except turned inward." She says it's like having fuzzy vision until you put your glasses on. When she takes her medication, the fuzziness disappears. AD/HD makes Amy feel stupid and unsure about why she can't "get" things as quickly as others. She feels distracted and has difficulty focusing. She feels frustrated by her inability to get anything done. Kate feels "un-centered": "It feels like I can't follow my thoughts from one to the next." Lauren says having AD/HD makes her feel "horrible." She doesn't like to think about it: "It's taken me a long time to accept the fact that I have ADD….you do your regular daily routine knowing that everything you do in some way brings it all back, and it kind of shakes you sometimes."

Stefan alone has found a way to channel his AD/HD as a positive force in his life. For him, AD/HD "has always felt like endless energy. I think as a child I wasn't able to control it very well. And so I acted out a lot and got into trouble….I think in college, I more or less figured it out that at some point you have to direct that energy to healthy pursuits." In college he focused his energy on being a good student. As an adult, he focuses that energy on his job, on long distance running, and on working around the house. (He runs ten miles every morning.)

2.   How would you describe yourself as a student?

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Ryan believes he was a good student: "Teachers always said they loved to teach me….I got easily distracted, talked a lot, but I was also the kid that was always engaged in topics. But if it didn't interest me, they pretty much lost me."

Melissa attributes being an excellent student to her love of reading and high verbal I.Q. (Ironically, she believes, that is also the reason that she was not diagnosed with AD/HD until graduate school.)

Amy characterizes herself as an average student until she transferred to a university and had to pay for her own education. At that point she was really invested in her education, and she successfully applied the coping mechanisms she had developed over the years.

Kate remembers being "bored in the classroom and looking for something to do with my mind." Teachers told that her that she was "spacey."

Lauren describes herself as a very hard-working student who often needed special help to understand the material. From elementary through high school, she was in many "skill classes." In college, she always took advantage of the opportunity to meet with professors after class to ask questions about what had occurred in class. She says, "over all I've had to work twice as hard just to keep up with everybody." Many times in high school and college, she "just wanted to throw up everything and forget about the whole thing." But she kept her goals in mind and kept pushing herself.

Stefan says he was a mediocre to poor student up through high school. In high school he did just well enough to get into college. (By his own choice he repeated his sophomore year in high school when his family moved to a new town.) In college, he met the woman who would become his wife. She was a "straight A" student who inspired

him to work hard and become an excellent student. He graduated with honors from college and from graduate school.

3. Which English courses did you take in high school?

Melissa, Amy, and Kate were in advanced honors English classes. Ryan and Lauren were in skills classes until sophomore year when they each then moved up to a regular class. Stefan was in average English courses throughout high school except for an honors advanced composition course his senior year.

4. What courses were easiest for you in high school? In college? Why?

For all of the college graduates, the courses that were easiest for them in high school were also the easiest in college. For Ryan social studies and math were the easiest courses: social studies because he watched the History Channel a lot; math because "it was different and it always had an end." Melissa found English and foreign language (French) to be the easiest courses for her. When she was in high school, she spent a summer in France. Creative classes—art and music—were the easiest for Amy. Kate found chemistry and physics to be her favorites. Lauren said English was definitely her easiest class, even though she had to work hard at it. Stefan thought English-related classes that required a lot of writing, such as English, history and government, were easiest for him because he is a good writer. In addition, he just loves history and thoroughly enjoyed those classes.

5. What courses were most difficult for you in high school? In college? Why?

Similarly, the courses that were most difficult for the college graduates in high school continued to be the most difficult in college. Reading comprehension has always been very difficult for Ryan, so any course that required a lot of reading was difficult for

him. For Melissa, math was the always the most difficult course; for Amy, it was science. Kate struggled most with history although that was her major in college. For Lauren, math was most difficult, but science, social studies and history were also very challenging. Stefan says, "No question about it, math and science."

**6.	What's your first memory of writing?**

Ryan recalls a story that he wrote in second grade, titled "A Thousand Broccoli Kids." This was a year-long project. Broccoli was his favorite food so he choose "broccolis" as his main characters who went to outer space, traveled around and had adventures. At the end of the year, he had a book to take home. This was a very happy memory for Ryan.

Melissa also happily recalls a creative project that she did in elementary school. She had to write a poem and illustrate it. She remembers loving having it on the wall in the classroom. For Amy writing poetry at about seven years of age was her first memory of writing: "I always had a creative bent, I guess, and I always expressed myself through journaling or writing poetry." Kate's first memory of writing is in her seventh grade creative writing class. She was very positively affected by her teacher's comments that she had "a nice way with creative writing."

Lauren's memory is of a project in her college "Materials and Methods" class. The assignment asked her to look in a mirror and draw herself without looking at the paper as she drew. Then she had to write a short essay about herself. Her teacher noted that her "drawing skills are amazing" and asked if she could use Lauren's project as an example. Lauren came across this project just a few days before the interview when she was cleaning out her desk: "I sat there and I read it….I said, 'Wow, I wrote this?'"

Stefan fondly remembers an assignment he had in fourth grade. The class had to write a letter to gather support for the restoration of the Statue of Liberty. His letter was selected as the best in the class, and so he got to send it to the local newspaper on behalf of the entire class.

7.   How do you *feel* about writing today?

Ryan describes himself as an "OK" writer. He laughs as he describes how his parents edit his emails. He knows that he has a good sense of what he wants to say, but he has great difficulty in expressing those ideas. So, he solicits the help of his wife and mother in critiquing and editing his work.

Melissa and Stefan absolutely love to write. Stefan says, "I think it was something I was meant to do."

Amy enjoys writing for herself in her journal or writing poetry. At work she feels competent to complete the writing required of her, most of which is creative and collaborative. If she had to write a paper, however, she thinks she would feel quite stressed.

Kate has mixed feelings about writing. Sometimes she feels like she's "really getting it," but at other times she feels "like it's still really hard." She does not, however, any longer feel any anxiety about writing.

Lauren feels that writing just makes her stronger: "It makes me feel like I can dream a vision, a goal, and make it a reality." She uses writing in order to deal with her stress, like others use the gym or bicycling: "writing seemed to pull something out of me that gave me a peace of mind." No one knows about the poetry and stories she has

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written. Lauren says, writing "is a place I could go to express myself and I didn't have to worry about what people thought of me."

8.   Do you keep a journal, or have you ever kept one? Do you or have you ever written for fun (poetry, stories, song lyrics, etc)?

Ryan confides that he has never written anything for fun. In contrast, Melissa has been keeping a journal since she first learned to write. Her journal is "more emotionally based." Similarly, Amy has been keeping a journal and writing poetry since she was in elementary school. She finds it very helpful to look at her journal entries from years back to see what was going on at that time and try "to figure out how I got through that, and if I got through that, how to apply it." Creative writing in the form of a journal and poetry has also brought Kate great pleasure through the years. When Lauren is very upset, she sits down and writes in her journal, but she doesn't write on a daily basis. Stefan would like to have more time to write for himself. He has kept a journal intermittently, but now he usually writes in his journal only when something is going on in the world that really gets him thinking. His dream is to write a novel.

9.   What specific writing strategies and/or techniques did you develop in college (or since college) to help you successfully complete your required writing tasks?
Ryan believes that his major problem with writing is that he doesn't have any strategies or techniques. He doesn't think he "ever really developed how to pre-writ." He acknowledges this is a gap that has made writing more difficult for him. When he's given an assignment, he just begins freewriting until he has all of his ideas down, and then he goes back and edits what he's written. He has never used an outline: "When I was writing, I'd write a sentence and it'd take twenty more minutes to think of my next sentence instead of just doing an outline, something to prepare."

In contrast, Melissa says that she has to be "so organized to a ridiculous point" before she begins writing. She develops a detailed outline and often color-codes her ideas in the outline. For a long paper, she typically uses 3x5 cards to take notes so that she can physically manipulate her ideas in to order to develop an effective outline. As she is writing, she often makes lists and writes notes to herself. For example, if she is having difficulty in putting her ideas into words in a particular paragraph, she might type a note in the text in large red font saying, "Need to rephrase paragraph." She needs visual cues so that she will not forget what editing she needs to do later.

Amy uses a similar note card technique to organize her ideas. She would, however, "basically flush through an outline" by writing quick notes on the cards of thought patterns or anything related to the subject. Then she would shuffle them to create an outline. From that point on, she would just write.

Kate finds putting things into "bite-sized pieces, chunks" and thinking section by section to be a very helpful technique. Also, when she's in the middle of a large project, at the end of the day she will make sure that she knows exactly where she will begin the following day. She leaves herself a note about something concrete to begin with. But there is a flaw in this plan, she laughs, because "the problem is I leave notes everywhere."

Lauren relies on the 500-word theme template that she learned in high school as her technique: "You have your introduction; you have your three objects you want to talk about, and your conclusion." She believes it takes her twice as long as a "normal" person to complete a writing assignment. For that reason and because she never wanted to be late with a paper, she would always start working on a paper immediately after

receiving the assignment. One frustration that she often encountered was having ideas in her head that would "just disappear" before she could "spit them out" on the computer. When that happened, she would literally sit in front of the computer for an hour without producing any text as she tried in vain to recapture the exact words that had "disappeared." Once her mind got "jogging" she would be able to "spit at least a couple words on the screen." She realizes that part of the reason it takes her so long to write is that she edits as she goes along, rather than just writing and editing later.

Stefan typically does a lot of thinking about his topic and a lot of research on it before he begins writing. He focuses on the intended message and themes he wants to get across. He lists his ideas and themes and from those lists creates a structure that will make his message "as clear and intelligible as possible." At that point, he just begins writing and then revises later.

10.   How much writing does your current position demand? What kinds of writing do you regularly do on the job?

Ryan's job as an aquatics director does not demand much writing. He does have to complete reports in which the format is preset. He also writes emails to his staff and supervisor. In all cases, he asks his wife to review what he has written to ensure that his message is clear.

Melissa has to do "a decent amount of writing" in her job as a private middle school foreign language teacher. She has to record comments on student reports several times a year. In addition, she has to frequently communicate with parents via email. It is very important to be "able to phrase things articulately for these parents so that they can

know that they've been heard even when they are not going to get their way on some things."

In her current job as a "temp," Amy has just a few reports to write all of which have a template to follow.

As a community college teacher, Kate writes recommendations for students and assignments. In addition, she occasionally works collaboratively with other faculty to write reports or proposals.

Lauren, a private kindergarten teacher, is required to complete student profiles each week recording their progress. In addition, she creates lesson plans each week. In both cases, there are templates to follow and Lauren knows exactly what to do.

Stefan's position is "100% communication and writing." Because his main focus is fundraising, much of his writing takes the form of letters or proposals soliciting donations. In addition, he creates informative brochures and website content, press releases, concept papers, articles for publication.

11. How would you describe your writing process?

Ryan's process consists of just writing without any particular preparation. He always writes the minimum required. Then he has someone (his parents in the past and his wife now) review what he has written and give him suggestions for improvement.

Melissa always begins with a list of ideas or concepts she needs to cover. Then she organizes this list into a full outline. From the outline she then writes. This is a process that works for her whether she is writing a brief email or a long research paper.

Amy describes her writing process as difficult, a struggle, a frustrating process. The most difficult part for her is in starting; she is a "huge procrastinator." Once she gets

started, she often goes off on different tangents and it is difficult for her to rein herself in. She thinks her mind is "always connecting to a lot of different things" at the same time. Having a deadline somehow enables her to complete the writing.

For Kate, the first step in her writing process is "a lot of running around." Just getting herself to sit for a while is a challenge. The whole time she is "circling around" she is thinking. She has to make sure that she makes herself sit down because "otherwise I waste too much time thinking." Once she is stationary, then she reads over her notes and strategizes about what she wants to accomplish that day.

Lauren says that her writing process is like making a sushi California roll. The seaweed is the base just as the 500-word theme template is the base for an essay. The three fillings, usually cucumber, avocado, and crab stick, are like the three main ideas in a paper. The spreading of the rice is like putting her thoughts in order. A chef always follows the same process when making a California roll, just as Lauren always follows the same process when writing.

The heart of Stefan's writing process is in gathering information and thinking about it. Once he has sorted out what he wants to include and what needs to be omitted, he then organizes these ideas into an effective outline. From that outline, he writes and then edits and revises.

12.   If you take medication for AD/HD, how does it affect your writing process?

Ryan took Ritalin in elementary and middle school, but chose to stop the medication in high school. At that point, he thought he could "control, focus more" and did not feel the need to take it any longer. He did not like the idea of taking medication.

Melissa notices that Ritalin positively affects her "organizational thinking over all." Without the medication, she "has to jump through twice the number of hoops to get to the organization place before I can write." Amy also experiences a positive effect. She says that Ritalin helps her focus: "I felt like I was on speed actually because I felt like I could get so much done." Similarly, Kate notices that the medication "definitely allows me to think from one thought to the next, much more carefully and clearly."

While Lauren definitely experiences a positive effect from her medication, it depresses her to have to rely on it. Without the medication, she finds that she forgets things, she can't think clearly, and her thoughts are so jumbled that she can't put them down the way she wants to. But when she is on medication, she is more stable emotionally and is better able to function and enjoy whatever she is doing.

Stefan has not used the prescribed Dexedrine since eighth grade. He does not remember it affecting his writing ability one way or the other. However, he notes, he did not think of himself as a writer then.

13. **How do you feel when you first confront a writing project? Does your response depend on what kind of writing task it is or what the writing situation is?**

When Ryan is given a writing assignment, he isn't excited, but he doesn't procrastinate either. He doesn't mind writing, but his goal is always to finish it as soon as possible. He never dreaded having to write.

Melissa's response depends on how much time she has to complete the project and how easily she will be able to get the resources she feels she needs to write (which may be space, computer programs, research, etc.). She believes that it will take her twice as long as a "normal" writer to "set the foundation of organization." Once that is

complete, then the writing comes easily. She never feels anxious about the writing, only about the organization.

Amy's response depends on both the writing task and on the writing situation. If it's a creative writing task, then she is definitely more at ease. On the other hand, if the task is something like a research paper in which she has to cite sources and "keep track of everything," then the project becomes tedious and Amy becomes overanxious about it. Her response can also be influenced by the professor assigning the task. If she thinks the professor is a "real stickler" about, for example, page length, punctuation, spelling, and grammar, then Amy would become very anxious. But if she felt the professor would be more flexible in terms of how she "structured the paper," then she would feel more comfortable about starting the paper.

Kate is comfortable with any writing situation. She begins by being excited about the ideas she is conveying.

Lauren feels anxious when given a writing task. She worries, "What am I going to do? What am I going to say? How am I going to get my information?" Her initial feelings are often of panic and frustration. When this happens, she tries to give herself a few days to think about the project. Then when she goes back to it, she can usually use that sense of panic as a motivator to start writing.

Reflecting his greater confidence in his writing abilities overall, Stefan is generally very positive about taking on any writing project. He's a confident writer who enjoys a challenge. However, if he is asked to take on a big project and he doesn't have the information he needs, then it will seem "pretty daunting" and he will not be very happy.

14.   What kinds of writing are you most comfortable with?

Ryan is most comfortable with emails where he can write the way he talks. Melissa also likes emails or any kind of writing where she can easily keep track of the details. On the other hand, constructing a complex organizational plan is not necessarily more difficult for her, but it does require a great deal more energy. Amy and Lauren enjoy creative writing. For Kate, the most comfortable kind of writing is freewriting or journal writing, the "writing to know what I think" rather than writing to communicate to another. For Stefan, persuasive writing is most comfortable.

15.   What kinds of writing are most difficult for you?

For Ryan and Melissa it is the research paper. For Amy, it is any formal paper. The most difficult kind of writing for Kate is the long project that has to have connected pieces. Lauren finds any paper that requires explaining something in detail to be very difficult. Stefan finds writing fiction most difficult, yet it is his dream to write a novel.

16.   How do you feel about deadlines? Do they help or hinder your production of writing?

Deadlines help Ryan: without them he would probably forget to do the writing. If a deadline is reasonable, it will help Melissa to plan her work. But if she has a last-minute request that does not allow her adequate time, then the deadline will be a hindrance because it will cause her a great deal of stress.

Amy hates and loves deadlines at the same time. She hates them because they do not allow her the freedom to explore a lot of topics, to go off on tangents. But she realizes that she can only explore for so long: "The deadline really does help me focus and realize I have to finish it." Kate's feelings about deadlines are similar. She says, "If I'm actually

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at a point where things are almost complete and I have a deadline, it can push me to be good. But if I'm not ready, it can put me into a tailspin."

In the past, Lauren would procrastinate if she was not interested in the topic. Often the deadline would be the force that would propel her to finish the assignment. Now, however, she has a better sense of how long a writing project will take; thus she is able to plan her time better using the deadline as a guide.

Deadlines are an integral part of Stefan's job. A deadline definitely assists him because it "helps light a fire under me."

17.   Can you talk about your ideas more readily (with more comfort and ease) than you can write about them? Why do you think that is?

Ryan can definitely talk more readily about his ideas; he has difficulty in putting his ideas in writing: "I'm the one who writes something, deletes it, writes it, and realizes 'Oh no, that's not what I mean.'" He would rather give a speech than write an essay.

Melissa agrees. She analyzes the situation for the individual with AD/HD in this way. "If you have a shorter attention span, then having to follow fewer steps to accomplish a task makes a lot of sense." Melissa explains that speaking takes just a step and a half as the idea goes out of your brain through your mouth. Writing, she notes, requires two and a half steps as the idea goes from your brain to your hand to the written product.

For Amy, the level of comfort depends on the person to whom she is speaking. She thinks she is most expressive when she is writing for herself. She's not sure whether it would be easier or more difficult to speak to a stranger than to write to a stranger.

Kate finds that the physical act of writing actually slows her down enough so that she can be more precise and clearer in the expression of her ideas.

Lauren thinks that speaking and writing are about the same for her. She thinks of the piece of paper she is writing on as "kind of like a person" she is having a conversation with.

Stefan is sure he is definitely more effective communicating in writing. He believes that may be because when he is talking, his brain is "racing because of insecurity issues," trying to figure out what his audience is thinking.

18. **Do you ever feel that your writing is "blocked"? Do you fear being "blocked"? What does that feel like? What do you do when you're in that situation?**
Ryan encounters writer's block all the time even with the little writing he does. When he is having difficulty putting his ideas into words, he'll email his wife and explain to her what he wants to say. She will come back with a suggestion on how to word it. His co-workers are also helpful in editing his writing.

While Melissa has experienced writer's block, it is not something that often bothers her. She does not fear being "blocked," but she does fear "forgetting everything." It is of great concern that she record everything that she has to do on her palm pilot. And, she actually assigns two students to be "class nags"; it is their job to remind her at the end of the day of anything she hasn't done that she promised to do.

For Amy, writer's block feels "like hitting your head against the wall." She also describes it like being on a stationary bike whose wheel keeps spinning but never goes anywhere. When she is blocked, Amy goes outside and tries not to think about the

writing she has to do. She looks at nature for inspiration. She also finds that meditation and physical exercise help her focus.

When Kate is "blocked," she will rewrite what she has just written to help her get going again.

Lauren finds that she experiences writer's block when she has "these really great thoughts" that disappear before she can get them down on paper. When this happens, she will do something else for a while—watch TV, play a video game, eat a snack. That will help refresh her mind.

Stefan occasionally experiences writer's block; this is a concern because people are depending on him to produce written products. He deals with it by running every morning before work which, he claims, releases endorphins in his brain and helps him work more effectively.

19.   Do you ever feel that your skills are not up to the demands of the writing task? Why is that?

Ryan knows that his writing skills aren't as good as they should be, but neither are his reading skills. Nevertheless, he considers himself a very positive person who thinks that he can do everything he needs to do: "It hasn't bothered me up to now, and it probably won't bother me."

Melissa and Stefan have high confidence in their writing skills. Amy, on the other hand, often feels that she is not "practiced enough in writing." She definitely feels insecure when it comes to writing. Similarly, Kate does not know why, but she feels that there is "something, not missing in my brain, but there's something related" that interferes with her ability to provide clear transitions between ideas.

Lauren says that she constantly feels that her writing skills are inadequate. But she learned to cope with this problem by taking advantage of the tutoring services in college. She feels that she is very aware of her shortcomings and is willing to do whatever is necessary to successfully complete the writing task at hand. She has become a "self-advocate" in seeking help from others.

20.   Are there any rules that you always try to follow when writing? If so, what are they?

Ryan states that he does not have any rules; he just writes and hopes that whoever edits his work will correct it. Melissa believes that she has internalized all of the rules and that her language skills are now instinctive. She attributes this ability to the fact that she is and always has been a voracious reader. There are no particular rules that Amy follows. Kate's only rule is to slow down. Lauren focuses on sentence structure, being sure to have complete sentences that flow from one to another. Stefan is always concerned about the structure of his argument and about word choice.

21.   What kinds of writing techniques do you use when you have to write a paper or report?

Ryan's technique for writing is always the same no matter what the writing task may be. (See his response to Questions 9 and 11.)

Melissa spends a great deal of time at the invention and organization steps, especially when a long writing project is involved. (See her response to Questions 9 and 11.)

In the workplace, Amy relies on mind-mapping to help her focus on her subject at the start of a project where she is required to come up with a lot of different creative options. She begins with a basic concept and draws images on a very big piece of paper

or on a white board. She needs lots of room: "That is always very freeing. The bigger the better. The smaller sheets, like you just run out of room and you can't really think." After drawing the images, she connects them. Then she adds words to the images, "then the words turn into ideas or phrases." The visual structure, which ends up looking like a big tree with many branches, helps her to create and organize her thoughts.

Kate has learned that she must first know what she thinks about a topic. So at the beginning of a project, she spends some time trying to find her thoughts and trying to determine which thoughts are useful. Then she puts those thoughts into an outline that she tries to follow but often does not.

Lauren states that she has already answered this question. (See her responses to Questions 9 and 11.)

Stefan reiterates his technique of doing research about the topic and then determining the main message, central theme or argument he wants to make. Then he works to create a structure that will support that message, theme or argument. Once he has a clear sense of the structure, he just begins writing. After that, he revises, revises, revises.

22.   Do you ever put incomplete thoughts or fragments of ideas on paper before writing the first draft? Why or why not?

Ryan doesn't make any notes before he begins writing the first draft, but he does put down incomplete thoughts or fragments of ideas in his first draft. Then he relies on someone to edit his work.

In contrast, Melissa "absolutely" records her thought fragments so that she can remember the points that she has to address. But those notes have to look different—

"bold or capped locked or red font or purple font or separated out with a space in the margins…something…or else the text all sort of folds in and I'll forget."

Amy also puts down incomplete thoughts on paper. Sometimes these jottings may help spur on another idea and "sometimes you never know." As a graphic designer, she is constantly on the watch for ideas. Each week she'll go through the box of things she's collected---"images, poetry that I like, phrases…that really touch me or spark something"—and "collage them together" in a scrapbook. She'll look for connections and group ideas, images or words that seem to go together. Amy says, "You can always go back to that as sort of your pool of ideas that you never used but can then further develop."

Kate does record her incomplete ideas, but she is not sure how helpful this process is. Sometimes it makes her feel that her thinking is "more fragmented"; at other times it's helpful because "it at least gets it out there." Recording incomplete thoughts is a technique that allows her to "know that I thought that but I don't have to deal with it right now. I can just put it over there."

Lauren does not put down fragments of thoughts because she wants to record her ideas as complete sentences. (See her response to Question 9.) Conversely, Stefan always writes down ideas as they come to him so that he will not forget them. He also lists ideas before he begins a first draft. (See his responses to Questions 9 and 11.)

23.   Do you use an outline of some sort? What other organizational techniques do you use, if any?

Although Ryan does not use any kind of outline to guide his writing, he feels that he is "pretty organized on the paper." Melissa, on the other hand, relies very heavily on the outline she constructs before writing the first draft. (See her response to Question 9.)

Amy finds that the visual nature of the outline is helpful. If she is doing a formal paper or report, she will use the traditional outline form; if she is doing a more creative writing project, she will use the mind-mapping strategy.

Kate has the most success with a "reverse outline," that is, she writes first and constructs an outline from what she has written. This technique helps her see where she has lost her focus and realize what she needs to revise.

While Lauren doesn't write her outline down, she does have an outline clearly in mind, that of the 500-word theme template: "I have this voice in my head that is kind of like knowing what I'm doing and so it guides me to make sure that I'm on task."

Crafting a structure for his argument is an integral part of Stefan's writing process. He always uses some sort of outline to guide his writing.

24. **Do you have trouble sticking to your thesis and/or outline? Why do you think that is? If you don't have this problem, how do you stick to your plan?**

Ryan shares that when he was in high school, his mom repeatedly observed that he "would have one idea and turn it into ten." He would begin with a thesis and then go off in so many directions that he was no longer sure what his thesis should be. Ryan attributes this problem to his difficulty with expanding points, with adding detail: "I never understood why teachers wanted you to write five pages when you could explain it all in one paragraph." He was able to correct this problem by following the advice his mom gave him on revision.

Both Melissa and Stefan observe that they have no difficulty in "sticking to the plan" they have developed. However, they note, it is important to keep their minds open to better possibilities that may occur to them as they are writing. As Stefan puts it, "You just never know what you are going to discover or what the information is going to say to you."

Sometimes Amy has trouble maintaining her focus as she's writing. Because she revises as she writes, she is able to discover when she's leaving her planned outline. Her technique is to write a section and then look it over. She will read that section several times aloud. If she finds something that "just doesn't jive with the thesis," then she will decide whether the new idea is stronger than her original. If it is, then she will rewrite to accommodate the new idea.

Kate says that she always has trouble sticking to the plan: "There's always another thesis around the bend….there's always one more thing to discover, to think about, to understand, to dabble in."

Lauren asserts that once she has her plan for writing, she sticks to it.

25.   Does your subject tend to grow and change as you're writing? Why do you think that is? If not, how do you keep your subject from changing? How do you stay focused on your topic?

For Ryan's, Melissa's, Amy's and Stefan's responses, see Question 24.

Kate believes that as she feels more comfortable with a writing project, she is more able to maintain her focus. Lauren sometimes experiences this problem, knowing what she wants to say as she begins writing, but then realizing when she has finished writing that she has veered away from her plan. This can actually be a good thing at

times because it may reveal a better way to express her thoughts. In any case, Lauren will then revise her paper.

26.   How often do you get to the revision step? Do you need to revise?

Ryan always gets to the revision step. Because he is realistic about the shortcomings of his writing and because he wants to be as professional as possible, he always has someone review his writing.

Melissa always revises herself. Amy rarely does. Usually Amy runs out of time for revision. Amy always feels that her writing would be better if she had taken the time to revise, but she really does not have the patience for it.

Kate states, "Always. I may not have wanted to revise, but I always have to revise." Lauren always revises both as she's writing and after she has finished a draft. Stefan also states that he revises everything he writes.

27.   How do you go about revising your writing? How do you know when your writing does not need revising?

Ryan first tries to correct any spelling or grammar errors that he can find, but he is unsure of what is correct or incorrect. Consequently, he feels that he often changes things that are correct and misses things that are errors. This is another reason that he always has someone else look over his writing before sending anything out.

Melissa finds that because she cannot revise "onscreen," she always prints out a hard copy of her work. She then carefully reads aloud what she has written and makes notes on the page in a bright color. Reading aloud allows her to hear an inappropriate tone or catch an incomplete thought. She always double or triple spaces her draft

because, in single space, "the text sort of mushes in on" her. She needs the white space to see the ideas.

See Amy's response to Question 26.

A very linear process of revision seems to work best for Kate. She will work sentence by sentence checking for clarity of expression and a clear connection to the next sentence. Working in "chunks"[18] to revise is also helpful for Kate.

Lauren's revision technique has two parts. First, she revises as she's writing. She looks over what she has written three or four times to check for grammar and spelling errors. Then she reads aloud to see if her prose makes sense. When she has finished the draft, she follows this procedure again and again until she feels that there are no mistakes.

Stefan also revises as he's writing. He feels he may have a "sixth sense" that signals him when something he's written just doesn't work. Then he will go back and restructure it. When his ideas are flowing and he is "in a groove," then he just keeps writing. He also reviews and revises his draft when he has finished writing it.

28. When you are having a hard time writing, what kinds of thoughts run through your head? Do you think negatively about your writing (e.g., "This isn't good enough." "This is too hard. I give up.")?

When Ryan was younger, he never thought that his writing wasn't good enough, but if he got stuck, he would think, "This is too hard." Then he would think of excuses for why he could not complete the writing assignment, such as the difficulty of the topic or the impossibility of writing three pages on this topic. Writing was very frustrating to him. In the business world, however, Ryan does not have a problem writing. He knows

what is required and he knows how to do it. For example, he has used sample contracts from the internet as a guide for crafting his own contract. He has saved all of the documents (e.g., job descriptions, letter of hire, community service letter) he has written on the job over the last eight years and uses them as guides for current writing demands.

Melissa has never had any thoughts like this because she believes that overall writing is not a hard thing for her.

Amy gets frustrated and wonders, "Why can't I get this?" She tells herself that it cannot be that hard and that she has written papers before. She will also remove herself from the computer and come back to the writing the next day knowing that "sometimes you just can't do it anymore."

Kate has had those thoughts in the past but does not "have time now anymore for those thoughts." When she was in college, she remembers being unable to write because of negative thoughts. What helped her write was remembering comments her professors had made, such as "brilliant ideas" and "You make connections other people don't make."

Lauren says, "Yeah, that's pretty much me." She sets very high standards for herself and is very critical of her writing. She gets very frustrated when she cannot get her thoughts out: "I just sit there and I have this mad look on my face and I just stare at the screen. And all these negative vibes are going through my head." Having someone else remind her of her past accomplishments and reassure usually her helps her get beyond this negativity.

Like Melissa, Stefan is a confident writer.

29.   How conscious are you of your writing process? For example, when you start writing, do you think about what you're going to do first? Or do you immediately begin to write?

Ryan just usually begins to write ideas, which may or may not make sense. Then he uses that list as an outline. He does not really think about his writing process.

Melissa has internalized her writing process through extensive practice, but always begins by carefully planning what she wants to write. Similarly, Amy knows what works for her and automatically follows her practice of "gathering" before she writes.

While her tendency is to just start writing, Kate now thinks about what she is going to write before she begins. But she often gets lost when she tries to revise. She is conscious of her tendency to "implode paragraphs" with too many ideas.

Lauren and Stefan are very aware of their writing process. (See their responses to Questions 9, 11, and 23.)

30.   What writing strategies worked or didn't work the last time you wrote something?

Ryan and Lauren state that they have already answered this question.

Melissa recognizes that "it doesn't work when I don't follow through and do what I know I need to get done."   Similarly, Amy acknowledges that she has probably tried things in the past that did not work, but because they did not work she has not used them again. She has "stuck with what I know works for me."

Kate knows that revising a really bad draft does not work for her. It is better to discard that draft and begin anew. Another strategy that does not work for her is looking

at past work and analyzing what she did wrong. This effort actually hinders her progress in writing.

A strategy that does not work for Stefan is rewriting something someone else has written.   He feels constrained by the original piece and is unable to make it work. So in this situation, he records the main points of the original, tears it up, and then starts fresh. He has a strong sense of ownership of anything he writes.

31.   What metaphor would you use to describe the challenges or problems you have with writing? (For example, "It's like trying to rake leaves when it's really windy."[19])

Ryan says writing is like his mind is nowhere, in a flood of ideas. The rain builds and builds and builds, increasing the flood of ideas until he is overwhelmed. He gives an example of writing a memo to the lifeguards about the problem of children running around the pools: "I'll say, 'I want to take care of the problem, no running' and then it's wait, maybe I should also put in rescue tubes, and then a whistle, and then how to discipline, and why don't we add substitution. And next thing you know, I get rid of the memo and say, 'We're having a staff meeting.'"

Melissa points out that what most people don't realize is "how much energy it takes [for the individual with AD/HD] just to maintain what some people don't even have to think about. Kids who have ADD and hide it very well are like ducks swimming on a lake. The ducks look very serene on the surface of the water, but underneath their feet are going like mad."

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[19]   This quote is from a student at Landmark College as reported by Lesle Lewis in her presentation with Sara Glennon, "Invisible Papers, Invisible Challenges: Coaching College Writers with AD/HD," at the College Composition and Communication Conference, Chicago, IL, 24 Mar. 2006.

Amy says, "It's kind of like being in a box. It's a clear box, but you're stuck in it. You can see out. You know there are possibilities, but you just can't seem to break out of it. It's like being stuck in a glass box."

Kate could not think of a metaphor.

Lauren's metaphor is related to her hobby of calligraphy: "It's like my ink pen not flowing correctly." In calligraphy the ink needs to flow smoothly and consistently onto the paper in order to form the beautiful letters. If the ink is not flowing correctly, then the calligraphy will be ruined. Lauren feels a similar frustration and sense of failure when she is having difficulty getting her ideas down in writing.

Stefan shares the frustration he feels when he is trying to write fiction. The challenge is "in seeing where you want to go and knowing you are supposed to be there, but not knowing how to get there. It's off in the distance."

32.   Can you tell me about an experience you have had that describes the challenges you face when you're writing?

Ryan recounts his frustrating experience of taking a writing placement test at Howard Community College. First he had to complete a math placement test and a computerized writing assessment on sentence structure. Then he had to write an essay. He simply could not sit there any longer; so he wrote five sentences and left. If he had been able to take a break between the tests or take the different tests at different times, he believes he would have been able to write a more complete and successful essay.

Melissa does not feel that writing is a "challenge" for her; yet, she wonders if instead of being just a good writer, she might be an exceptional writer if she did not have

to deal with the disability of AD/HD. She attributes a large part of her success as a writer to her willingness to work so hard at it.

Amy recalls an art history paper that she had to write in college. She wanted it to be exceptional because the topic—modern contemporary artists--was something she was very interested in. This writing project was a challenge because Amy had such high expectations for herself. She was sorely disappointed when she received "only a B+" on the paper.

The biggest recent challenge for Kate is making her writing a priority in her life, "instead of trying to fit it in around the edges, which doesn't work at all."

Lauren has not had to do a lot of writing since she graduated from college.

Stefan has encountered frustration in his attempts to write a novel. He has felt the inspiration to write a fictional political novel, he has the knowledge to do it, and he has convinced himself that he can do it. "And then, I'll sit down at the computer and it just doesn't happen." He thinks that he needs to "be around other people who are trying to tackle this task."

Discussion of Findings

Preliminary Questionnaire

Eight of the ten participants in both groups have a diagnosis of AD/HD Inattentive Type. One person has AD/HD Combined Type and one person has AD/HD Hyperactive-Impulsive Type. This distribution is typical for college age students and young adults. Three of the participants (33%) also have a diagnosed learning disability. This is slightly more than the expected statistical norm as approximately 25% of all

children who have AD/HD also have a diagnosed learning disability.

Six of the participants were diagnosed in elementary school: one at age 6, four at age 7, and one at age 8. Of these six, four are Inattentive Type, one is Combined Type and one is Hyperactive-Impulsive Type. Most people with AD/HD are diagnosed early in elementary school when the challenges of attending to school work are first encountered.[20]

One of the participants was diagnosed at age 16 as a sophomore in high school. For those who have AD/HD Inattentive Type and especially for those who have a high IQ, it is not unusual for the diagnosis to be delayed until high school or later when the demands of academic work outpace the coping skills the individual has used successfully in the past. While these individuals may not be working up to their potential, they are able to perform adequately in school until the challenges become overwhelming. One of the other participants in this study was diagnosed in college and two were diagnosed in graduate school.

Of the six participants who were diagnosed in elementary school, only one was aware of symptoms at the time of diagnosis. Usually a parent and/or teacher recognizes academic and/or social problems at this young age. Of the remaining five of these participants, two were informed of the symptoms by parents and physicians; two became aware on their own in middle school; and one became aware in high school. The four participants who were diagnosed in high school or later were all aware of their own symptoms at the time of the diagnosis and they themselves had sought help. One

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[20] Seventy percent of children with AD/HD continue to experience symptoms into adolescence; 65% continue to experience symptoms into adulthood (CHAAD).

significant point here is that there may be college students in our classes who are unaware that they have AD/HD and who thus may not understand why they are having difficulty with writing. Self-awareness is essential for the individual with AD/HD in order to develop coping skills. Often the diagnosis itself triggers an epiphany in individuals with AD/HD, especially those diagnosed as teenagers or adults. This is the moment they realize that they are not stupid or lazy, but are, in fact, just different. This is when they can put a name to problems they've encountered and struggled with in the past. Diagnosis of AD/HD and the resulting self-awareness are the first steps toward developing the coping skills necessary to be successful students.

No conclusions can be drawn about the use of medication: six of the participants regularly take prescribed medication; four participants no longer take medication. Those who do take medication, however, state that it helps them focus and improves their ability to complete writing assignments. Scientific studies have confirmed that using medication to address the symptoms of AD/HD is an effective treatment, one that improves the quality of life for the individual with AD/HD (Zametkin "Where Have We Come in 70 Years?").

Scores on the SAT do not seem to be a reliable indicator of success in college for the individual with AD/HD. Eight of the participants took the SAT in high school. Six scored from average to well above average (of a possible 1600 the scores ranged from 1000 to 1280; of a possible 2400 the score was 2050). Two participants scored poorly: 820 and 880 respectively out of 1600. (Stefan, who scored the 880, graduated from college with honors, has an MA, and is a professional writer.) There is no indication that participants generally scored better on either the Math or Verbal portions of the test.

The participants' college majors show no affinity for any particular field of study. The ten participants have ten different majors: History, Biology, General Studies, Interdisciplinary Studies, Sports Management, Psychology and French, Graphic Design and Art History, Women's Studies and History, Early Childhood Education, History and Political Science.

I expected that the individual with AD/HD would take much longer than average to graduate; this assumption proved incorrect for these participants. Only one of the college graduate participants took longer than average to complete the degree: she needed eight years to earn the AA degree (but she also had other serious health problems). The other participant who earned an AA degree took three years. Two of the graduates earned the BA degree in four years; two earned the BA degree in five years. Three of these graduates also have an MA degree; one is also a Doctoral Candidate.

Five of the six college graduate professionals are employed in professions directly related to their degree. One graduate is between professional positions. My assumption that there would be a lack of focus in careers proved incorrect.

The educational goals for the four current students are as follows: one hopes for an AA degree; two aim for a MA degree; one hopes for medical school. I expected that individuals with AD/HD would not be likely to seek an advanced degree. This was incorrect.

Interviews

I expected the affective impact of AD/HD to be negative. Dr. Mel Levine, renowned learning expert, asserts that children often suffer greatly for having been born with an AD/HD mind:

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Some children end up paying an exorbitant price for having the kind of mind they were born with. Through no fault of their own, they are the owners of brains that somehow don't quite mesh with the demands they come up against, requirements like the need to spell accurately, write legibly, read quickly, work efficiently….When they grow up, they will be able to practice their brain's specialties; in childhood they will be evaluated ruthlessly on how well they do everything (*A Mind at a Time* 14).

The findings do support this prediction with one exception. Nine of the participants expressed negative feelings about how AD/HD makes them feel: "anxious," "stupid," "frustrated," "horrible," "un-centered." Only Stefan, a professional writer, has been able to find a positive in having AD/HD: "endless energy." As a child this endless energy caused him problems in school, but as an adult he has been able to channel his energy to achieve positive outcomes. In addition, I expected to find that past experiences with writing would have contributed to a negative self-image as a writer. All but two of the participants confirmed that negative thoughts about their ability to write have at times made it impossible for them to produce any text at all, ending with an overwhelming sense of frustration and inadequacy. The two dissenting participants, Stefan and Melissa, actually love to write. This was a very surprising finding. In addition, it was even more surprising that an individual with AD/HD would choose writing as a career as Stefan has done. Nevertheless, all of the participants have developed coping mechanisms that enable them to overcome any negative mindset and perform at least adequately when presented with a writing assignment.

The ten participants confirm that AD/HD college students often work twice as hard as other students with the same abilities to achieve the same result. Not fulfilling their potential causes continuous frustration for these students. They are also constantly challenged by the high expectations they have for themselves. Their willingness to work hard, however, enables them to complete the writing requirements at least adequately.

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They also report that they are easily distracted in and out of the classroom and have an especially difficult time attending to a topic or activity in which they are not interested. If they can choose their own topic, then they are more likely to be engaged with the writing project. They very often are bored, especially with rote work such as memorization. On the other hand, if they are very interested in something, then they are likely to "hyperfocus" on it. For example, they might immerse themselves in reading a book or researching something on the internet to the exclusion of all else, losing all sense of time and completely forgetting about everything else that they have to do. Russell Barkley explains that it is incorrect to call it "hyperfocus" because what they are actually doing is persisting at rewarding activities beyond the point where they should shift to other activities (VideoCHADD). This is also called "sticky perseveration."

Their negative memories of learning to write often center around the problems they have with handwriting. Poor handwriting is typical of the individual with AD/HD. Even as adults, they find the physical act of writing by hand to be difficult and unsatisfying. Having access to a computer for writing is very important for these students' success. Writing an in-class essay or an essay exam by hand imposes an extra burden on these students, one that may prevent them from even completing the assignment. In addition, they often have difficulty managing their time in a timed writing environment.

On the other hand, the positive memories they report emanate from creative writing projects they completed successfully and for which they received praise from teachers and parents. The teacher's attitude can also affect their attitude toward writing. If they are fearful of receiving a poor grade, then they are more likely to put the project

off or avoid doing it all together. If they are discouraged by a poor grade, then they may find it difficult to keep trying. Providing opportunities for creative and expressive writing is important if students with AD/HD are to experience success and gain confidence as writers.

I expected to learn that the participants would have negative feelings about writing today. The findings do not fully support that prediction. All of the participants recognize the importance of writing; yet, they state that their feelings about writing depend on the kind of writing they are required to produce. Two participants love to write, period. The other eight enjoy creative and expressive writing; however, they dread any long assignment, such as a research paper, because of the demands this type of writing assignment places on their time management and organizational skills. They find research work tedious, stressful, and anxiety-producing. Nevertheless, all of the participants have confidence that they can complete any writing assignment successfully, even though eight of them believe their writing skills need some improvement. It should be noted that all of the participants in this study have experienced success in college. This study does not include any individuals with AD/HD who dropped out of college after one or two disastrous semesters. At his clinic for attention and related disorders at Yale, Thomas E. Brown studied 103 adults with IQ scores of 120 or above, that is, those in the top 9% of the general population. Forty-two percent of these extremely intelligent people had failed in college because they "were unable to make themselves go to classes regularly, take decent notes, complete the assigned readings, study adequately for tests, and finish enough written assignments on time" (*Attention Deficit Disorders* 145).

No conclusions can be drawn about the relationship of AD/HD and the

participants' positive or negative responses to past course work. Five of the participants took honors English classes in high school; two took average classes; and three took remedial English courses. The courses they found easiest in high school and college covered the entire spectrum: two participants cited math as easiest, two science, three English, one French and art history, one art and music, and one drama. Similarly, the most difficult courses covered all fields of study: four participants cited math and science, two reading, two chemistry, one history, and one foreign language. Across this variety of responses, however, one point emerged consistently: participants equated their level of interest in a subject with how "easy" they found that subject to be. But, perhaps countering an expectation, no particular subject matter was deemed as unacceptable to individuals with AD/HD.

I assumed that medication would increase the participant's ability to focus and thus would make writing easier. The six participants who regularly take medication for AD/HD symptoms confirm that the medication helps them to begin working, focus attention, organize ideas, work more efficiently, and manage time better. The four participants who do not take medication believe that their writing ability is unaffected by the lack of medication. Unfortunately, it is not unusual for individuals diagnosed and treated for AD/HD in elementary school to stop taking medication when they enter college, even if continuing the treatment would still be in their best interest (Brown *Attention Deficit Disorders* 144).

The student participants found one-on-one conferencing to be the most helpful kind of feedback on their writing. They also mentioned as helpful the peer response group. Conversely, students stated that being graded on their writing process was

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distinctly unhelpful. They perceived having to submit each step in the process (notes, outline, first draft, revised first draft, second draft, final) for a grade as tedious busy work.

All of the participants have a thorough understanding of their own writing process: they know what does work and what does not work for them. There is variety in their process, however: two participants faithfully follow the 500 word theme template; three participants just sit down and begin writing; the remaining five participants think, brainstorm, take notes, construct an outline, write a draft, and revise. In all cases, they have internalized the process and do not have to consciously think about it in order to write.

There is no single writing strategy that works for everyone. The reported variety suggests that students should be exposed to a variety of techniques so that they can learn what works best for them. Using a visual structure such as mind-mapping, webbing, or even the traditional formal outline is often helpful for writers with AD/HD. Other helpful visual cues are color-coding note cards and using color for revision notes in the text. Breaking the project into smaller parts and working on one part at a time is another helpful strategy as is setting deadlines for completing each small section.

My expectation that individuals with AD/HD would be able to talk about ideas more readily than they could write about them is only partially supported by the findings. Five participants agree with this statement. Two participants think that they can talk and write equally well about their ideas. Three participants report they can write more easily than they can talk about their ideas. This variation suggests that students should be given opportunities to both talk and write about their ideas.

My prediction that writers with AD/HD would not be likely to put incomplete

thoughts on paper before writing a draft is not supported by the findings. Only two of the participants "just begin writing." The other eight find that jotting down ideas helps to capture the thoughts that might otherwise be lost. In addition, seeing their thoughts on paper (a visual cue) may generate more good ideas.

The participants do not consistently follow any "rules" when writing except for the two who follow the 500 word theme template. None of the participants' writing is suppressed or curtailed by excessive concern with rules.

The findings do confirm that writers with AD/HD have great difficulty arranging ideas logically and coherently. But nine of these participants have learned to use an outline of some sort to help direct their writing. Two participants use the 500 word theme template as a guide. One participant uses the webbing technique and one uses the mind mapping technique to generate and organize ideas. Three use the traditional outline as a guide. Two use a "reverse outline" technique (they freewrite first to generate ideas and then go back and outline what they have written). Only Ryan never uses any sort of outline. Instead, he depends on someone to edit his work. Clearly, learning to use some outlining technique is important for these writers.

In general, the participants do not have difficulty in following their outline. In addition, four of the ten are aware that they should be open to better possibilities that may emerge as they are writing and that they can make adjustments in the plan as needed.

The findings do not support my prediction that many writers with AD/HD never get to the revision step. In fact, all of the participants always revise: two revise as they are writing; three revise at the end as a separate step; five revise as they are writing and at the end as a separate step. Some revision techniques that are particularly helpful for

individuals with AD/HD include the following: reading the piece aloud; printing out a hard copy because identifying errors on the screen is difficult; using colors for revision notes; leaving a lot of white space for revision notes. Two techniques that are not helpful are trying to revise a really bad draft and looking at past work in order to analyze what went wrong.

The findings do confirm that a poor sense of time may be a major reason that writers with AD/HD procrastinate. Deadlines force the writer to focus and produce. Eight report usually writing better under pressure. Conversely, deadlines also cause anxiety and curtail the time and freedom the writer has to explore ideas.

The findings confirm that writers with AD/HD often experience writer's block. Sometimes it occurs when they are unable to start a project. Sometimes it occurs when they have great ideas, but those ideas disappear before they can capture them on paper. But these participants all have developed coping skills to deal with being blocked. The most common technique is simply to leave the writing and do something else, especially something physical, and then to come back to it later. Getting feedback from someone can also work to break the blockage as can brainstorming.

One thing that is absolutely clear from this study is that while everyone with AD/HD suffers similar symptoms and similar challenges under situational variability, it is impossible to standardize the portrait of the writer with AD/HD. Their attitudes toward writing vary; their writing challenges vary from situation to situation and from person to person; their writing processes vary; their successful writing strategies vary; their interest in writing varies. Research into AD/HD has established as fact, however, that all adults with AD/HD are at increased risk for academic impairment (Heiligenstein et al. 183).

Because an AD/HD identity can be stigmatizing, entering college students often don't want to self-disclose their disability. This reluctance may in turn prevent them from getting the help they need. Ironically, students with AD/HD often try to "do it on their own" at a most difficult transition time—moving from secondary school to college. This is the time at which they may need to survive without the hands-on support and guidance previously provided by their parents. This is also the time when the academic demands on the college student with AD/HD are ratcheted up.

Chapter 4: Executive Functions, AD/HD, and Writing

"[AD/HD] has always felt like endless energy."
--Stefan

As noted in Chapter 2: The Rhetorical Construction of AD/HD, the most compelling explanation of AD/HD at present is that it is a complex "cognitive disorder" increasingly being "recognized as a developmental impairment of executive functions of the brain" (Brown "DSM IV" 914). Both of the pre-eminent AD/HD researchers, Russell Barkley and Thomas E. Brown, conceptualize AD/HD in a model that moves beyond the narrow behavioral definition provided in the *DSM-IV-TR* toward a "greater recognition of the complexity of this syndrome as essentially a developmental impairment of the brain's self-regulatory mechanisms" (Brown "Executive Functions" 38). In other words, both believe that "executive function impairment is the essence of what constitutes ADHD" (Brown "Executive Functions" 40).

Chapter 3: The Study presents evidence from my study that supports the theories of Barkley and Brown in relation to executive impairment and AD/HD. In addition, findings from my study help to explain how this impairment in executive functions affects the writing of individuals with AD/HD.

While the definition of "executive function" itself is still evolving, most researchers agree that it is a construct describing "those higher systems of the brain that activate, integrate, coordinate, and modulate a variety of other cognitive functions" (Brown *Attention Deficit Disorders* 26). Executive functions are generally agreed to be critically important for multiple aspects of daily life in all individuals. They are necessary for goal-directed behavior. They include effortful attention, inhibitory control, working

memory, planning and set-shifting, and delay aversion (Stefanados and Baron 20).

Executive functions seem to be part of a major neural network in the brain including the

prefrontal cortex, two basal ganglia (caudate nucleus and globus pallidus), the

dorsolateral frontal region, and the hippocampal region (Semrud-Clikeman). The

hippocampus acts as a memory indexer, sending memories out to the appropriate part of

the cerebral hemisphere for long-term storage and retrieving them when necessary

(Volkow). While the executive functions do not work perfectly for everyone at all times,

those with AD/HD are at the extreme end of the normal range of impairments in

executive function (Brown "Executive Functions" 40).

Russell Barkley was one of the first (1997) to theorize that AD/HD is related to a

developmental impairment of the executive functions: "most if not all of the cognitive

deficits associated with ADHD…seem to fall within the realm of self-regulation or

executive functions" (*ADHD* 80). Barkley noted that physiological evidence for this

assumption was discovered by Alan Zametkin and his colleagues at the National

Institutes of Mental Health (NIMH) in 1990 in their research, which used PET scans to

demonstrate for the first time that the AD/HD brain metabolizes glucose at a lower rate

than the "normal" brain. The decrease in metabolic activity was largest in the prefrontal

cortex, one site of the executive functions (Hallowell and Ratey 275). In addition, in a

1996 study, F. Xavier Castellanos and his colleagues at NIMH discovered that the right

prefrontal cortex, the caudate nucleus, and the globus pallidus are consistently smaller in

the AD/HD brain. In 1998, they discovered that the vermis region of the cerebellum is

also smaller in the AD/HD brain (Barkley "Attention-Deficit Hyperactivity Disorder"

67). These smaller brain areas are the very ones that regulate attention. Barkley explains,

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The right prefrontal cortex, for example, is involved in 'editing' one's behavior, resisting distractions and developing an awareness of self and time. The caudate nucleus and the globus pallidus help to switch off automatic responses to allow more careful deliberation by the cortex and to coordinate neurological input among various regions of the cortex. The exact role of the cerebellum vermis is unclear, but early studies suggest it may play a role in regulating motivation. ("Attention-Deficit Hyperactivity Disorder" 67).

In 1999, Castellanos observed that "the unifying abstraction that currently best encompasses the faculties principally affected in ADHD has been termed executive function (EF)….there is now impressive empirical support for its importance in ADHD" (qtd. in Brown *Attention Deficit Disorders* 27).

Brown uses the conductor of a symphony orchestra as a metaphor to explain executive functions. In this orchestra each musician plays his or her own instrument very well. The conductor does not play an instrument, but does play a critical role in enabling the orchestra to produce complex music. The conductor organizes, activates, focuses, integrates, and directs the musicians as they play. Imagine a performance without the conductor. It would be nearly impossible for the orchestra to produce good music because, for example, there would be no one to guide the musicians in their interpretation of the music, or to keep time, or to signal when the brass should come in, or when the strings should fade out. The brain's executive functions, like the functions of the conductor, organize, activate, focus, integrate and direct, allowing the brain to perform both routine and creative work. Thus, the impairments in the executive functions of the AD/HD brain can be compared to impairments in the conductor—not in the individual musicians[21]. The problem for the individual with AD/HD lies in the chronic inability to

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[21] However, in AD/HD individuals who also have a specific learning disability, the impairments would be in both the conductor and in certain specific musicians.

activate and manage actions, not in the performance of the individual actions themselves

("Inside the ADD Mind" 22). Brown explains the problem this way:

> The executive functions—paying attention, organizing, recalling, etc.—are intact; they are simply not responsive to higher-order processing. That is, the individual is not able readily to activate, deploy, and utilize these functions as needed. They are not readily turned off or on when needed; they are not responsive to "willpower' (*Attention Deficit Disorders* 26).

Barkley emphasizes a cognitive dimension related to the executive functions,

namely self-control or behavioral inhibition (the ability to inhibit or delay one's initial

response to a stimulus), as the "critical foundation for the performance of any task"

("Attention-Deficit Hyperactivity Disorder" 69). This self-inhibition is enacted through

the regulation of attention. In 1890, William James wrote that attention involves moving

between different threads of consciousness and focusing on one or another in a

deliberately conscious way. That means suppressing some threads while focusing on a

few or one. Thus, inhibition may be considered to be the other side of attention. Barkley

cites three forms of behavioral inhibition: preventing prepotent responses (that is, those

responses for which immediate reinforcement is available or with which reinforcement

has been previously associated), ceasing or persisting in ongoing responses, and

interference control (resistance to distraction) (*ADHD* 49). These inhibitory response

deficits are most apparent in situations where 1) there are time lags between events,

responses, and outcomes; 2) there are conflicts between immediate and delayed

outcomes; 3) fresh, original responses are required (*ADHD* 20). Individuals with AD/HD

often persist in an incorrect response pattern despite feedback about errors.

Barkley identifies four categories of executive functions that he believes are all

dependent upon behavioral inhibition: non-verbal working memory; internalization of

self-directed speech; self-regulation of mood, motivation, and level of arousal; and

Reconstitution.[22] For Barkley, executive functions

> represent the internalization of behavior so as to anticipate such change in the environment. That change is essentially the concept of time. Therefore, what the internalization of behavior achieves is the internalization of a sense of time, which is then applied to the organization of behavior in order to anticipate sequences of change in the environment, events that probably lie ahead in time. Such behavior is therefore future-oriented and the individual who employs it can be said to be independent, goal-directed, purposive, and intentional in his or her actions (*ADHD* 155).

Working memory enables the individual to hold information in the mind and manipulate it to reach a goal even when the original stimulus has been removed. Working memory is just one element in the brain's overall memory system. The total memory system is made up of four sub-processes: receiving information; encoding it; storing and retrieving it; and forgetting it. "Memory" is categorized in various ways for useful distinctions to be made. Working memory fits between short-term memory and long-term memory. Short-term memory is learning's "front door." Sensory information is received in the cortex and is held in short-term memory for no more than two seconds (Foer 43). One of three things will happen to the information that enters short-term memory: it will be forgotten immediately; it will be used and forgotten; or it will be used and saved for later by being recoded into working memory or long-term memory. Long term memory has a seemingly limitless capacity for permanent storage of information. On the other hand, short-term memory has a very small storage capacity. For example, the average adult can hold only seven numbers in short-term memory at a time (Levine *A Mind at a Time* 95). By contrast, information can stay in working memory for seconds,

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[22] See Figure 4: "Barkley's 'A Psychological Model of ADHD.'"

A Psychological Model of ADHD

A loss of behavioral inhibition and self-control leads to the following disruptions in brain functioning:

IMPAIRED FUNCTION	CONSEQUENCE	EXAMPLE
Nonverbal working memory	Diminished sense of time Inability to hold events in mind Defective hindsight Defective forethought	Nine-year-old Jeff routinely forgets important responsibilities, such as deadlines for book reports or an after-school appointment with the principal
Internalization of self-directed speech	Deficient rule-governed behavior Poor self-guidance and self-questioning	Five-year-old Audrey talks too much and cannot give herself useful directions silently on how to perform a task
Self-regulation of mood, motivation, and level of arousal	Displays all emotions publicly; cannot censor them Diminished self-regulation of drive and motivation	Eight-year-old Adam cannot maintain the persistent effort required to read a story appropriate for his age level and is quick to display his anger when frustrated by assigned schoolwork
Reconstitution (ability to break down observed behaviors into component parts that can be recombined into new behaviors in pursuit of a goal)	Limited ability to analyze behaviors and synthesize new behaviors Inability to solve problems	Fourteen-year-old Ben stops doing a homework assignment when he realizes that he has only two of the five assigned questions; he does not think of a way to solve the problem, such as calling a friend to get the other three questions

(Barkley "Attention-Deficit Hyperactivity Disorder" 70)

Figure 4: Barkley's "A Psychological Model of ADHD"

minutes, or even hours.

Working memory is not just a temporary storage space, however, but an active processing system that helps the mind deal with immediate situations, whether novel or routine, in light of relevant information remembered from the immediate and/or distant past. According to Levine, working memory accomplishes four specific duties: 1) provides mind space for combining or developing ideas; 2) offers a mechanism for keeping track of the parts of a task while engaged in the task; 3) provides a place where short-term and long-term memory can interact; 4) provides a space to hold multiple immediate plans and intentions (*A Mind at a Time* 100). The "mind space" for working memory is limited, like that of a desk top. If a task is easy and fully automatic, then more space is freed up in working memory. But if an aspect of the task is too difficult, then that ingredient likely crowds out other components, pushing them off the working memory screen. For example, individuals with AD/HD who have difficulty with handwriting won't be able to get their ideas down on paper before "losing" the ideas. Anxiety can infect the working memory like a virus and fill up the space with worry. Tight attention control expands the space in working memory, while weak attention diminishes the space (Levine *A Mind at a Time* 104). There can also be content-specific working memory weaknesses. For example, a student may struggle with the working memory demands that come with writing an essay, but may have no problem holding multiple ideas in mind while solving an algebra problem. Working memory also "controls our ability to review our past experience, evaluate our current experience, and plan for the future" (Goldman-Rakic qtd. in Hallowell and Ratey 277).

Our brains record experiences as one of two basic kinds of memories: declarative

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(explicit) and nondeclarative (implicit). Declarative memories are the things we know we remember, such as our address, the color of our car, or what happened yesterday morning. Nondeclarative memories are things we know without consciously thinking about them, such as how to ride a bike or touch-type. These unconscious memories do not rely on the hippocampus to be consolidated and retrieved. Instead, motor skill learning takes place at the base of the brain in the cerebellum, perceptual learning in the neocortex, and habit learning at the brain's center (Foer 41-44). These are areas of the brain that are *not* affected by AD/HD. Consequently, it is possible that individuals with AD/HD could develop habits, motor skills and perceptual associations with the writing process to offset the challenges presented by the impairment in working memory caused by AD/HD.

Individuals with AD/HD demonstrate mild to severe weaknesses in working memory. Barkley describes the consequences of these weaknesses as being manifest in a diminished sense of time, an inability to hold events in mind, a defective hindsight, a defective forethought, and the inability to imitate the complex, novel behavior of others (*ADHD* 236). The consequence for individuals with AD/HD is that they have great difficulty in being "independent, goal-directed, purposive, and intentional in [their] actions" (*ADHD* 155).

The internalization of self-directed speech is the second executive function identified by Barkley. Before the age of six, children typically perform this executive function externally. For example, they may talk aloud to themselves while remembering how to tie their shoes. As they mature, their self-directed speech will be internalized. This interior self-directed speech allows the individual--privately and quickly--to reflect,

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to follow rules or instructions, to use self-questioning as a way to solve problems and to construct "meta-rules" (the basis for understanding the rules for making rules) ("Attention-Deficit" 70). Those with AD/HD experience reduced description and reflection, poor self-questioning and problem solving, deficient rule-governed behavior, less effective generation of rules/meta-rules, impaired reading comprehension, and delayed moral reasoning (*ADHD* 237).

Barkley's third executive function is self-regulation of mood, motivation, and level of arousal. This system allows the individual to appraise past events being held in working memory for their affective and motivational elements. "By providing such affective and motivational color or tone to these events, it permits them to be immediately retained or discarded depending upon their affective and motivational value to the individual" (*ADHD* 104). Being able to control emotions, motivation, and state of arousal will also help "individuals achieve goals by enabling them to delay or alter potentially distracting emotional reactions to a particular event and to generate private emotions and motivation" ("Attention-Deficit" 70). For individuals with AD/HD self-regulation of affect will be limited; they often find it difficult to censor their emotions. Their diminished ability to appraise the affective and motivational value of past events will make it more difficult for them to make good decisions, to start working on a task, or stop working when that's appropriate.

The final executive function identified by Barkley is reconstitution: that is, analysis and synthesis of behavior. These processes enable the individual to break down observed behaviors and then recombine the parts into new actions not previously learned from experience. This ability to reconstitute

gives humans a great deal of fluency, flexibility and creativity; it allows individuals to propel themselves toward a goal without having to learn all the needed steps by rote. It permits children as they mature to direct their behavior across increasingly longer intervals by combining behaviors into ever longer chains to attain a goal" ("Attention-Deficit" 70).

Individuals with AD/HD have a "limited ability to analyze behaviors and synthesize new behaviors" and a decreased ability to solve problems ("Attention-Deficit" 70).

Although Brown's model of AD/HD is similar to Barkley's in its explanation of AD/HD as a developmental impairment, there are two significant differences. First, Barkley states that his model applies only to those who have AD/HD Combined type. Second, Barkley focuses on behavioral inhibition as the fundamental executive function upon which all the others depend. Conversely, in Brown's theory, behavioral inhibition is just one of the multiple executive functions that are interactive and interdependent with each other. Second, Brown believes that executive function impairments are the essence of AD/HD, no matter what the sub-type (Primarily Inattentive, Combined, or Primarily Hyperactive-Impulsive).

However, Barkley and Brown both believe that the only way to accurately assess an individual's executive functioning is by assessing the person's ability to perform the complex, self-managed tasks of daily life (Brown "Executive Functions" 41). They assert that it is impossible to accurately measure executive functions by traditional neuropsychological tests. Those tests are too "reductionistic" because they attempt to analyze the micro-components of executive functions rather than the complex interaction of the multiple components of executive function ("Executive Functions" 44). Indeed, a neuropsychological test that is designed to isolate a single brain function in order to evaluate it is the exact opposite of what is needed to evaluate the functioning of executive functions. Brown cites Joaquin Fuster's critique (2003) of contemporary neuroscience as

being too reductionistic in the analysis of "micro-units of brain functioning and suggests that such research 'drifts toward fragmentation' of systems and mechanisms'" ("Executive Functions" 44). Brown notes that Fuster's critique is especially suited to understanding executive function and gives an example of "attention" as playing a critical role in multiple, overlapping cognitive operations:
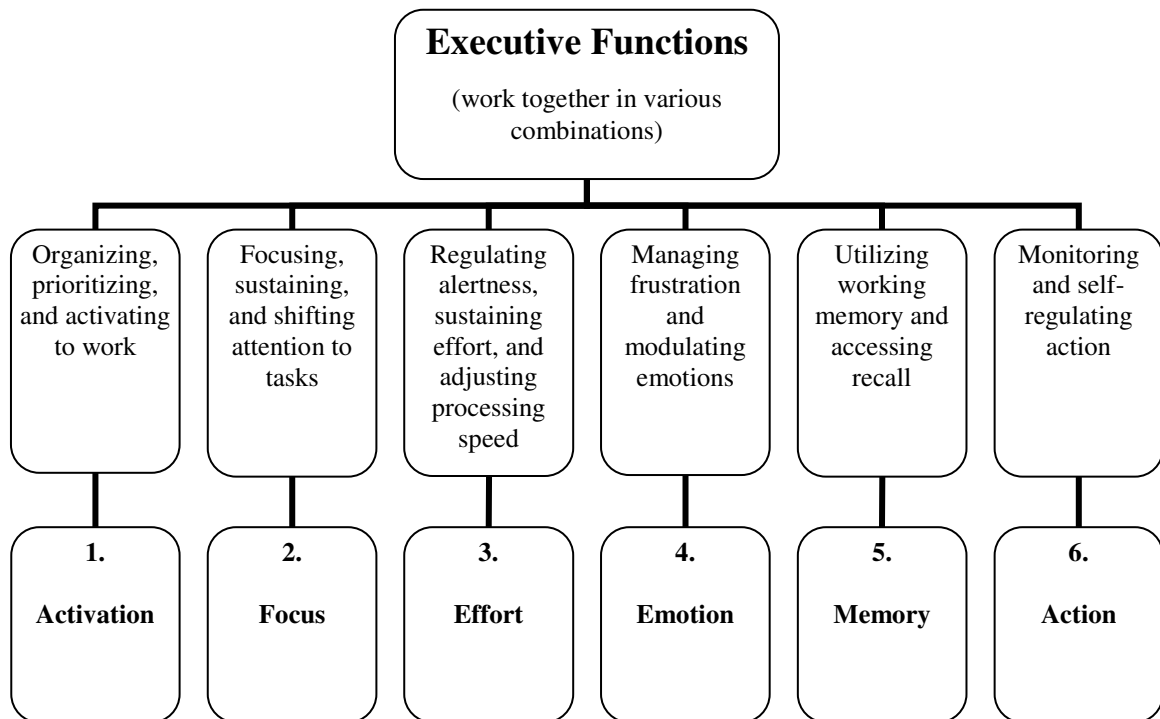
> Perception is part of the acquisition and retrieval of memory; memory stores information acquired by perception; language and memory depend on each other; language and logical reasoning are special forms of cognitive action; attention serves all the other cognitive functions (Fuster qtd. in "Executive Functions" 44).

Brown's model describing the relationship between AD/HD and executive functions was derived from his extensive clinical interviews with individuals diagnosed with AD/HD and with their families. From that research, he then developed a set of rating scales for AD/HD symptoms in children (3 to 12 years old), in adolescents, and in adults. He used data from these scales (which were completed by patients, teachers and parents) as a foundation for his model of executive functions that are impaired in AD/HD.

Brown's model includes six clusters of cognitive functions and provides a way of conceptualizing executive functions for all individuals. None of the clusters is a "unitary variable" like height or weight; instead, each cluster is like a basket containing a variety of related cognitive functions ("Executive Functions" 39).[23] Brown states that each of "these clusters is seen as functions operating in rapidly shifting interactive dynamics, usually quite unconsciously, to do a wide variety of daily tasks where the individual must regulate the self using attention and memory to guide action rather than being micro-managed by someone else" ("Executive Functions" 39). The six clusters are as follows:

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[23] See Figure 5: "Brown's 'Executive Functions Impaired in ADD Syndrome.'"

Executive Functions Impaired in ADD Syndrome

Executive Functions

(work together in various combinations)

Organizing, prioritizing, and activating to work	Focusing, sustaining, and shifting attention to tasks	Regulating alertness, sustaining effort, and adjusting processing speed	Managing frustration and modulating emotions	Utilizing working memory and accessing recall	Monitoring and self-regulating action
1. **Activation**	**2.** **Focus**	**3.** **Effort**	**4.** **Emotion**	**5.** **Memory**	**6.** **Action**

(Brown *Attention Deficit Disorder* 22)

Figure 5: Brown's "Executive Functions Impaired in ADD Syndrome"

Activation, Focus, Effort, Emotion, Memory, Action.

The *Activation* cluster includes organizing, prioritizing, and activating to work. Those with AD/HD often have difficulty in these areas, especially with estimating time. Problems with chronic procrastination are common. It seems that they will put off starting on a task, even one that is very important to them, until they perceive it as an acute emergency.

The *Focus* cluster includes focusing, sustaining and shifting attention to tasks. "Maintaining effective attention requires the ability to select the most important of countless external and internal stimuli—and screen out those that intrude on awareness. Yet, it also requires the ability to shift one's focus of attention as needed..." (Brown *Attention Deficit Disorder* 34). Brown observes that some of his AD/HD patients reported being easily distracted not only by things around them but also by thoughts in their own minds. Focus on reading is also often difficult. Unless a task is intrinsically interesting to them, they often have difficulty focusing on it and maintaining that focus until the task is completed.

The *Effort* cluster includes regulating alertness, sustaining effort, and processing speed.[24] Individuals with AD/HD typically have trouble shifting focus; that is, they are unable to stop focusing on one thing and redirect their attention when necessary. Many individuals with AD/HD can be successful in completing short-term projects, but they have great difficulty sustaining effort for long periods of time. Even when they expend great effort, they often report needing an extraordinarily long time to complete certain

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[24] "Processing speed" refers to the amount of time an individual needs to process incoming information. For example, an AD/HD individual may require a longer period of time than normal to read and understand a story or to write a response to an in-class essay question.

tasks because of a slow processing speed. For example, they might need to read a page

repeatedly before comprehending what it says. In writing, their excessive slowness may

be due to what is known as "sticky perseveration." For example, in an essay exam, they

may find themselves working and reworking a single sentence to make it perfect and as a

consequence, they lose track of the time available for finishing the exam. Another kind of

writing problem that results from slow processing speed is that of being unable to "get

ideas down" on paper. How much the individual can write down on the page is restricted

because of difficulties in coordinating and integrating the multiple skills needed for

writing. Regulating sleep is also a problem: they have difficulty "turning off the brain" in

order to go to sleep and once they do fall asleep, they often sleep like a "dead person"

and cannot wake up on time.

The *Emotion* cluster focuses on the executive functions needed to manage

frustration and modulate emotions. The *DSM-IV-TR* does not mention any symptoms of

AD/HD related to managing emotion. Yet, individuals with AD/HD often struggle with

controlling their emotions. They describe the feeling of their emotions taking over their

brain, making it impossible for them to pay attention to anything else. It is difficult for

them to put their emotions in perspective. They have a low threshold for frustration and

often lash out, "throwing objects, banging doors, punching walls, driving recklessly, or

pushing or hitting people" (Brown *Attention Deficit Disorder* 43). They also have

difficulty with modulating feelings of sadness and discouragement. Their emotional

response is often inappropriate to the stimulus.

The *Memory* cluster includes utilizing working memory and accessing recall.

Often individuals with AD/HD will have exceptional memory for things that happened

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long ago but will not be able to remember something that just happened, such as what they were about to say or what someone just said to them, or where they just put their keys. They also report that they have difficulty in remembering what they have learned when they need it. They also forget what they put aside while attending to other tasks. Brown describes such memory problems as having an "inadequate 'search engine' of the brain, to activate stored memories, integrating these with current information as needed to guide thoughts and actions" ("DSM-IV" 912). Brown notes that difficulties with working memory are especially implicated in the problems individuals with AD/HD often have with written expression.

The *Action* cluster includes monitoring and self-regulating action. Even those individuals with AD/HD without hyperactive behavior report having difficulty controlling their actions. Impulsivity is often a problem—in what they say and what they do. They also have difficulty in monitoring the context for the action, in "reading the situation." Jumping to inaccurate conclusions or making decisions without deliberation about the consequences are typical behaviors.

A significant element of Brown's theory is that the executive function impairments in AD/HD are situational. Brown has observed the following in his research:

> All individuals with ADHD seem to have some specific domains of activity in which they have no difficulty in performing these various functions that are, for them, so impaired in virtually every other area of life. Often this is described by ADHD patients as simply a function of the level of their personal interest in the specific activity ("Executive Functions" 39).

This situational variability of symptoms provides evidence that impairments in the AD/HD brain involve the central management system that turns the cognitive functions on and off and not with the individual cognitive functions themselves ("Executive Functions" 39). Individuals with AD/HD can be "spontaneously activated and integrated

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by situational stimuli that, for the given individual, provide sufficient intrinsic satisfaction or threat to stimulate and sustain response" ("Executive Functions" 39-40). Problems arise for these individuals in performing the day-to-day tasks that do not provide a stimulus that is strong enough to trigger a response or that does not appeal to their individual interest.

William James observed a similar phenomenon in his 1892 *Talks to Teachers on Psychology*. He asserts that if a thing is inherently interesting to a person, then it will be easier for that person to pay attention to it. James calls this "passive" or "spontaneous" attention. The thing itself excites our attention. He identifies the opposite as "voluntary" or "deliberate" attention, which we must direct at a thing with effort. James notes that our attention "comes in beats." He suggests that if a subject is not inherently interesting, then the teacher must make it interesting by helping the students to see it in new ways. James seems to capture Brown's concept of situational variability in these words:

> No matter how scatterbrained the type of a man's successive fields of consciousness may be, if he really care for a subject, he will return to it incessantly from his incessant wanderings [of the attention], and first and last do more with it, and get more results from it, than another person whose attention may be more continuous during a given interval, but whose passion for the subject is of a more languid and less permanent sort.

Another way to consider the broader view of attention as executive functions is presented by Denckla in her 1996 *Attention, Memory, and Executive Function*. She compares the intelligent person with executive function impairment to a disorganized cook trying to prepare and serve a meal on time.

> Imagine a cook who sets out to cook a certain dish, who has a well-equipped kitchen, including shelves stocked with all the necessary ingredients, and who can even read the recipe in the cookbook. Now imagine, however, that this individual does not take from the shelves all the relevant ingredients, does not turn on the oven in a timely fashion so as to have it a the proper heat when called for in the recipe, and has not defrosted the central ingredient. This individual can be observed dashing to the shelves, searching for the next spice mentioned in the recipe, hurrying to defrost the meat and heat the oven out of sequence. Despite possessing all the equipment,

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ingredients, and instructions, this motivated but disheveled cook is unlikely to get dinner on the table at the appointed time. (Brown "Inside the ADD Mind" 21).

Brown notes that this "motivated but disheveled cook" is very like the individual with AD/HD who sincerely wants to accomplish a task, but is unable to because of poor organization, poor focus, and poor planning. The needed executive functions sometimes simply are not activated, or are not deployed, or are not sustained even though the individual has a strong desire to accomplish something.

Finally, Emily Dickinson captures what it must feel like to have an AD/HD brain with executive function impairment:

I felt a cleavage in my mind
As if my brain had split;
I tried to match it, seam by seam,
But could not make them fit.

The thought behind I strove to join
Unto the thought before;
But sequence raveled out of reach
Like balls upon a floor.

How does impairment in executive functions in AD/HD college students affect their writing?

The writing process places extremely heavy demands on the executive functions, demands that are fluid rather than static. Brown notes how psychologists Berninger and Richards describe of some of these demands: "Writing, especially expository writing, is not talk written down—it requires self-generated language without social supports during the initial and text generation processes" (*Attention-Deficit Hyperactivity Disorder* 109). Self-talk is one of the executive functions that is impaired by AD/HD. In other words, Brown observes, "writing lacks the scaffolding—the support—of having a partner in conversation. And a blank page does not offer the structure of other words to read"

(110).[25]   In *The Neuropsychology of Written Language Disorders*, Feifer and DeFina

stress that perhaps "no other academic task requires the unique synchronization and

harmony of multiple cognitive constructs performing at peak efficiency more than written

language" (30). Given the multiple impairments of the executive functions imposed by

AD/HD, it should come as no surprise that individuals with AD/HD experience

extraordinary challenges as writers.

Using Barkley's theory to evaluate the impact of impairments in executive

functions on writers with AD/HD, we see that behavioral inhibition is seriously affected.

For one thing, as Barkley asserts, deficits in behavioral inhibition typical in AD/HD are

intensified when 1) there are time lags between events, responses, and outcomes; 2) there

are conflicts between immediate and delayed outcomes; and 3) fresh, original responses

are required (*ADHD* 20). All three of these situations are active during the writing

process. For example, there are typically several instances of "time lags" in the writing

process. First, there is always a lag between the time the college student with AD/HD

receives the assignment and the date it is due. There is a lag between the time the student

receives the assignment and the moment when he/she begins writing the paper. There is

another lag between the time the student writes the paper and the time he/she receives a

response, even a response to a draft in a peer response group. The grade also is delayed.

Second, conflicts between immediate and delayed outcomes occur. An immediate

outcome may be the student's initial attempt at getting some ideas down on the page.

The individual with AD/HD would tend to focus on the immediate gratification of having

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[25] In contrast to Brown's observation, Lauren notes that when she is writing, she thinks of the blank page as "someone" with whom she is having a conversation.

jotted down some ideas. The conflict with the delayed outcome (that is, in this example, completing the essay) would occur because the individual with AD/HD would take too much satisfaction in the immediate accomplishment and thus would not devote adequate time and effort to achieving the long-term goal of the finished essay. Finally, writing always requires "fresh, original responses." Whatever the student writes, it will be new and original in some way because it hasn't been written down by him/her in exactly that way before.

Analyzing the writing process will make evident the ways in which the executive functions are called upon and the ways in which AD/HD college writers are challenged because of impairments in their executive functions.

At the moment the college student with Ad/HD receives an assignment for a writing task in class, Brown's "Activation" cluster of cognitive functions is called upon. First, the individual must "get to work." Interference may arise immediately if the student does not completely understand the assignment and waits to ask questions about it. The inability to accurately estimate how long it will take to complete an assignment may mislead the student with AD/HD into believing that he/she doesn't need to worry about getting started "yet" or about clarifying exactly what needs to be accomplished, just yet. Individuals with AD/HD have difficulty in setting priorities, in realizing what is important and what is not. This can also lead to misunderstandings about the intention of the assignment. Thus, even making a plan of how to accomplish the writing task may be very difficult. As the participants in my study indicated, procrastination is very common among individuals with AD/HD. They stated that a poor sense of time is a major factor contributing to procrastination as is an inability to focus on a project. Barkley notes that

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the "problem is not so much one of an inaccurate sense of time as inadequate behavioral performance relative to it" (*ADHD* 357). So while, the student may record that the essay is due in three weeks, he/she may delay doing anything about working toward accomplishing the goal until the very last minute. Another problem may be beginning a project with enthusiasm but then losing interest before it is completed. For example, Kristen reports that she often begins a project with great enthusiasm, but then gets bored halfway through. My study participants also reported that they work best under the pressure of an impending deadline. It may be that they need that "shot" of adrenaline to "activate." But deadlines may also cause anxiety because they curtail the amount of time the writer has to explore ideas. A not uncommon result is the failure to submit anything. This need to activate to work will be present throughout the writing process, but the writer with AD/HD will likely struggle with it continually. This inability to get started easily is one of the biggest problems writers with AD/HD face.

During the invention stage of the writing process, the writer must first select a topic. Because writers with AD/HD have difficulty in focusing, they may choose a topic that is unrelated to the particular assignment. Or they might choose one that is too broad or too complex for the time and space of the assignment. Their impulsivity may also contribute to problems with selecting an appropriate topic. If they are assigned a topic, they may not be able to engage with it at all if it is not something they are interested in. The participants in my study confirm these problems. For example, Nick asserts that if he's not interested in the subject, then he finds it very difficult to commit himself to the project. Mary and Kristen report that they often have to bring themselves willfully back to the task at hand when their attention drifts off. If a student is extremely interested in a

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topic, he/she may "hyperfocus" on it and spend much too much time researching it. The result may be that the paper is never written because the student never gets beyond the invention stage or because he/she runs out of time and/or interest.

This inability to regulate attention as needed is one of the impaired executive functions in individuals with AD/HD and is part of Brown's "Effort" cluster. The ability to sustain effort for a long period of time is also impaired. Participants in my study reported having the most difficulty with any long assignment, such as a research paper, that required weeks or even months of preparation and sustained effort. This type of long writing task places extraordinary demands on their time management and organizational skills. A research project also requires the ability to distinguish between relevant and irrelevant information. The AD/HD writer's ability to make this distinction is impaired. The result is often that the writer with AD/HD collects huge amounts of information on a topic and then is unable to sort through it and organize it. Everything appears to be equally important. This often presents an insurmountable challenge. On the other hand, the participants in my study are unanimous in their confidence in being able to successfully complete a short (one to three pages) writing assignment. This short length is well-suited to their comfort in working intensely for short time periods.

After gathering ideas for a writing assignment, the student must next organize them in a logical way. This is a very difficult step for the writer with AD/HD. This is the spot in the writing process where working memory is called into play most heavily. Brown points out that "working memory plays an essential role in written expression":

> In writing, one must hold in mind an overall intention for what is to be communicated in the whole of the phrase, sentence, paragraph, essay, report, chapter, book, and so forth, while simultaneously generating the micro units of words and phrases that will eventually constitute the written work being produced. Complex and rapidly shifting interplay of micro and macro intentions is the

essence of creating and self-editing that allows one to gradually shift from the glimmer of an idea, through crude approximations of rough draft, to the greater specificity and polish of a final product in which one has captured in written language what one wants to say ("Comorbidity" 50).

Writers with AD/HD often need external support, such as a writing template, to help them manage the organizational demands of a writing assignment. Of course, the writer with AD/HD must not only organize the ideas on the page, but also organize the time required to accomplish the assignment. This calls for long-term planning and goal setting.

Actually writing the paper also places severe demands on the executive functions. One common problem is resisting distractions, whether external or internal. A writer with AD/HD may be distracted from his own ideas by the need to recall how to spell a word. These demands on recall are very heavy. For example, the writer must simultaneously remember spelling, punctuation, capitalization, grammar, prior knowledge, and his/her own ideas (Levine *A Mind at a Time* 116). Even though the writer knows the rules that govern usage, he/she may not be able to readily apply the rule when needed because of executive functions impairment. The writer not only needs to recall these language production rules, but also must engage the intricate motor skills necessary to write by hand or type. One challenge common to writers with AD/HD is to capture on the page the idea that flashes into the mind before it disappears. Losing ideas in this way creates a high level of frustration and can lead to writer's block.

The revision step in the writing process demands the same contribution from the executive functions as the writing step. As a recursive process, writing is often likely to occur simultaneously with revision, as well as appearing as separate previous steps. As Feifer and Fina assert, self-monitoring may be the most critical feature of accomplished writing:

> The passage must be constantly monitored to determine if the piece is suitable for the intended audience, if the tone and language are appropriate, and if it conforms to the structural requirements of a letter, essay, resume, etc. The ability to review work to garner feedback is essential for students to monitor their effectiveness as communicators and evaluate their own skill level in meeting the goals of an assignment (113).

Unfortunately, poor self-monitoring is a key dysfunction in individuals with AD/HD. All of the participants in my study have a thorough understanding of their own writing process and know what does and does not work for them. This metacognition is valuable.

Finally, for the individual with AD/HD, writing may come with past negative emotions that color all phases of the writing process and interfere with the ability to successfully complete writing assignments. In fact, the demands of writing can create a stressful environment for the writer with AD/HD (Baird, Stevenson, and Williams 30). The college student with AD/HD with often knows what to do but cannot always perform as desired. As Barkley observed, "ADHD is not a disorder of knowing what to do, but of doing what one knows....ADHD, then, is a disorder of performance more than a disorder of skill; a disability of the 'when' and 'where' and less in the 'how' and 'what' of behavior" (*ADHD* 314). Eight of the ten participants in my study confirm that negative thoughts about their ability to write have at times made it impossible for them to produce any text at all, ending with an overwhelming sense of frustration and inadequacy. The teacher's attitude has also affected their attitude toward writing. If, on one hand, they are fearful of receiving a bad grade, they are likely to put off the writing task or completely avoid doing it. If, on the other hand, they have received positive reinforcement from a teacher and feel safe in that class, then they are more amenable to taking risks and learning new things about their writing. The participants in my study also reported one-

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on-one conferencing to be the most helpful kind of feedback on their writing. In this setting, their attention is being directed by the teacher and they are able to focus and learn.

While the impairments in executive functions in AD/HD brains create an extraordinary challenge when the individual needs to produce writing, there is no single profile of impairment that fits every writer with AD/HD. And the situational variability of those executive function impairments means that even a single individual will not have the same problems with writing in every writing situation. Faced with these tremendous writing challenges, the participants in my study have nevertheless all managed to develop strategies to successfully meet these challenges. Chapter 5 describes the pedagogical approaches that might be helpful to address this constellation of writing challenges faced by individuals with AD/HD.

Chapter 5: Pedagogy Suggested to Address the Challenges Faced by the College Writer with AD/HD

"I [AD/HD] will make you creative
You will see what no one else sees
You will understand things in a different way"
--Cary

The pedagogy suggested here to address the challenges faced by the AD/HD college writer is based on the principles of Universal Design for Learning. The term "universal design" refers to "the design of products and environments to be usable by all people to the greatest extent possible, without the need for adaptation or specialized design" (Center for Universal Design). In other words, what is necessary for some is helpful for all, regardless of their ability. In the classroom, "universal design" does not refer to a single optimal solution for everyone, but to the need for multiple approaches to universally meet the needs of diverse learners. Universal Design for Learning does not remove academic challenges, but rather removes barriers to access, whether physical or psychological. A universally designed curriculum includes the following: 1) multiple methods of presentation to give learners various ways of acquiring knowledge; 2) multiple means of engagement to tap into the learners' interests, challenge them appropriately, and motivate them to learn; and 3) multiple means of expression of mastery of the material (Center for Teaching Excellence).

For the following reasons, it makes eminent good sense to employ in the classroom Universal Design for Learning techniques that are especially helpful to students with AD/HD, in particular, and to everyone, in general. First, there is no single profile of *the* writer with AD/HD. And, there is no one prototype of problems all writers

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with AD/HD encounter. In fact, the individual writer with AD/HD is likely to encounter different problems at different times and in different situations. In addition, students with AD/HD may be "invisible" in the classroom if they choose not to disclose their disability. Certainly, writing teachers should never be expected to diagnose AD/HD, nor should they attempt to do so. But, by following the Universal Design for Learning guidelines in the writing course, instructors can not only effectively address the special challenges and needs of students with AD/HD, but can also effectively meet the needs of the other students. Thus, students with AD/HD do not need to be identified and may not need special accommodations. As the "Policy Statement on Disability in CCCC" asserts, we "should ensure that alternatives for those with disabilities are built into physical and intellectual spaces, rather than 'added on' in ways that segregate and stigmatize those with disabilities." Patricia Dunn asserts that writing-centered instruction needs to be supplemented

> in our writing classes, not only because people do make knowledge in different ways, but also because everyone can benefit from occasionally using nonwriting strategies to alter perspectives and create the intellectual distance needed for sophisticated revising. The system needs to change not because some people are labeled LD [and AD/HD], but in spite of it. Those called "normal" also learn along a continuum of difference and would be better challenged if classrooms became more interactive, student-centered, multi-modal, and collaborative (Brueggeman et al 380).

Writers with AD/HD need to find a safe and welcoming learning environment in the composition classroom--especially since their behavior is very much influenced by the teacher and the environment (Schnapp). When adults with AD/HD were asked in a study how they had coped successfully, they often replied, "Someone believed in me." After parents, the person most often cited as having faith in them was a teacher (Dendy 292). Asking any students to write is asking them to take a risk. For students with AD/HD, this risk may be extremely intimidating given past negative experiences with

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writing and the resulting lack of self-confidence. Early "shame experiences" are common for students with AD/HD. Most have been repeatedly told, "You could do better if you really tried!" (Summer 47). This is simply not true.

The first year composition course often serves as the AD/HD students' initiation into the discourse community of the college or university at large. They may be apprehensive entering. Thomas Brown notes that "emotion is the on-off switch for learning" and hope and inspiration are essential for learning as is a sense of "connectedness" (CHADD Video). Students with AD/HD, especially, need to feel welcomed, to feel that they belong, that they are important, rather than feeling alienated and strange. We need to help these students learn how to operate successfully in *this* community of learners; providing a hospitable environment in which to learn is a crucial first step. They need to feel secure in order to take risks.

Parker Palmer describes this place as a community of learners "where truth is central…a place where every stranger and every strange utterance is met with welcome" (74). But this is not a classroom where anything goes, a place without boundaries. Rather it is a comfortable place where ignorance can be exposed, tentative hypotheses can be tested, false or partial information can be challenged, and thought can be mutually criticized (74). It is a place where we recognize "that not knowing is simply the first step toward truth, that the anxiety created by our ignorance calls not for instant answers but for an adventure ride into the unknown" (Palmer 72). Students need to be reassured that "to educate" means to "'draw out' and that the teacher's task is not to fill the student with facts but to evoke the truth the student holds within" (Palmer 43).

But students may not be ready for this learning environment. Most first year

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college students arrive in class with notions of what the teacher expects and how they should behave to meet those expectations. Students are used to the ritualized behavior of the conventional classroom where the teacher is the authority dispensing knowledge which they are to passively swallow whole and then regurgitate on tests and papers. This mode, while impersonal and isolating, is likely to be familiar. Patricia Bizzell asserts that when students don't have knowledge of a particular discourse community, they will fall back on things that worked in the past ("Cognition" 221). This is especially true for students with AD/HD who often depend on familiar ritual and structure to guide their behavior.

Creating and maintaining this safe and welcoming learning environment is an on-going project that lasts all semester and involves every element of the course, from the syllabus to the last comment on the final paper.   The teacher's attitude toward the students serves as the compass for this journey. All students, and especially those with AD/HD, respond best to a teacher who is encouraging, positive, patient and honest.

The first day of class offers the perfect opportunity to begin creating this positive learning environment. The teacher needs to know who is in the class, and the students need to meet their classmates. After distributing the syllabus and briefly reviewing it, the teacher can move to the introduction portion of the class. Any sort of getting-to-know-you activity will work well, but I usually have students pair up, interview each other, and then introduce the person they've interviewed to the class. I list some possible interview topics on the board to guide the conversations, such as major, career goal, family, hobbies, pets, sports, job, and interests. It is also interesting to pose a specific question, such as "What is one unique thing about you?" or "What is your favorite place?" I also

instruct the paired students to get each other's email addresses. After about twenty

minutes, I ask the students to introduce the person they interviewed to the class. They're

instructed to begin with "My name is _____ and I'd like to introduce _____." In this way

each student's name is repeated twice. I ask the class to record any similarities they

notice between themselves and their classmates. (This gives them another reason to pay

attention to the introductions.) After the students have completed their introductions, I

introduce myself using the same guidelines. By the end of this first class, every student

has heard his/her own voice in the classroom, everyone has identified themselves, and

each student has the email address of a classmate. One of the compensation strategies

used by high-ability students with AD/HD who succeeded in college was cultivating

friendships with peers (Reis, McGuire and Neu 129). This introductory exercise serves

to set that process in motion. In effect, we've met each other in a social situation. This

friendly beginning sets the stage for the rest of the semester.

To build the sense of a community of learners still further, the first assignment in

my composition class is to create "My Page for English 121" (Appendix J). This

assignment is designed to achieve these goals: 1) students think about themselves as

writers; 2) they think about the rhetorical situation; 3) they think about their classmates as

audience; 4) they realize that what they write creates an image of themselves; and 5) they

have an opportunity to express themselves creatively. We begin by discussing Langston

Hughes's poem "Theme for English B." Hughes provides a model for the assignment in

his poem. He has written a poem in response to his college instructor's assignment in

which he creates a particular image of himself and sends a particular message. We

analyze his message through a close reading, considering why he might have altered his

biographical information ("born in Winston-Salem./ I went to school there, then Durham"), what the significance is of his being the only "colored" student in his class at the college on the hill (Columbia), and the importance of the historical situation at the time the poem was written. Hopefully, students will think deeply about themselves and about what they want to share with the class. Students are encouraged to create a true reflection of themselves in words or images or both in any format that they feel is appropriate. In the past, students have created photo collages, original music, and self-portraits among a myriad of other self-expressive pieces. This assignment is attractive to students with AD/HD because it offers them the opportunity to tap into their creativity. I also create a page about myself. I display our "pages" in the hallway outside my office for a week. Then in the next class, we visit the "gallery" and view all of the creations. (An added benefit is that students must find my office.) Each student is asked to select one "page" that was especially appealing. The student then writes a letter to the creator of that page. I collect the letters in the following class. In the next class, after having read the letters, I deliver each letter to the "addressee" along with my separate response, and return the "page." By the end of this assignment we all feel a connection to each other and we have a sense of the class as a community.

Quintilian reminds us that we should begin where the students are. But how are we to determine exactly "where" that is? One way is to assign an essay which asks students to reflect on themselves as writers. Potential questions include these: What kind of writer am I? How do I go about writing? What are my strengths and weaknesses? Not only will this assignment encourage students to think about themselves as writers, but it will also help the instructor understand the student's writing challenges and feelings

about writing. Students with AD/HD especially need to be encouraged to reflect on their practices because the ability to look back in hindsight is typically weak in individuals with AD/HD. One of the strengths exhibited by all of the participants in my study was a clear understanding of their own writing process and of what they needed to do to successfully complete a writing assignment.

I ask my students to complete a "Writing Autobiography" as their first essay assignment (Appendix K). In preparation for this essay, they do a focused freewrite in class on "My First Memory of Writing." I also participate by writing about my first memory. Then I ask students to share what they've written with the class, and I share what I've written. (Interestingly, even though I've freewritten on this topic scores of times, I still discover something new each time.) This exercise serves several purposes: it models freewriting; it helps the students generate some ideas for their essay; and it establishes the practice of trying out ideas with the class. In another class, I give each student an 11x14 sheet of paper on which they are to draw a cartoon of themselves writing a paper. The large size of the paper encourages a freer expression of ideas. The cartoon should include all of the steps they take from the moment they receive the assignment in class to the moment the graded essay is returned. When they have finished, they share their cartoon with another student and talk about it. Then as a class, we talk about the cartoons we've created and about the technique of drawing as an invention technique. This exercise helps students think about their actual writing process and about their feelings about writing. We often discover that we share many of the same challenges, such as procrastination. Drawing the cartoons leads to a productive discussion of what it takes to write and how we all have our own strategies for writing. Drawing the

cartoon also provides them with another strategy for invention that they can put in their "bag of tricks."

The next week students bring a draft (defined as their best work to that point, but work that they hope to improve) of their essay to share with their peer response group. (Before the students first respond to a peer's writing, they see a film that models the process and we talk about how the process works and how it should be helpful.) Each group is made up of three or four students. Each writer reads his/her paper aloud as the group listens and takes notes. The writer reads a second time as the group takes more notes. Then the writer listens as each member of the peer response group shares his/her reaction to the paper, one at a time. Then the next writer reads, and so forth. Students are encouraged to share positive comments as well as asking questions about content, etc. By listening to the essay, rather than looking at it, the students necessarily focus on content and organization rather than on surface errors, such as spelling or punctuation. For the peer response group to work, students must have a sense of trust in the process and in each other. (I sit in on the groups as an observer just to ensure that the process is working smoothly.) As the semester progresses, students regularly demonstrate that they value the comments of their peers and look forward to receiving them. (Often students will meet outside of class, in addition to their peer group meeting in class.) Students then take home their drafts and notes from the peer group and revise their essays. When they submit their finished essay, they also submit the draft and the notes from the peer response group. In this way, I can follow the evolution of the essay. Participating in the peer response group helps students develop their own editing skills and helps them develop confidence as writers. The participants in my study confirm that working in peer

response groups has been helpful to them in improving their writing and in increasing their confidence as writers.

When I return the graded essay, I ask students to write a response to these questions in class: 1) How do you feel about your grade?; 2) What "old" comments (good and bad) do you see (that is, comments that other teachers have made in the past)?; 3) What "new" comments (good and bad) do you see?; 4) What questions do you have for me? I also ask the students to answer any questions I asked them on their paper. This brief response to the graded essay forces the students to look at more than the grade and actually to read the comments. It also serves to defuse any negative emotions about the grade. The week after this assignment has been graded and returned to the students, I require my students to meet me in my office for an individual conference. (I cancel the regular class to free up time for the conferences.) Students are to come to the conference prepared with any questions they have about my comments on their papers, about the assignment, or about the course in general. I'm prepared by having read their response to the graded essay. Requiring this conference ensures that the students will find my office for the second time and hopefully will return later on their own volition. Another successful compensation strategy used by high-ability students with AD/HD in college was frequent contact with professors outside of class (Reis, McGuire and Neu 129). This conference also provides an opportunity for the students and me to become better acquainted. They meet me in "my space," a space that is different from the classroom space. This conference also provides an invaluable opportunity to talk about the student's writing process and feelings about writing. Students will often share their disabilities and anxieties about writing. The one-on-one environment allows an open

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exchange between student and teacher. For the student with AD/HD, the one-on-one situation is the most effective way to provide help with writing.

By the end of the fourth week of the semester, students should feel that they are in a safe, friendly, and positive learning environment in our first year writing class. This is a place where they should feel comfortable enough to take risks with their writing, to ask questions, and to learn. This is especially important for the writer with AD/HD. But the work is not done at this point—what has been established must be maintained and enhanced as the semester goes on. There are a number of strategies the composition teacher can use to help the writer with AD/HD be successful. Glennon and Hinckley of Landmark College advocate six principles of best practice to guide the potential of students with AD/HD:

1. Provide novelty within structure and routine;
2. Teach strategies for completing assignments. Encourage experimentation;
3. Provide scaffolding to manage process and keep next actions clear;
4. Encourage and nurture collaboration and connection;
5. Assess flexibly, without compromising course objectives;
6. Encourage reflection on practice.

1.   Provide novelty within structure and routine.

Students with AD/HD present a paradox: they need and desire structure and routine, yet they bristle under too much control. Thus, the goal is to provide just enough structure to support them while injecting a bit of novelty to peak their interest. Having a specific structure or predictable routine to follow helps eliminate unnecessary distractions and improves their ability to focus. The exterior structure or routine reduces the demands on the executive functions. Novelty can be introduced in the way lessons are presented (lecture, group discussion, film, PowerPoint, music, group activity, freewriting, etc.), in

the assignments themselves, and in the ways assignments are completed.

There are several types of structure and routine that can function in the writing class. First are the routines established in the classroom itself. The students need to be habituated to the particular classroom procedures. Those procedures should be consistent so that the student with AD/HD will always know what to expect. For example, each class might begin with a five-minute freewrite in response to a quotation from a professional writer. The teacher should write the activities and goals for that day's class on the board so that students can see what will be happening. This is called an "advance organizer" because it provides specific, concrete steps to organize and motivate the students in advance. It provides the students with a "map" of the upcoming lesson and/or activity and a sense of direction. Advance organizers help students with AD/HD maintain their focus and attention while also modeling planning, prioritizing, and goal-setting (Glennon "Effective Methods"). The teacher should also create logical routines for repeated classroom activities: for example, papers are always collected at the beginning of class on Tuesday. These routines will help the student with AD/HD to remember when assignments are due and to stay focused in class; the more consistency, the better (Clark). Teachers should also be consistent in grading and returning papers. For example, graded essays will always be returned one week after they have been submitted. Classroom routines help all students to avoid wasting time trying to figure out what is expected of them in class, to develop habits of readiness, and to be comfortable with their role in the class.

Another type of structure is provided for the class by the syllabus. It should be purposeful and intentional. Information on how to contact the instructor (office, office

hours, phone number, and email) should be prominent. It should also be specified how quickly the students can expect a response to an email (e.g., within 24 hours). The course requirements should be thoroughly and clearly explained. The teaching methods should be transparent, explaining why these goals have been selected and how students can expect to achieve them. This sets the stage for the students' metacognition. Above all, the syllabus should be framed as a conversation between the teacher and the student ("I" and "you"). Due dates for all assignments should be clearly listed in a calendar. Ideally, the syllabus will not only be distributed in paper form, but will also be available on a class webpage so that the information is readily available even if the student loses the paper copy.

To ensure that students read the syllabus, I have them work in teams on a "scavenger hunt" in the syllabus. The team that is the first to find all of the correct answers to a series of questions (such as, "Where will you be at 9:30 a.m. on October 1?" Answer: "In the library for an orientation.") wins a little prize (e.g., a candy bar). This sort of collaborative activity also injects some novelty into the classroom routine.

Finally, the most important structure provided to the writing student is the actual assignment. Poor directions here can easily derail the student with AD/HD. Students with AD/HD are often confused by oral directions. If it's not written down, assume that the student with AD/HD has not heard it. When directions are written, those who have attention problems can get themselves back on track. Directions for in-class activities should always be written clearly on the board and left in place until the activity is completed.

Directions for writing assignments should be clear, concise, and easy to read.

Assignments should be distributed in a paper copy and also be posted on the class web-page. The assignment should specify exactly what is expected and when it is due. One of the most common problems college writers with AD/HD have is not understanding the assignment (Schnapp). So, not only should the assignment be clearly written, but it should also be fully discussed in class so that students can easily ask questions. Workable topics and approaches should be suggested, but students should be able to modify a topic to suit their own interests. This is especially important for writers with AD/HD because their attention, motivation, and ability to sustain work are directly related to how interested they are in the topic. The writing project itself should be broken into manageable steps and those steps should be identified and set off from the rest of the text. The assignment should differentiate between major and minor tasks. The format should be an open one with lots of white space, rather than a block of text. People with AD/HD have great difficulty in attending to information that is presented in a block format. (See Appendix K for a sample assignment format.) Use a similar format for all assignments so that students are familiar with the layout and know what to expect and where to find certain information.

Donald Murray suggests that the following questions will be answered by the writing teacher in a well-written assignment:

a. Have I clearly explained *why* I have made this assignment?
b. Have I clearly and specifically explained *what* the students are to do?
c. Is the topic something that the students have an interest in and have knowledge about?
d. What form(s) of writing is (are) acceptable? Have I made the ground rules clear?
e. What language expectations do I have for this assignment? (E.g., is the use of "I" acceptable? Are contractions OK?)
f. Have I explained how long the paper should be?
g. What is the final deadline? What interim deadlines are there—for a draft, for example? Have I provided specific, firm dates?
h. Have I provided models of the kind of writing I expect for this assignment?
i. Will I look at writing *in process*? What stages are due? A proposal? A draft? A final

version? What are the expectations for each stage?

j.   Is a specific form of documentation required? Which one? Have I been specific?

k.   What are my expectations for manuscript preparation?

l.   Are there special resources that students should know about?

m.   Are there skills the students need to have before they can complete the assignment properly? If so, have I provided instruction in those skills? Have I provided them with models?

n.   Have I explained what kind of response to their writing students can expect? Will they participate in peer response groups? Will they have an opportunity to discuss their work in conference with the instructor? Will they have an opportunity to revise their work? How will their writing be evaluated for a grade? What are my priorities?
(*A Writer Teaches Writing)*

2.   Teach strategies for completing assignments. Encourage experimentation.

The writing assignment that is clearly written and that describes each step in the process is the basis upon which other strategies are built. Being able to create a realistic timeline for completing an assignment is crucial to writers with AD/HD. Providing a checklist of required steps and/or a calendar with due dates listed are helpful strategies. Encouraging goal-setting is also productive.

Many writers with AD/HD never get started on their writing. They need a stimulus to action. Creating an activity that helps the writer with AD/HD recognize a personal connection to the assignment is a good beginning. For example, students can be asked to brainstorm in class on an upcoming topic, answering the question, "What do I know/want to know about this topic?" (Glennon *Effective Methods).* If students can connect their new knowledge to something they already know, they are more likely to remember it.

Next, they often need help with invention. It is often difficult for them to capture those great ideas that flash through their minds like meteors. A technique that may help is to write each idea on a separate post-it note; then later the ideas can be manually arranged and rearranged. Other invention techniques include keeping a scrapbook as

Amy did in my study. She collects pictures, jots down ideas, draws, doodles, etc. in a large scrapbook of ideas. Then she later refers to this collection when she needs an idea for a paper or a project. Drawing is also a great way to generate ideas. Patricia Dunn notes that Darwin clarified his ideas about evolution by sketching them out as a tree. Only later did he articulate his theory in words (*Talking, Sketching, Moving* 2).

Linda Hecker advocates using multi-modal techniques for teaching writing (Glennon *Effective Methods*). These techniques are particularly helpful to students with AD/HD because they do not depend on behaviors exclusively monitored by the executive functions. One of her techniques involves "walking and talking" the essay. Students are paired up with one being the writer/talker and the other the recorder. They walk in a straight line, veering off the path when subsidiary ideas emerge. The physical movement seems to help the mind focus. Moving the body in space also helps the writer sense how the ideas are related to each other. For example, Stefan uses movement every day to help him focus on his daily activities by running ten miles in the morning.

Another technique suggested by Hecker is to use "manipulatives" to construct a model of an essay. "Manipulatives" could be clay, Tinkertoys, pipe cleaners, etc. It is the hands-on experience that is especially helpful to the student with AD/HD. Hecker notes that when students build models of comparison-contrast structure, for example, they notice elements of symmetry, contrast, and repetition in the visual patterns that they don't notice in outlines or even in visual-schematic form.

3.   **Provide scaffolding to manage process and keep next actions clear.**

Scaffolding is defined as "instructional supports or interactions that help the student acquire or extend his or her knowledge, reduce task complexity, and support the

student's move towards being able to work independently, providing emotional support and encouragement" (Teach AD/HD). Scaffolding provides an external framework and stimulus to assist students with AD/HD in areas where their executive functions are weak. In general, scaffolding acts as a memory aid. There are two kinds of scaffolding that can be employed in the writing classroom as instructional supports: teaching techniques and concrete tools. Teaching techniques that provide support include modeling; offering explanations and providing guided practice; ordering and sequencing information and giving examples; modifying task difficulty or reducing the amount of information presented at one time; and providing prompts, cues, supportive questioning and specific feedback (Teach AD/HD). The concrete tools include visual and memory aids, such as posters, drawings, manipulatives, checklists, mnemonics, and charts; content organizers, such as graphic or advance organizers; and technological and media aids, such as word processors, assistive technology, multimedia, and films (Teach AD/HD).

Scaffolding may help the person with AD/HD develop strategies for writing that do not depend on the executive functions by developing and recording nondeclarative memories. Our brains record experiences as one of two basic kinds of memories: declarative (explicit) and nondeclarative (implicit). Declarative memories are the things we know we remember, such as our address, the color of our car, or what happened yesterday morning. Nondeclarative memories are things we know without consciously thinking about them, such as how to ride a bike or touch-type. These unconscious memories do not rely on the hippocampus to be consolidated and retrieved. Instead, motor skill learning takes place at the base of the brain in the cerebellum, perceptual learning in the neocortex, and habit learning at the brain's center (Foer 41-44). These are

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areas of the brain that are not affected by AD/HD. Consequently, it is possible that AD/HD individuals could develop habits, motor skills and perceptual associations with the writing process to offset the challenges presented by the impairment in working memory caused by AD/HD.

The use of templates for writing, such as that for the 500-word theme, aid the individual with AD/HD in developing these habits, skills, and perceptual associations by providing an external stimulus. Visual perception uses the template to form non-declarative memories. Several participants in my study reported that following a template (e.g., Lauren and Jon use the 500-word theme template) or following a specific step-by-step process (e.g., Melissa's scrupulous organizing strategies) is invaluable in helping them produce written output. The visual is most important for our ability to recollect. As Carruthers points out, "signs make something present to the mind by acting on the memory" (222). Other sorts of templates are structured as a series of questions or a step-by-step checklist that guide the student through the writing process from the invention stage to the revision stage. Also, often included in these templates are self-reflective questions that promote metacognition in the student writer.

Graphic organizers are another type of scaffolding. They offer visual representations of processes or of relationships between ideas. There are many types of graphic organizers: web diagram, circle diagram (or pie chart), Venn diagram, time line, table or matrix, concept map, causal chain map, and flow chart. For example, the web diagram is very helpful for both generating ideas and for organizing them. The software program *Inspiration* allows the user to select the shape of the web diagram and the number and relationship of connections. Then after the spaces are filled in, the program

will convert the web diagram to a traditional outline format.[26] Another example is the Venn diagram, which is excellent for developing and organizing ideas when comparing two things.

Providing model essays that illustrate the successful completion of an assignment and discussing them is another type of scaffolding. It is very helpful to the writer with AD/HD to actually see what will work and to understand why it worked. Knowing a process and understanding the end goal will help the writer with AD/HD gain confidence (Clark).

One of the biggest challenges for the individual with AD/HD is managing time and planning for the future. Scaffolding can provide support in this area as well. A helpful strategy is to use a planning calendar that lists each hour in the day. Then time commitments (e.g., time in class, travel time to get to and from class, time to read assignments, time to eat, time to get dressed, time for work, etc.) can be blocked out using different color highlighters for different types of commitments. The resulting chart clearly and visually depicts how much time is needed to accomplish tasks during the day. Individuals with AD/HD often tend to rush through things at the last minute because they underestimate the time required for a task under normal, reasonable conditions. This underestimation may be caused in part by the fact that their sense of how long something takes is colored by their behavior of usually working at "warp speed" at the last minute (Kolberg and Nadeau 181). Another contributing factor is the tendency to delay unappealing tasks until they become urgent and then having to work at "warp speed."

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[26] See Figure 6: "Web Diagram Created with *Inspiration* Software."
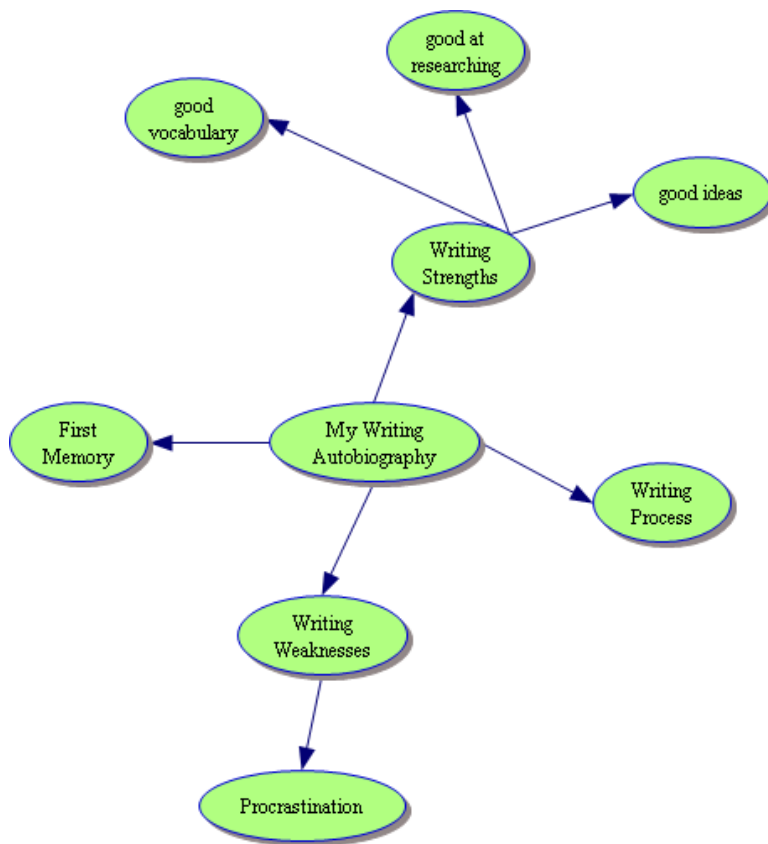
My Writing Autobiography
I.   First Memory
II.   Writing Process
III.   Writing Strengths
        A.   Good vocabulary
        B.   Good at researching
        C.   Good ideas
IV.   Writing Weaknesses
        A.   Procrastination

Figure 6: Web Diagram Created with *Inspiration* Software

This behavior can become a vicious cycle.

Another time-related problem individuals with AD/HD often face is spending too much time on something, such as collecting research for an assigned paper or writing and revising endlessly. Linda Hecker of Landmark College reports once meeting with a student who had 75 pages of notes for a three-page paper (Dunn and de Mers). A strategy to control this problem is to limit the time allotted for writing. For example, the student could set a kitchen timer for 30 minutes and write continuously for that time period only. Some writers with AD/HD can be very productive in this sort of timed environment.

Another kind of scaffolding is known as Cognitive Strategy Instruction (or Self-Regulated Strategy Development) and has been demonstrated in several studies to be helpful to writers with AD/HD in elementary and middle school by providing direct and systematic instruction in procedures for planning and writing a particular type of paper and for reflection on that writing process (de la Paz; Reid and Lienemann). Although there have been very limited studies done with college writers who have AD/HD and who have been instructed in cognitive strategies, some success has been demonstrated in the method (MacArthur). These strategies are conscious, goal-directed processes for solving problems or for completing complex tasks. The goal is for the student to internalize the strategies and self-regulate their use as needed for dealing with complex tasks. Self-regulated strategy development employs explicit instruction and guided practice. The following stages of instruction are followed: 1) develop the student's background knowledge regarding the strategy; 2) discuss the strategy and why and where it is useful; 3) model the strategy; 4) help the student apply the strategy by working collaboratively with the student; 5) provide the student with opportunities to

apply the strategy independently, providing support as necessary. While this technique does seem promising, it demands a very individualized program for each student that may require time and resources unavailable to the college composition instructor in the regular classroom. The best way to conduct Cognitive Strategy Instruction in college may be on an individual basis in the Special Services area.

A very practical and helpful scaffold is guided notes that simply present a skeleton outline of a lecture or lesson with some key guide words provided among lots of blanks. Students use the guided notes to take notes during the lecture or lesson. The guided notes are particularly helpful for students with AD/HD because they not only assist them in knowing what is important and instruct them in how to take notes, but also help them to maintain their focus during the lecture or lesson.

Finally, the most important type of scaffolding is breaking assignments into manageable parts, or "chunking" the work. Writers with AD/HD have an especially difficult time with long-term writing assignments, such as research projects. All of the participants in my study confirm this. An effective way to address this problem is to create a research project that is made up of several smaller assignments, each with a separate due date, each receiving feedback, and each having the opportunity to be revised. At the end of the series of projects, the student should be able to combine the parts successfully.

In my first year composition course the required research project is broken into nine assignments: journals, reflective personal essay, library orientation and preliminary research, annotated bibliography, proposal, issues paper, research paper, I-search in-class essay, and poster presentation. Students participate in peer response groups for the

reflective personal essay, annotated bibliography, proposal, issues paper, and research

paper. First, the class reads a book that will be the focal point of the course. One book

that I've used successfully is *Brave New World*. I chose it because it raises a number of

issues that are relevant today, such as genetic engineering, society's emphasis on youth

and "beauty," socialized medicine, etc. Reading literature offers a shared experience for

our diverse student body—an experience that can help them learn about language and

about the new discourse community of the college and that can help them learn to write.

Parker Palmer suggests that teachers can create "conceptual space," a common learning

space, through reading that is assigned:

> When all students in the room have read the same brief piece in a way that allows them to enter and occupy the text, a common space is created in which students, teacher, and subject can meet. It is an open space since a good text will raise as many questions as it answers. It is a bounded space since the text itself dictates the limits of our mutual inquiry. It is a hospitable, reassuring space since everyone has walked around in it beforehand and become acquainted with its dimensions….the teacher invites the students to step inside the space created by the text, asking them what is going on in it, how it can be understood, how they understand themselves within it (Palmer 76).

As they are reading the book, students complete journal responses to questions

about the novel. We also watch the film *Gattaca* which is based on *Brave New World*

and then discuss the interpretation. The reflective personal essay helps to orient the

individual student to the novel and its issues. Students are asked to consider how science

and technology have affected their lives (Appendix L). The class generates a list of

possible topics for the research paper that are related to *Brave New World*. The next

assignment is a preliminary research worksheet that the students complete after attending

a library orientation in which the librarian reviews online search techniques of data bases,

etc. Then they write a proposal for their project, explaining what their topic will be, why

they've chosen it, what they already know about it, and what they need to find out. They

are also required to list the sources of information that they have found so far and to present a plan for completing the entire project (on a calendar). The proposal provides an opportunity for the teacher to check that the topic is appropriate and workable. If not, the student has a chance to revise the plan. Next the students complete an annotated bibliography including at least ten sources. Here the teacher can intervene if the student has not chosen relevant or appropriate sources or if he/she is having difficulty finding information.

The next assignment is a three to five page informative paper that describes the issues involved with the topic chosen. This assignment requires that the student demonstrate an understanding of the topic and of the major issues surrounding the topic. Next, I meet individually with each student to review the plan he/she has developed for the argumentative research paper itself. They bring to the conference at least an explanation of the background of their topic and of how it is related to *Brave New World*, their working thesis, and some sort of plan for the paper (an outline or some less conventional representation). Hopefully, by the end of the conference, the student will leave with a workable plan. The next project is the research paper itself. We spend two days of class in peer response groups where they share their introductions with the whole group. Then they exchange papers, responding to two other students' work by answering a series of questions I've posed for them (e.g., What is the most convincing point? What needs more explanation?). After the research project is submitted, the students write an I-Search paper in class in the form of a memo to me, describing their experience with the research project and highlighting what they have learned about writing a research project as well as what they have learned about their topic. This self-reflective piece is very

helpful for the student with AD/HD. Finally, the students prepare a poster which presents

the outcome of their research. During the final exam period, the posters are hung on the

classroom walls and the students visit each other's posters and talk about the research

project. The poster presentation format is modeled after those conducted at professional

conferences. This final assignment offers the students the opportunity to share what they

have discovered with their classmates, with their community of learners.

4.   Encourage and nurture collaboration and connection.

As stated previously, creating a student-centered, safe, and welcoming learning

environment is essential. Activities such as the introduction activity and peer response

groups foster connections among students. Collaborative activities in the class help

students take responsibility for their own learning as well as strengthening those

connections among students. The teacher's connection with the students is nurtured by

her active participation in class activities and exercises as well as in individual

conferences.

A collaborative assignment that worked particularly well in my Ethics in

Literature class was a group research project. One of the topics in this class was the

death penalty. We read *Dead Man Walking* because of its powerful and personal

exploration of this topic. The students had an assignment to write a letter to Senator

Mikulsky to convince her to endorse their particular point of view about the death

penalty. In preparation for this writing assignment, I had the students arrange themselves

in five self-selected groups to research the five major issues about the death penalty.

Each group then presented their research to the class using PowerPoint and providing

handouts. By the end of the presentations, everyone had a clear understanding of all of

the issues and had solid research that they could use in their own letter.

5.   Assess flexibly, without compromising course objectives.

The first step in assessment should be to define the goals and expectations for the students. Exactly what are they expected to learn in this course? Rubrics for grading should be provided to the students and discussed. An interesting exercise is to ask the students themselves to develop a rubric for evaluating a writing assignment. Also, writing skills can be developed in formats other than the expository essay although that type of essay is the most commonly required in college courses. The teacher should attempt to offer other opportunities for the student to demonstrate mastery of the course objectives. Some possibilities are the PowerPoint presentation or the poster presentation. In addition, students could demonstrate their writing skills in the form of a newsletter, an online magazine, or even in a blog. Opportunities for oral communication of ideas are also helpful to the student with AD/HD who can often talk more easily than write.

Also, it is helpful to the writer with AD/HD if the instructor asks real questions when responding to an essay. It is also helpful if the instructor remembers that grading is a form of one-on-one conferencing (Glennon and Hinckley). The writers should be encouraged to reflect on their intended meaning and compare that to what has actually been written, rather than simply correcting "mistakes." Students should be offered the opportunity to revise their work after receiving comments.

6.   Encourage reflection on practice.

Reflection is very important for a number of reasons: to consolidate information; to plan the next steps in a process; to prepare to meet the next challenge; to emphasize the recursive nature of learning (Glennon and Hinckley). Students with AD/HD especially

need guidance on self-reflection since this is one of the impaired abilities in their executive functions.

Reflection, or metacognition, can take several forms. Students can be asked to reflect on their writing process in general in an essay. They can also be asked to write a brief memo when they submit a writing assignment answering such questions as these: What was the most difficult part of completing this paper? What did you enjoy most? What would you change if you could do it again? What has worked in the past?

It is especially helpful to allow revision of all assignments, requiring the student to reflect on what was successful, what was not, and how the revision improves the paper. This practice in reflection as well as in rewriting is very helpful to the student with AD/HD.

Overall, students should be encouraged to discover what works best for them. The writing process is never the same for any two students. The key to success as a college writer with AD/HD seems to be self-knowledge about the process and strategies that work best for the individual. Each writer needs to assemble his/her own "bag of tricks."

Implications for Further Study

As demonstrated in Chapter I: Review of the Literature, very little work has been done in composition studies on the problems and needs of college students with Attention-Deficit/Hyperactivity Disorder. Indeed, very little has been done in any field on the impact of AD/HD on writing in any age group. Given the scarcity of research in this area, the possibilities for further study are numerous.

An initial project should be to ensure that all English graduate students and

college composition instructors have a clear understanding of AD/HD—its definition and its diagnosis. In addition, they need to be aware of the legal obligation colleges have to meet the special needs of college students with AD/HD. Most important, they need to understand the impact that AD/HD has on the individual's ability to write. A logical place to begin this project is to learn exactly what college composition instructors already know and what they feel about AD/HD. It would not be surprising to learn that they, like the general public, know little or are skeptical about the validity of AD/HD, its diagnosis, and treatment. Certainly, it could be expected that some might believe that providing accommodations for college students with AD/HD represents a lowering of standards in higher education. These misconceptions need to be corrected as a first step toward meeting the needs of college writing students with AD/HD. An online survey of college composition instructors could be undertaken to ascertain what they know and how they feel about AD/HD. Possibly, the NCTE College Section and the Two Year College English Association (TYCA) would agree to share their membership lists for such a project.

Second, empirical studies need to be conducted to learn if our assumptions are correct about how to help writers with AD/HD meet their challenges. Does the recommended pedagogy work? Are the strategies we suggest helpful? In addition, we need to learn more about how AD/HD impacts the executive functions and writing. Individual case studies and further in-depth interviews with college students with AD/HD would be valuable. We need to listen to the voices of students with AD/HD and learn from them.

It would also be instructive to interview current college students and college

graduates who have *not* been diagnosed with AD/HD or with any learning disabilities. They could be asked the same questions the participants in the current study were asked. The results could then be compared.

For any further study, however, it will be difficult to identify college students with AD/HD. They are largely invisible in our composition classes because many of them choose not to disclose their AD/HD diagnosis. But under no circumstances should composition instructors be expected to or attempt to identify or diagnose AD/HD in their students. It is possible that students with AD/HD could be recruited for studies through the special services departments in individual colleges. But the best repository of college students with AD/HD who are aware of their problems would seem to be Landmark College whose student body is composed entirely of those with learning disabilities and/or AD/HD. Ideally, researchers could work collaboratively with the English Department of Landmark College to conduct in-depth and longitudinal studies of AD/HD and writing.

Another possible path of research would be to work collaboratively with psychologists who are already studying AD/HD. Compositionists could contribute important knowledge about the writing process and writing theory to the study of AD/HD and writing and could learn much from the psychologists' research.

Hopefully, more work will be done in all areas of composition studies to uncover those brighter margins inhabited by the college writer with AD/HD. We can learn much about teaching writing by studying those whose brains are different, those who see what no one else sees, and who understand things differently.

Appendix A:

Diagnostic and Statistical Manual for Mental Disorders (Third Edition) 1980

Diagnostic Criteria for Attention Deficit Disorder

Diagnostic and Statistical Manual for Mental Disorders (Third Edition) 1980
Diagnostic Criteria for Attention Deficit Disorder

The child displays, for his or her mental and chronological age, signs of developmentally inappropriate inattention, impulsivity, and hyperactivity. The signs must be reported by adults in the child's environment, such as parents and teachers. Because the symptoms are typically variable, they may not be observed directly by the clinician. When the reports of teachers and parents conflict, primary consideration should be given to the teacher reports because of greater familiarity with age-appropriate norms. Symptoms typically worsen in situations that require self-application, as in the classroom. Signs of the disorder may be absent when the child is in a new or a one-to-one situation.

The number of symptoms specified is for children between the ages of eight and ten, the peak age range for referral. In younger children, more severe forms of the symptoms and a greater number of symptoms are usually present. The opposite is true for older children.

Attention Deficit Disorder with Hyperactivity

A. **Inattention.** At least three of the following:
   (1) often fails to finish things he or she starts
   (2) often doesn't seem to listen
   (3) easily distracted
   (4) has difficulty concentrating on schoolwork or other tasks requiring sustained attention
   (5) has difficulty sticking to a play activity

B. **Impulsivity.** At least three of the following:
   (1) often acts before thinking
   (2) shifts excessively from one activity to another
   (3) has difficulty organizing work (this not being due to cognitive impairment)
   (4) needs a lot of supervision
   (5) frequently calls out in class
   (6) has difficulty awaiting turn in games or group situations

C. **Hyperactivity.** At least two of the following:
   (1) runs about or climbs on things excessively
   (2) has difficulty sitting still or fidgets excessively
   (3) has difficulty staying seated
   (4) moves about excessively during sleep
   (5) is always "on the go" or acts as if "driven by a motor"

D. Onset before the age of seven.
E. Duration of at least six months.
F. Not due to Schizophrenia, Affective Disorder, or Severe or Profound Mental Retardation.

Attention Deficit Disorder without Hyperactivity

The criteria for this disorder are the same as those for Attention Deficit Disorder with Hyperactivity except that the individual never had signs of hyperactivity (criterion C).

Attention Deficit Disorder, Residual Type

A.   The individual once met the criteria for Attention Deficit Disorder with Hyperactivity. This information may come from the individual or from others, such as family members.

B.   Signs of hyperactivity are no longer present, but other signs of the illness have persisted to the present without periods of remission, as evidenced by signs of both attentional deficits and impulsivity (e.g., difficulty organizing work and completing tasks, difficulty concentrating, being easily distracted, making sudden decisions without thought of the consequences).

C.   The symptoms of inattention and impulsivity result in some impairment in social or occupational functioning.

D.   Not due to Schizophrenia, Affective Disorder, or Severe or Profound Mental Retardation, or Schizotypal or Borderline Personality Disorders.

Appendix B:

Diagnostic and Statistical Manual for Mental Disorders
(Third Edition-Revision) 1987

Diagnostic Criteria for Attention-deficit Hyperactivity Disorder

Diagnostic and Statistical Manual for Mental Disorders
(Third Edition-Revision) 1987

Diagnostic Criteria for Attention-deficit Hyperactivity Disorder

Note: Consider a criterion met only if the behavior is considerably more frequent than that of most people of the same mental age.

A.   A disturbance of at least six months during which at least eight of the following are present:

    (1)   often fidgets with hands or feet or squirms in seat (in adolescents, may be limited to subjective feelings of restlessness)
    (2)   has difficulty remaining seated when required to do so
    (3)   is easily distracted by extraneous stimuli
    (4)   has difficulty awaiting turn in games or group situations
    (5)   often blurts out answers to questions before they have been completed
    (6)   has difficulty following through on instructions from others (not due to oppositional behavior or failure of comprehension), e.g., fails to finish chores
    (7)   has difficulty sustaining attention in tasks or play activities
    (8)   often shifts from one uncompleted activity to another
    (9)   has difficulty playing quietly
    (10)   often talks excessively
    (11)   often interrupts or intrudes on others, e.g., butts into other children's games
    (12)   often does not seem to listen to what is being said to him or her
    (13)   often loses things necessary for tasks or activities at school or at home (e.g., toys, pencils, books, assignments)
    (14)   often engages in physically dangerous activities without considering possible consequences (not for the purpose of thrill-seeking), e.g., runs into street without looking

    Note: The above items are listed in descending order of discriminating power based on data from a national field trial of the DSM-III-R criteria for Disruptive Behavior Disorders.

B.   Onset before the age of seven.

C.   Does not meet the criteria for a Pervasive Developmental Disorder.

Criteria for severity of Attention-deficit Hyperactivity Disorder:

Mild: Few, if any, symptoms in excess of those required to make the diagnosis **and** only minimal or no impairment in school and social functioning.

Moderate: Symptoms or functional impairment intermediate between "mild" and "severe."

Severe: Many symptoms in excess of those required to make the diagnosis **and** significant and pervasive impairment in functioning at home and school and with peers.

Appendix C:

**Diagnostic and Statistical Manual for Mental Disorders
(Fourth Edition Text Revision) 2000**

Diagnostic Criteria for Attention-Deficit/ Hyperactivity Disorder

Diagnostic and Statistical Manual of Mental Disorders
(Fourth Edition Text Revision) 2000[27]
Diagnostic Criteria for Attention Deficit/Hyperactivity Disorder

A.   Either (1) or (2):

   (1)   six (or more) of the following symptoms of **inattention** have persisted for at least 6 months to a degree that is maladaptive and inconsistent with developmental level:

   Inattention
   (a)   often fails to give close attention to details or makes careless mistakes in schoolwork, work, or other activities
   (b)   often has difficulty sustaining attention in tasks or play activities
   (c)   often does not seem to listen when spoken to directly
   (d)   often does not follow through on instructions and fails to finish schoolwork, work, chores, or duties in the workplace (not due to oppositional behavior or failure to understand instructions)
   (e)   often has difficulty organizing tasks and activities
   (f)   often avoids, dislikes, or is reluctant to engage in tasks that require sustained mental effort (such as schoolwork or homework)
   (g)   often loses things necessary for tasks or activities (e.g., toys, school assignments, pencils, books, or tools)
   (h)   is often distracted by extraneous stimuli
   (i)   is often forgetful in daily activities

   (2)   six (or more) of the following symptoms of **hyperactivity-impulsivity** have persisted for at least 6 months to a degree that is maladaptive and inconsistent with developmental level:

   Hyperactivity
   (a)   often fidgets with hands or feet or squirms in seat
   (b)   often leaves seat in classroom or in other situations in which remaining seated is expected
   (c)   often runs about or climbs excessively in situations in which it is inappropriate (in adolescents or adults, may be limited to subjective feelings of restlessness)
   (d)   often has difficulty playing or engaging in leisure activities quietly
   (e)   is often "on the go" or often acts as if "driven by a motor"
   (f)   often talks excessively

   Impulsivity
   (g)   often blurts out answers before questions have been completed
   (h)   often has difficulty awaiting turn
   (i)   often interrupts or intrudes on others (e.g., butts into conversations or games)

B.   Some hyperactive-impulsive or inattentive symptoms that caused impairment were present before age 7 years.

C.   Some impairment from the symptoms is present in two or more settings (e.g., at school [or work] and at home).

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[27] The *DSM-IV* "Diagnostic Criteria for Attention-Deficit/Hyperactivity Disorder" (1994) is virtually the same as that in *DSM-IV-TR* except for two very minor changes in word choice.

D.   There must be clear evidence of clinically significant impairment in social, academic, or occupational functioning.

E.   The symptoms do not occur exclusively during the course of a Pervasive Developmental Disorder, Schizophrenia, or other Psychotic Disorder and are not better accounted for by another mental disorder (e.g., Mood Disorder, Anxiety Disorder, Dissociative Disorders, or a Personality Disorder).

Code based on type:

Attention-Deficit/Hyperactivity Disorder, Combined Type: if both Criteria A1 and A2 are met for the past 6 months.

Attention-Deficit/Hyperactivity Disorder, Predominantly Inattentive Type: if Criterion A1 is met but Criterion A2 is not met for the past 6 months

Attention-Deficit/Hyperactivity Disorder, Predominantly Hyperactive-Impulsive Type: if Criterion A2 is met but Criterion A1 is not met for the past 6 months

Coding note: For individuals (especially adolescents and adults) who currently have symptoms that no longer meet the full criteria, "In Partial Remission" should be specified.

Attention-Deficit/Hyperactivity Disorder Not Otherwise Specified
This category is for disorders with prominent symptoms of inattention or hyperactivity-impulsivity that do not meet criteria for Attention-Deficit/Hyperactivity Disorder. Examples include

1.   Individuals whose symptoms and impairment meet the criteria for Attention-Deficit/Hyperactivity Disorder, Predominantly Inattentive Type but whose age at onset is 7 years or older.

2.   Individuals with clinically significant impairment who present with inattention and whose symptom pattern does not meet the full criteria for the disorder but have a behavioral pattern marked by sluggishness, daydreaming, and hypoactivity.

Appendix D:

Informed Consent Form

Consent Form

Project Title	*At the Brighter Margins: Teaching Writing to the College Student with Attention-Deficit/Hyperactivity Disorder (AD/HD)*
Why is this research being done?	This is a research project being conducted by Barbara Graham Cooper at the University of Maryland, College Park. We are inviting you to participate in this research because you are at least 18 years of age, have been diagnosed with Attention-Deficit/Hyperactivity Disorder (AD/HD), and are currently enrolled in college or are a college graduate. The purpose of this research is to gather information about how AD/HD affects the individual's ability to produce writing.
What will I be asked to do?	The procedure involves completing a preliminary questionnaire and one individual interview session with the principle researcher in which you will be asked a series of questions about your experiences as a writer with AD/HD. (See the attached questionnaire and interview questions.) The interview will last approximately one hour. You may also be asked to allow the researcher to analyze a sample of your writing. In this case, you would be asked to deliver the writing sample to the investigator.
What about confidentiality?	We will do our best to keep your personal information confidential. To help protect your confidentiality: 1) your name will not be included on the preliminary questionnaire, the interview or other collected data; 2) a code will be placed on the preliminary questionnaire, the interview or other collected data; 3) through the use of an identification key the researcher will be able to link your preliminary questionnaire, interview or other collected data to your identity; 4) only the researcher will have access to the identification key. If we write a report or article about this research project, your

Project Title	*At the Brighter Margins: Teaching Writing to the College Student with Attention-Deficit/Hyperactivity Disorder (AD/HD)*
What about confidentiality? (continued)	identity will be protected to the maximum extent possible. This research project involves making an audiotape of you during the interview in order to accurately record your responses to the questions. The audiotape will be stored in a locked file cabinet in the researcher's office at Howard Community College. Only the researcher will have access to the audiotape. A transcript of the audiotape will be made; it will not include your name. When the transcript is completed, the audiotape will be destroyed. _____I agree to be audio-taped during my participation in this study. _____I do not agree to be audio-taped during my participation in this study.
What are the risks of this research?	There are no known risks associated with participating in this research project. You may feel uncomfortable by the personal nature of some of the questions.
What are the benefits of this research?	This research is not designed to help you personally, but the results may help the investigator learn more about the effect that AD/HD has on the writing process and how best to help individuals deal with that effect. We hope that, in the future, other people might benefit from this study through improved understanding of the most effective way to teach writing to college students with AD/HD.
Do I have to be in this research? May I stop participating at any time?	Your participation in this research is completely voluntary. You may choose not to take part at all. If you decide to participate in this research, you may stop participating at any time. If you decide not to participate in this study or if you stop participating at any time, you will not be penalized or lose any benefits to which you otherwise qualify.

Project Title	***At the Brighter Margins: Teaching Writing to the College Student with Attention-Deficit/Hyperactivity Disorder (AD/HD)***
What if I have questions?	This research is being conducted by Barbara Graham Cooper, English Department at the University of Maryland, College Park. If you have any questions about the research itself, please contact Barbara Graham Cooper at Howard Community College, English/World Languages, 10901 Little Patuxent Parkway, Columbia, MD 21044; (telephone) 410-772-4851; (email) bcooper@howardcc.edu . If you have questions about your rights as a research subject or wish to report a research-related injury, please contact: Institutional Review Board Office, University of Maryland, College Park, MD 20742; (telephone) 301-405-0678; (email) irb@deans.umd.edu . This research has been reviewed according to the University of Maryland, College Park IRB procedures for research involving human subjects.
Statement of Age of Subject and Consent	Your signature indicates that you are at least 18 years of age; the research has been explained to you; your questions have been fully answered; and you freely and voluntarily choose to participate in this research project.
Name of Subject	
Signature of Subject	
Date	

Appendix E:

Preliminary Questionnaire for Students with AD/HD

Barbara Graham Cooper
Department of English
University of Maryland
Dissertation: *At the Brighter Margins: Teaching Writing to the College Student with*
                         Attention-Deficit/ Hyperactivity Disorder (AD/HD)

Preliminary Questionnaire for Students with AD/HD

This questionnaire will be completed by the student subject before the individual interview. The identity of the person completing this questionnaire will be kept confidential.

1.   When were you first officially diagnosed with AD/HD?

2.   What is your diagnosis?

3.   How old are you now?

4.   Have you been prescribed medication to control the symptoms of AD/HD? What medicine was prescribed?

5.   Do you now take the medication regularly? If not, why not?

6.   When did you first become aware of symptoms of AD/HD?

7.   What is your educational goal?

8.   What degree would you like to achieve?

9.   What are some things you'd like to achieve with your degree? What is your career goal?

10.   Where are you in your educational process?

11.   Why did you choose Howard Community College?

12.   What are your post-Howard Community College plans?

13.   Where did you go to high school?

14.   Did you take the SAT? If so, when? If so, what were your scores on the SAT?

Appendix F:

Preliminary Questionnaire for College Graduate Professionals with AD/HD

Barbara Graham Cooper
Department of English
University of Maryland
Dissertation: *At the Brighter Margins: Teaching Writing to the College Student with*
                Attention-Deficit/ Hyperactivity Disorder (AD/HD)

Preliminary Questionnaire for College Graduate
Professionals with AD/HD

This questionnaire will be completed by college graduates who are employed in a professional capacity before the individual interview. The identity of the person completing this questionnaire will be kept confidential.

1.   When were you first officially diagnosed with AD/HD?

2.   What is your diagnosis?

3.   How old are you now?

4.   Have you been prescribed medication to control the symptoms of AD/HD? What medicine was prescribed?

5.   Do you now take the medication regularly? If not, why not?

6.   When did you first become aware of symptoms of AD/HD?

7.   Did you take the SAT? If so, when? If so, what were your scores on the SAT?

8.   Where did you go to college?

9.   What was your major?

10.   How long did it take you to complete your degree?

11.   What degree did you earn? How old were you when you received your degree?

12.   Did you go to graduate school? If so, what did you study?

13.   If so, did you complete an advanced degree? What is it?

14.   Did you go to a professional school (e.g., dental, medical, law)?

15. If you went to a professional school, what degree did you earn?

16. What is your job history since college graduation?

17. What is your current position?

Appendix G:

Interview Questions for Students with AD/HD

Barbara Graham Cooper
Department of English
University of Maryland
Dissertation: *At the Brighter Margins: Teaching Writing to the College Student with*
                  Attention-Deficit/ Hyperactivity Disorder (AD/HD)

Interview Questions for Students with AD/HD

These questions will be used in individual interviews with current college students. Their responses will be audio recorded and later transcribed. Once the interview has been transcribed, the audio recording will be destroyed. The identity of the interview subject will be kept confidential.

1.   Describe how AD/HD feels to you.

2.   How would you describe yourself as a student?

3.   Which English courses did you take in high school? Can you tell me about them?

4.   What courses were easiest for you in high school? In college? Why?

5.   What courses were most difficult for you in high school? In college? Why?

6.   What's your first memory of writing?

7.   How do you *feel* about writing today?

8.   What kind of help with your writing do you find most helpful?

9.   What kind of feedback did you receive on your writing in high school?

10.   Do you keep a journal, or have you ever kept one? Do you or have you ever written for fun (poetry, stories, song lyrics, etc)?

11.   How successful are you at writing essay exams or in-class essays (that is,   writing in a timed or structured environment)?

12.   How would you describe your writing process?

13.   If you take medication for AD/HD, how does it affect your writing process?

14. What kinds of writing assignments are you most comfortable with?

15. What kinds of writing assignments are most difficult for you?

16. How do you feel when you are first given a writing assignment? Does your response depend on what kind of assignment it is or on what the writing situation is?

17. How do you feel about deadlines? Do they help or hinder your production of writing?

18. Can you *talk* about your ideas more readily (with more comfort and ease) than you can *write* about them? Why do you think that is?

19. Do you ever feel that your writing is "blocked"? Do you fear being "blocked"? What does that feel like? What do you do when you're in that situation?

20. Do you ever feel that your skills are not up to the writing assignment? Why is that?

21. Are there any rules that you always try to follow when writing? If so, what are they?

22. What kinds of writing techniques do you use when you have to write a paper?

23. Do you ever put incomplete thoughts or fragments of ideas down on paper before writing the first draft? Why or why not?

24. Do you use an outline of some sort? What other organizational techniques do you use, if any?

25. Do you have trouble sticking to your thesis and/or outline? Why do you   think that is? If you don't have this problem, how do you stick to your plan?

26. Does your subject tend to grow and change as you're writing? Why do you think   hat is? If not, how do you keep your subject from changing? How do you stay focused on your topic?

27. How often do you get to the revision step?

28. How do you go about revising your paper? How do you know when your paper does not need revising?

29.   When you are having a hard time writing, what kinds of thoughts run through your head? Do you think negatively about your writing (e.g., "This isn't good enough." "This is too hard. I give up")?

30.   How conscious are you of your writing process? For example, when you start writing, do you think about what you're going to do first? Or do you immediately begin to write?

31.   What writing strategies worked or didn't work the last time you wrote something?

32.   Have you ever been graded on your writing process itself? If so, did it help? If not, do you think being graded on your writing process would be helpful to you? Why or why not?

33.   What metaphor would you use to describe the challenges or problems you have with writing? (For example: "It's like trying to rake leaves when it's really windy."[28])

34.   Can you tell me about an experience you have had that describes the challenges you face when you're writing?

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[28]   This quote is from a student at Landmark College as reported by Lesle Lewis in her presentation with Sara Glennon, "Invisible Papers, Invisible Challenges: Coaching College Writers with AD/HD," at the College Composition and Communication Conference, Chicago, IL, 24 Mar. 2006.

Appendix H:

Interview Questions for College Graduate Professionals with AD/HD

Barbara Graham Cooper
Department of English
University of Maryland
Dissertation: *At the Brighter Margins: Teaching Writing to the College Student with Attention-Deficit/ Hyperactivity Disorder (AD/HD)*

Interview Questions for College Graduate

Professionals with AD/HD

These questions[29] will be used in interviews with college graduates who have been diagnosed with AD/HD and who are employed in a professional capacity. Their responses will be audio recorded and later transcribed. Once the interview has been transcribed, the audio recording will be destroyed. The identity of the interview subject will be kept confidential.

1.   Describe how AD/HD feels to you.

2.   How would you describe yourself as a student?

3.   Which English courses did you take in high school?

4.   What courses were easiest for you in high school? In college? Why?

5.   What courses were most difficult for you in high school? In college? Why?

6.   What's your first memory of writing?

7.   How do you *feel* about writing today?

8.   Do you keep a journal, or have you ever kept one? Do you or have you ever written for fun (poetry, stories, song lyrics, etc)?

9.   What specific writing strategies and/or techniques did you develop in college (or since college) to help you successfully complete your required writing tasks?

10.   How much writing does your current position demand? What kinds of writing do you regularly do on the job?

11.   How would you describe your writing process?

12.   If you take medication for AD/HD, how does it affect your writing process?

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[29]   These questions were suggested by the "Interview Questions" (2006) developed by Lesle Lewis, Associate Professor, Landmark College, Putney, VT. Used with the author's permission.

13. How do you feel when you first confront a writing project? Does your response depend on what kind of writing task it is or what the writing situation is?

14. What kinds of writing are you most comfortable with?

15. What kinds of writing are most difficult for you?

16. How do you feel about deadlines? Do they help or hinder your production of writing?

17. Can you talk about your ideas more readily (with more comfort and ease) than you can write about them? Why do you think that is?

18. Do you ever feel that your writing is "blocked"? Do you fear being "blocked"? What does that feel like? What do you do when you're in that situation?

19. Do you ever feel that your skills are not up to the demands of the writing task? Why is that?

20. Are there any rules that you always try to follow when writing? If so, what are they?

21. What kinds of writing techniques do you use when you have to write a paper or report?

22. Do you ever put incomplete thoughts or fragments of ideas on paper before writing the first draft? Why or why not?

23. Do you use an outline of some sort? What other organizational techniques do you use, if any?

24. Do you have trouble sticking to your thesis and/or outline? Why do you think that is? If you don't have this problem, how do you stick to your plan?

25. Does your subject tend to grow and change as you're writing? Why do you think that is? If not, how do you keep your subject from changing? How do you stay focused on your topic?

26. How often do you get to the revision step? Do you need to revise?

27. How do you go about revising your writing? How do you know when your writing does not need revising?

28.   When you are having a hard time writing, what kinds of thoughts run through your head? Do you think negatively about your writing (e.g., "This isn't good enough." "This is too hard. I give up.")?

29.   How conscious are you of your writing process? For example, when you start writing, do you think about what you're going to do first? Or do you immediately begin to write?

30.   What writing strategies worked or didn't work the last time you wrote something?

31.   What metaphor would you use to describe the challenges or problems you have with writing? (For example, "It's like trying to rake leaves when it's really windy."[30])

32.   Can you tell me about an experience you have had that describes the challenges you face when you're writing?

---

[30]   This quote is from a student at Landmark College as reported by Lesle Lewis in her presentation with Sara Glennon, "Invisible Papers, Invisible Challenges: Coaching College Writers with AD/HD," at the College Composition and Communication Conference, Chicago, IL, 24 Mar. 2006.

Appendix I:

Recruiting Poster for Students with AD/HD

Have you been diagnosed with Attention-Deficit/Hyperactivity Disorder (AD/HD)?

Would you like to contribute to research that seeks to learn more about how AD/HD affects the individual's ability to produce writing?

You have the opportunity to participate in a study being conducted by **Barbara Graham Cooper**, Professor of English at Howard Community College and a Ph.D. candidate at the University of Maryland, College Park. Her dissertation is titled *At the Brighter Margins: Teaching Writing to the College Student with Attention Deficit/Hyperactivity Disorder (AD/HD).*

If you participate in this study, you'll be interviewed privately by Professor Cooper. You may also wish to share some samples of the writing you've done in your college classes. *The identity of all participants will be kept strictly confidential.* (There will be a small remuneration to thank you for your time.)

If you're interested, please contact Professor Cooper:

Telephone: **410-772-4851**

Email: **bcooper@howardcc.edu**

Appendix J:

"My Page for English 121"

Assignment 1: *My Page for English 121*

In order to get a better idea of who our audience is in this class, I would like you to try the same exercise that poet Langston Hughes writes about in "Theme for English B":

The instructor said,

Go home and write
a page tonight
And let that page come out of you--
Then, it will be true.

Create a "Page" about yourself for ENGL 121 and "let that page come out of *you.*" Be creative. Your page can contain a poem like Langston Hughes', a collage of things that are important to you, photographs, a drawing, even a brief prose essay, or any combination of these.

We will display your pages on the walls outside my office (ELB 231), so keep in mind that many people other than your classmates may be looking at your page. Be sure that your name is on the front of your page.

Begin your project by reading Hughes' poem, "Theme for English B." (It's on the next page). What do you think the instructor meant when he said that the writing should "come out of you"? Why would it *then* be true?

The student says he is part of his instructor and that his instructor is a part of him. What does he mean? Are we all part of each other? If so, in what way? If not, why not?

Then think about yourself. What *about you* would you like to share with the class? Consider your audience and purpose as you create your "Page."

Theme for English B

Langston Hughes

The instructor said,

Go home and write
a page tonight
And let that page come out of you--
Then, it will be true.

I wonder if it's that simple?
I am twenty-two, colored, born in Winston-Salem.
I went to school there, then Durham, then here
to this college on the hill above Harlem.
I am the only colored student in my class.
The steps from the hill lead down into Harlem,
through a park, then I cross St. Nicholas,
Eighth Avenue, Seventh. and I come to the Y,
the Harlem Branch Y, where I take the elevator
up to my room, sit down, and write this page:

It's not easy to know what is true for you or me
at twenty-two, my age. But I guess I'm what
I feel and see and hear, Harlem, I hear you:
hear you, hear me--we two--you., me, talk on this page.
(I hear New York, too.) Me--who?
Well, I like to eat, sleep, drink, and be in love.
I like to work, read, learn, and understand life.
I like a pipe for a Christmas present,
or records—Bessie, bop, or Bach.
I guess being colored doesn't make me *not* like
the same things other folks like who are other races.
So will my page be colored that I write?
Being me, it will not be white.
But it will be
a part of you, instructor.
You are white--
yet a part of me, as I am a part of you.
That's American.
Sometimes perhaps you don't want to be a part of me.
Nor do I often want to be a part of you.
But we are, that's true!
As I learn from you
I guess you learn from me--
although you're older---and white--
and somewhat more free.

This is my page for English B.

[1949]

Appendix K:

"My Writing Autobiography"

Assignment 2: *My Writing Autobiography*

For this assignment you will write an essay describing and analyzing your writing history. As you know, in an autobiography, the author typically tells about his or her entire life. In your ***writing*** autobiography, you will tell the story of your life as a ***writer.***

Your essay should be about 500 words (about two pages typed, double-spaced). It should have a clear focus (that is, your attitude about your writing history should be clear), be supported with specific details and examples, be interesting, and demonstrate that you have thought carefully about yourself as a writer. Although there is no set pattern for this essay, you probably could cover these points (not necessarily in this order):

- Where do you stand now as a writer?

- How did you get to where you are today? (What events and people shaped and influenced you as a writer?)

- What are your hopes for the future as a writer?

You might use the story of your first memory of writing that you recorded in the freewriting exercise as material for your introduction. You can also use your cartoon drawing as a first step in the invention phase of writing as you think about what you actually do when you write. Use any other strategies that are helpful to you in generating ideas to work with. Be sure to include specific, vivid details whenever possible.

Prepare a draft (your best writing without the benefit of a peer response) of your *My Writing Autobiography* to share with your peer response group. Take the feedback that you receive from your peer response group and revise your essay as your think advisable. Then on the due date, turn in your draft, the notes from the peer response group, and your final draft. I will grade it and return it to you as soon as possible.

The due dates are listed in the schedule. Also record the due dates here:

Draft for Peer Response Group is due on _____

Final Draft is due on _____

Appendix L:

"*Brave New World* and Me"

Essay I: *Brave New World* and Me

According to Martin Green, in Brave New World, Aldous Huxley speaks as a "conscientious moralist" who is genuinely concerned with the fate of the world. Huxley's prophetic vision of a less than desirable, yet distant future was written in 1931. The ruling principles of this Brave New World are "COMMUNITY, IDENTITY, STABILITY." It is a world where every segment of life is managed so that there is no unhappiness, no disease, no old age and no protest. There is also no space for individuality.

What makes Huxley's world of the future possible is science and technology. His novel predicts, among other things, cloning, test tube babies, eradication of disease, managed population growth, and managed food supplies.

It is amazing to think that much of the science needed to create Huxley's predicted world has already become reality for us. Recently, it was announced that a kitten (named Copy Cat) had been successfully cloned. Many of the diseases that plagued humans in the 1930s have been eradicated or nearly so (such as polio, small pox, and measles). We can perform life-saving organ transplants. We can accurately test for genetic diseases. We can perform intrauterine surgery to save the life of an unborn child. We have been to the moon. We regularly travel to outer space. We have instantaneous communication in many forms everywhere on the globe. We can destroy the earth with nuclear weapons. We can watch the brain at work from the inside with nuclear medicine.

How has science and technology affected your life?

Consider both the positive and negatives of this influence. Choose one or more elements of modern science and/or technology that have had a direct influence on you. (I don't expect you to write about *all* of the influences—for that you would need a book length project!)

- Do some innovations trouble you (e.g. cloning or genetic engineering)?
- Do you have fears or hopes or both for the miracles of modern science and technology and for the future?

Write a personal essay clearly presenting your position. Try to be as specific as possible using narrative, details and/or examples to vividly convey your experience and understanding. There is no "right answer" to this essay. Each of us will have a unique response.

Your finished essay should be two to three pages (500-750 words) long. (It may be longer, but it should not be shorter than this.) Bring your draft to the *Peer Response Group* on the date due.

After getting feedback, revise your essay as you see fit and submit the final version on the date due. Please staple your final version on top of the draft you shared with the *Peer Response Group*. Also include any notes you took in the group.

The due dates are listed in the schedule. Also record the due dates here:

Draft for Peer Response Group is due on _____

Final Draft is due on _____

Bibliography

American Academy of Pediatrics. "Clinical Practice Guideline: Diagnosis and Evaluation of the Child with Attention-Deficit/Hyperactivity Disorder." *Pediatrics*. 105 (5 May 2000) 1158-1170.

American Psychiatric Association. *Diagnostic and Statistical Manual of Mental Disorders: Third Edition.* Washington, DC: American Psychiatric Association, 1980.

_____. *Diagnostic and Statistical Manual of Mental Disorders: Third Edition, Revision.* Washington, DC: American Psychiatric Association, 1987.

_____. *Diagnostic and Statistical Manual of Mental Disorders: Fourth Edition, Text Revision.* Washington, DC: American Psychiatric Association, 2000.

_____. "DSM." *American Psychiatric Association Official Website*. 2007. 9 Sept. 2007. www.psych.org/research/dor/dsm.

Baddeley, Alan. "Working Memory: Looking Back and Looking Forward." *Nature Reviews* 4 (Oct. 2003): 829-839.

Baird, Jessica, Joan C. Stevenson and Don C. Williams. "The Evolution of ADHD: A Disorder of Communication?" *The Quarterly Review of Biology* 75 (Mar. 2000) 17-35.

Barber-Fendley, Kimber and Chris Hamel. "A New Visibility: An Argument for Alternative Assistance Writing Programs for Students with Learning Disabilities." *College Composition and Communication* 55:3 (2004): 504-535.

Barkley, Russell A. *ADHD and the Nature of Self-Control.* New York: Guilford, 1997.

_____. "Attention-Deficit Hyperactivity Disorder." *Scientific American* (Sept. 1998): 66-71.

Barkley, Russell A. and Kevin Murphy. "Identifying New Symptoms for Diagnosing ADHD in Adulthood." *National Association for Continuing Education.* Apr. 2006. 11 Nov. 2007. www.naceonline.com/article-identifying-new.php

Bartholomae, David. "The Study of Error." *CCC* 31 (1980): 253-269.

Berlin, James A. "Contemporary Composition: The Major Pedagogical Theories."
        (1982) *Composition in Four Keys*, Eds. Mark Wiley, Barbara Gleason, Louise
        Wetherbee Phelps. Mountain View, CA: Mayfield, 1996. 556-66.

Bernhardt, Stephen A. "Seeing the Text." *CCC* 37 (Feb. 1986): 66-78.

Berthoff, Ann E. "The Intelligent Eye and the Thinking Hand." *Composition in Four
        Keys.* Eds Mark Wiley, Barbara Gleason and Louise Wetherbee Phelps. Mountain
        View, CA: Mayfield, 1996. 40-44.

Biederman, Joseph, et al. "Influence of Gender on Attention Deficit Hyperactivity
        Disorder in Children Referred to a Psychiatric Clinic." *American Journal of
        Psychiatry* 159 (2002) 36-42.

Bitzer, Lloyd F. "The Rhetorical Situation." *Philosophy and Rhetoric* 1 (Winter 1968):
        1-14.

Bizzell, Patricia. *Academic Discourse and Critical Consciousness.* Pittsburgh: U
        Pittsburgh P, 1992.

Bizzell, Patricia. "Cognition, Convention, and Certainty: What We Need to Know about
        Writing." *PRE/TEXT* 3 (Fall 1982): 213-43.

Brand, Alice G. "Healing and the Brain." *Writing and Healing: Toward an Informed
        Practice.* Eds. Charles M. Anderson and Marian M. MacCurdy. Urbana, IL:
        NCTE, 2000. 201-221.

Brand, Susan, Rita Dunn and Fran Greb. "Learning Styles of Students with Attention
        Deficit Hyperactivity Disorder: Who Are They and How Can We Teach Them?"
        Clearing House 75 (May-Jun 2002): 268-73.

Brodkey, Linda. "Writing Permitted in Designated Areas Only." *Writing Permitted in
        Designated Areas Only.* Minneapolis: U of Minnesota P, 1996. 130-149.

Brown, Thomas E., ed. *Attention Deficit Disorder: The Unfocused Mind in Children and
        Adults.* New Haven: Yale University P, 2005.

_____. "DSM IV: ADHD and Executive Function Impairments." *Johns
        Hopkins University Advanced Studies in Medicine* 2 (2002): 910-914.

_____. "Emerging Understandings of Attention-Deficit Disorders and Comorbidities."
        *Attention-Deficit Disorders and Comorbidities in Children, Adolescents, and
        Adults.* ED. Thomas E. Brown. Arlington, VA: American Psychiatric Association
        P, 2000: 1-77.

240

_____. "Executive Functions and Attention Deficit Hyperactivityy Disorder: Implications of Two Conflicting Views." *International Journal of Disability, Development and Education* 53 (Mar. 2006): 35-46.

_____. "Inside the ADD Mind." *Attitude Magazine* (April/May 2006): 20-24.
Brueggemann, Brenda. Email. (4 Feb. 2008).

Brueggemann, Brenda Jo, Linda Feldmeier White, Patricia A. Dunn, Barbara A. Heifferon, and Johnson Cheu. "Becoming Visible: Lessons in Disability." *CCC* 52 (Feb. 2001): 368-98.

Brufee, Kenneth A. "Collaborative Learning and the 'Conversation of Mankind.'" *CE* 46 (Nov. 1984): 635-52.

Carruthers, Mary. *The Book of Memory.* Cambridge: Cambridge UP, 1992.

Castellanos, F. X., et al. "Quantitative Brain Magnetic Resonance Imaging in Attention-Deficit Hyperactivity Disorder." *Archives of General Psychiatry* 53 (1996): 607-16.

Center for Teaching Excellence. "Learning for All: Purposeful Course Design." University of Maryland. College Park, MD. 31 Oct. 2007.

Centers for Disease Control and Prevention (CDC). "Attention Deficit/Hyperactivity Disorder." *Centers for Disease Control and Prevention.* 9 Sept. 2005. 5 Dec. 2007. www.cdc.gov/ncbddd/adhd.htm .

CHADD (Children and Adults with Attention Deficit/Hyperactivity Disorder). "2006 Public Policy Agenda." *National Resource Center on AD/HD.* Oct. 2007. 23 Oct. 2007. www.help4adhd.org .

_____. "VideoCHADD: AD/HD Awareness Day." *CHADD.* Nov. 2007. 19 Nov. 2007 www.CHADD.org.

Childers, Pamela B., Eric H. Hobson, and Joan A. Mullin. *ARTiculating: Teaching Writing in a Visual World.* Portsmouth, NH: Boynton/Cook, 1998.

Clark, Lois, Howard County Special Education and Reading Specialist. Personal Interview. Columbia, MD. 17 Oct. 2007.

Cooper, Barbara Graham. "The AD/HD Student and College Composition: Unlocking the Gate." Conference on College Composition and Communication. San Francisco. 17 Mar. 2005.

Cooper, Marilyn M. "The Ecology of Writing." *College English* 48 (Apr. 1986): 364-75.

Dunn, Patricia A. Email (4 Apr. 2003).

_____. *Learning Re-abled: The Learning Disability Controversy and Composition Studies.* Portsmouth, NH: Boynton/Cook, 1995.

_____. *Talking, Sketching, Moving: Multiple Literacies in the Teaching of Writing.* Portsmouth, NH: Boynton/Cook, 2001.

Dunn, Patricia A. and Kathleen Dunn DeMers. "Reversing Notions of Disability and Accommodation: Embracing Universal Design in Writing Pedagogy and Web Space." *Kairos* 7:1 (2000) 15 Jan. 2008 http://english.ttw.edu/Kairos/7.1.

Eaton, Shevawn and Sharon Wyland. "College Students with Attention Deficit Disorder (ADD): Implications for Learning Assistance Professionals." *Learning Assistance Review* 1 (Fall 1996): 5-22.

Ede, Lisa and Andrea Lunsford. "Audience Addressed Audience Invoked: The Role of Audience in Composition Theory and Pedagogy." *CCC* 35 (May 1984): 155-71.

Elbow, Peter. *Embracing Contraries: Explorations in Learning and Teaching.* New York: Oxford U P, 1986.

Emig, Janet. *The Composing Process of 12th Graders.* Urbana, IL: NCTE, 1971.

Emig, Janet. *The Web of Meaning: Essays on Writing, Teaching, Learning, and Thinking.* Upper Montclair: Boynton/Cook, 1983.

Emig, Janet. "Writing as a Mode of Learning." *CCC* 28 (1977): 122-128.

Faigley, Lester."Competing Theories of Process: A Critique and a Proposal." *CE* 48 (Oct. 1986): 527-42.

Faigley, Lester, et al. *Picturing Texts.* New York: W. W. Norton, 2004.

Faigley, Lester, and Stephen P. Witte. "Analyzing Revision." *CCC* 32 (Dec. 1981): 400-414.

"Fast Facts for Faculty: Universal Design for Learning, Elements of Good Teaching." *The Ohio State University Partnership Grant for Improving the Quality of Education for Students with Disabilities.* 3 Mar. 2008. http://telr.osu.edu/dpg.html.

Fish, Stanley. *Is There a Text in this Class?: The Authority of Interpretive Communities.* Cambridge, MA: Harvard U P, 1980.

Fleming, David. "Can Pictures Be Arguments?" *Argumentation and Advocacy* 33 (Summer 1996): 11-22.

Flower, Linda. "The Construction of Purpose in Writing and Reading." *CE* 50 (Sept. 1988): 528-50.

Flower, Linda. "Writer-Based Prose: A Cognitive Basis for Problems in Writing." *The Writing Teacher's Sourcebook.* Eds. Gary Tate and Edward P. J. Corbett. New York: Oxford UP, 1981. 268-293.

Flower, Linda, and John R. Hayes. "A Cognitive Process Theory of Writing." *CCC* 32 (365-387), 1981.

Flower, Linda et al. "Detection, Diagnosis, and the Strategies of Revision." *CCC* 37 (Feb. 1986): 16-55.

Foer, Joshua. "Remember This." *National Geographic* Nov. 2007: 32-57.

Gander, MacLean and Stuart W. Strothman. *Teaching Writing to Students with Learning Disabilities.* Putney, VT: Landmark College, 2001.

George, Diana. "From Analysis to Design: Visual Communication in the Teaching of Writing." *CCC* 54 (Sept. 2002): 11-39.

Gere, Ann Ruggles. "Whose Voice is It Anyway?" *Writing and Healing.* Eds. Charles M. Anderson and Marian M. MacCurdy. Urbana, IL: NCTE, 2000. 25-33.

Gleason, Barbara. "Putting It Together: The Art of Composition." *Composition in Four Keys.* Eds. Mark Wiley, Barbara Gleason and Louise Wetherbee Phelps. Mountain View, CA: Mayfield, 1996. 129-39.

Glennon, Sara. *Effective Methods and Innovative Strategies for Writing Instruction.* Workshop. Landmark College, Putney VT. July 24-28, 2000.

_____. Email. (22 March 2005).

Glennon, Sara and Jill Hinckley. "Dynamic Classrooms for Dynamic Learners: Guiding the Potential of Students with ADHD." Conference on College Composition and Communication. New Orleans. 2 Apr. 2008.

Glennon, Sara and Lesle Lewis. "Invisible Papers, Invisible Challenges: Coaching College Writers with AD/HD." Conference on College Composition and Communication. Chicago. 24 Mar. 2006.

Goffman, Erving. *Frame Analysis.* Boston: Northeastern U P, 1986.

Groening, Matt. *The Simpsons Beyond Forever!* Ed. Jesse L. McCann. New York:
    Perennial, 2002.

Hairston, Maxine. "Diversity, Ideology, and Teaching Writing." *CCC* 43 (May 1992):
    179-93.

Hallowell, Edward and John J. Ratey. *Delivered from Distraction.* New York: Ballantine,
    2005.

_____. *Driven to Distraction.* New York: Pantheon, 1994.

Harris, Joseph. "The Idea of Community in the Study of Writing." *CCC* 40 (Feb. 1989):
    11-22.

Hawisher, Gail. "Research and Recommendations for Computers and Composition."
    Composition in Four Keys. Eds. Mark Wiley, Barbara Gleason and Louise
    Wetherbee Phelps. Mountain View, CA: Mayfield, 1996. 337-53.

Heiligenstein, Eric, et al. "Psychological and Academic Functioning in College Students
    With Attention Deficit Hyperactivity Disorder." *Journal of American College
    Health* 44.4 (1999): 181-85.

Hickman, Zach. "Ensuring the Intellectual Access to the Process: The Coalition Between
    Learning Disabled Students and Project-based Writing." Conference on College
    Composition and Communication. Chicago. 25 March 2006.

Hinckley, Jill and Peg Alden. "Women with Attentional Issues: Success in College
    Learning." *Journal of Developmental Education* 29.1 (2005): 10-18.

Horner, Bruce. "Rethinking the 'Sociality' of Error: Teaching Editing as Negotiation."
    Rhetoric Review 11 (1992): 172-99.

"International Consensus Statement on ADHD, January 2002." *CHADD* 2002. 14 Nov.
    2004. <www.chadd.org/webpage> .

James, William. "Attention." Chapter 11. *Talks to Teachers on Psychology (1892).* New
    York: Holt, 1923. 21 May 2006. < www.des.emory.edu/mfp/tt11.html >.

Kinneavy, James L. "Kairos: A Neglected Concept in Classical Rhetoric." *Composition
    in Four Keys.* Eds. Mark Wiley, Barbara Gleason, and Louise Wetherbee Phelps.
    Mountain View, CA: Mayfield, 1996. 211-24.

Kirk, Stuart A. and Herb Kutchins. *The Selling of DSM*: *The Rhetoric of Science in
    Psychiatry.* New York: Aldine De Gruyter, 1992.

Kress, Gunther and Theo van Leeuwen. *Reading Images: The Grammar of Visual Design.* New York: Routledge, 1996.

Larson, Richard L. "Teaching Before We Judge: Planning Assignments in Composition." (1967). *The Writing Teacher's Sourcebook.* Eds. Gary Tate and Edward P. J. Corbett. New York: Oxford U P, 1981. 208-19.

Lee, Christopher and Rosemary Jackson. *Faking It: A Look into the Mind of a Creative Learner.* Portsmouth, NH: Boynton/Cook, 1992.

Levine, Mel. *Educational Care: A System for Understanding and Helping Children with Learning Problems at Home and in School.* Cambridge, MA: Educators Publishing Service, 1994.

_____. *A Mind at a Time.* New York: Simon & Schuster, 2002.

_____. *The Myth of Laziness.* New York: Simon & Schuster, 2003.

Lewiecki-Wilson, Cynthia and Brenda Jo Brueggemann, eds. *Disability and the Teaching of Writing: A Critical Sourcebook.* Boston: Bedford/St. Martin's, 2008.

Lindemann, Erika. *A Rhetoric for Writing Teachers.* 3rd ed. New York: Oxford U P, 1995.

Lu, Min-Zhan. "From Silence to Words: Writing as Struggle." *CE* 49 (Apr. 1987): 437-48.

McAlexander, Patricia J. "Using Principles of Universal Design in College Composition Courses." *Basic Writing E-Journal* 5:1 (2004).

MacArthur, Charles. "Insights on Writing Instruction from a Cognitive Science Perspective: Cognitive Strategy Instruction." Conference on College Composition and Communication. New Orleans. 3 Apr. 2008.

McCarthy, Lucille. "A Psychiatrist Using *DSM-III*: The Influence of a Charter Document in Psychiatry." In *Textual Dynamics of the Professions.* Eds. Charles Brazerman and James Paradis. Madison, WI: U of Wisconsin P, 1991: 358-78.

McCarthy, Lucille and Joan Page Gerring. "Revising Psychiatry's Charter Document DSM IV." *Written Communication* 11.2 (April 1994): 147-92.

McQuade, Donald, and Christine McQuade. *Seeing & Writing.* Boston: Bedford/St. Martin's, 2000.

Minnema, Lindsay. "Will Kids Outgrow ADHD?" *Washington Post* 27 Nov. 2007: F8.

Minskoff, Esther and David Allsopp. *Academic Success Strategies for Adolescents with Learning Disabilities and ADHD.* Baltimore, MD: Brookes P, 2003.

Mitchell, W. J. T. *Iconology, Image, Text, Ideology.* Chicago: U of Chicago P, 1987.

Mooney, Jonathan and David Cole. *Learning Outside the Lines.* New York: Simon & Schuster, 2000.

Murray, Donald M. "Write Before Writing." (1978) *The Writing Teacher's Sourcebook.* Eds. Gary Tate and Edward P. J. Corbett. New York: Oxford U P, 1981. 170-79.

Murray, Donald M. *A Writer Teaches Writing.* 2nd ed. Boston: Houghton Mifflin, 1985.

NCTE (National Council of Teachers of English). Conference on College Composition and Communication: Conventions and Meetings. *CCCC Online 2008 Program.* 2008. 12 Jan. 2008. www.ncte.org/cccc/program

NCTE (National Council of Teachers of English). Conference on College Composition and Communication: Position Statement. *A Policy on Disability in CCCC.* Nov. 2006. 13 Jan. 2008. www.ncte.org/cccc/resources/positions/126411.htm

National Institute of Mental Health. "Brain Matures a Few Years Later in ADHD, But Follows Normal Pattern." *Science News.* 12 Nov. 2007. 27 Nov. 2007. www.nimh.nih.gov/science-news/2007

_____. "Global Use of ADHD Medications Rises Dramatically." *Science Update.* 6 Mar. 2007. 11 Nov. 2007. www.himh.nih.gov/science-news/2007 .

Ong, Walter. *Orality and Literacy: The Technologizing of the Word.* London: Routledge, (1982) 1999.

Ong, Walter. "The Writer's Audience is Always a Fiction." *PLMA* 90 (Jan. 1975): 9-21.

Palmer, Parker. *To Know as We are Known: Education as a Spiritual Journey.* San Francisco: Harper, 1993.

Pastor, Patricia N. and Cynthia A. Reuben. "Racial and Ethnic Differences in ADHD and LD in Young School Children: Parental Reports in the National Health Interview Survey." *Public Health Reports* 120 (July-August 2005): 383-392.

Perl, Sondra. "Understanding Composing." *The Writing Teacher's Sourcebook, 3rd Ed.* Eds. Gary Tate, Edward P. J. Corbett, and Nancy Myers. New York: Oxford U P, 1994. 149-54.

Porter, James E. "Intertextuality and the Discourse Community." *Composition in Four Keys.* Eds. Mark Wiley, Barbara Gleason and Louise Wetherbee Phelps. ` Mountain View, CA: Mayfield, 1996. 225-33.

Pratt, Mary Louise. "Arts of the Contact Zone." *Profession* 91 (1991): 33-40.

Quintana, et al. "Comparison of a Standard Psychiatric Evaluation to Rating Scales and EEG in the Differential Diagnosis of AD/HD." *Psychiatry Research* 152 (2007): 211-222.

Quintilian. *On the Teaching of Speaking and Writing: Translations from Books One, Two, and Ten of the* <u>*Institutio Oratoria*</u>*.* Ed. James J. Murphy. Carbondale and Edwardsville, IL: Southern Illinois U P, 1987.

Rafalovich, Adam. *Framing ADHD Children.* Lanham, MD: Lexington Books, 2004.

Ratey, John J. *A User's Guide to the Brain.* New York: Pantheon, 2001.

Re, Anna Maria, Martina Pedron, and Cesare Cornoldi. "Expressive Writing Difficulties in Children Described as Exhibiting ADHD Symptoms." *Journal of Learning Disabilities* 40.3 (May-June 2007): 244-64.

Reis, Sally M., Joan M. McGuire and Terry W. Neu. "Compensation Strategies Used by High-Ability Students with Learning Disabilities who Succeed in College." *Gifted Child Quarterly* 44 (2000): 123-134.

Rimm, Sylvia. *Why Bright Kids Get Poor Grades.* New York: Three Rivers Press, 1995.

Robelia, Beth. "Tips for Working with ADHD Students of All Ages." *Journal of Experiential Education* 20 (May 1997): 51-53.

Rose, Mike. *Possible Lives: The Promise of Public Education in America.* New York: Penguin, 1995.

_____. "Rigid Rules, Inflexible Plans and the Stifling of Language: A Cognitivist Analysis of Writer's Block." *CCC* Dec. 1980.

_____. *Writer's Block: The Cognitive Dimension.* Carbondale and Edwardsville, IL: Southern Illinois U P, 1984.

Schilb, John. *Between the Lines: Relating Composition Theory and Literary Theory.* Portsmouth, NH: Boynton/Cook, 1996.

Schnapp, Linda, Assistant Director of Project Access, Howard Community College. Personal Interview. Columbia, MD. 16 Feb. 2007.

Scholes, Robert. *Textual Power.* New Haven, CT: Yale U P, 1985.

Shaughnessy, Mina. *Errors and Expectations: A Guide for the Teacher of Basic Writing.* New York: Oxford UP, 1977.

Sontag, Susan. *Illness as Metaphor* and *AIDS and Its Metaphors.* New York: Farrar, Strauss & Giroux, 1990.

Saland, Spencer J., et al. "Éducational Interventions for Students with ADD." *Intervention in School and Clinic* 38 (May 2003): 280-88.

Schwartz, Evan I. "Interrupt-Driven" *Wired.* June 1994. 1 Dec. 2007. http://www.wired.com/wired/archive/2.06/interrupt-driven.html

Semrud-Clikeman, Margaret. "New Developments in Our Understanding of Executive Functions in AD/HD." CHADD 20th Anniversary Hall of Fame Conference. Washington, DC. 8 Nov. 2007.

Stefanatos, Gerry and Ida Sue Baron. "Attention-Deficit/Hyperactivity Disorder: A Neuropsychological Perspective Towards DSM V." *Neuropsychology Review* 17 (2007) 5-38.

Summer, Caroline. *Careless Errors: Teaching Expository Writing to Postsecondary Students with Learning Disabilities or Attention Deficit Disorder.* Washington, DC: U. S. Department of Education, 1997.

Szegedy-Masak, Marianne. "Driven to Distraction." *U. S. News & World Report.* 26 April 2004: 52-62.

Teach AD/HD. "Focusing on Instructional Choices." Teach AD/HD. 20 Nov. 2007. www.research.aboutkidshealth.ca/teachadhd/teachingadhd .

Vipond, Douglas. *Writing and Psychology.* Westport, CT: Praeger, 1993.

Volkow, Nora. Director, National Institute on Drug Abuse (NIMH). "How NIMH Has Addressed AD/HD: Past Accomplishments and Future Plans?" CHADD 20th Anniversary Hall of Fame Conference. Washington, DC. 9 Nov. 2008.

Watterson, Bill. *The Complete Calvin and Hobbes.* Vol. III. Kansas City: Andrews Mc Meel P, 2005.

Weiss, Lynn. *A.D.D. and Creativity.* Dallas, TX: Taylor, 1997.

Wender, Paul. *The Hyperactive Child, Adolescent, and Adult: Attention Deficit Disorder Through the Lifespan.* New York: Oxford U P, 1987.

_____. *Attention Deficit Hyperactivity Disorder in Adults.* New York: Oxford U P, 1995.

White, Linda Feldmeier. "Learning Disability, Pedagogies, and Public Discourse." *CCC* 53 (June 2002): 705-738.

Zametkin, Alan J., et al. "Cerebral Glucose Metabolism in Adults with Hyperactivity of Childhood Onset." *New England Journal of Medicine* 323 (1990): 1361-66.

_____. "Where Have We Come in 70 Years?" CHADD 20th Anniversary Hall of Fame Conference. Washington, DC. 9 Nov. 2007.