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THE NON-GRAMMARIAN'S GUIDE TO FIXING STUDENT GRAMMAR AND

PUNCTUATION ERRORS

by

Amy K. Brumfield

A dissertation

submitted in partial fulfillment

of the requirements for the degree of

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Comments? Questions? Want to collaborate?

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To Troy,

who loves me for the grammatical freak that I am.

I promise to write a book that you want to read.

Eventually.

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Dissertation Abstract--Idaho State University (2018)

Nearly all first-year composition learning objectives state that writing instructors will help each student to improve their knowledge of written conventions, like punctuation, spelling, and grammar. Historically, it has been difficult to achieve significant learning gains in writing mechanics. This teaching failure disproportionately damages the most linguistically, economically, racially, and culturally diverse students, who have the most documented deficits in this vital area, but all students benefit from strengthening this area.

This dissertation asserts that if first-year composition instructors provide explicit sentence-level instruction that focuses on the clausal structure instead of the marks or the mistakes, their students will be able to compose more clear, concise sentences that meet the grammatical and punctuation conventions of Standard Edited American English. To strategically teach sentence-level structure, this dissertation delineates six critical sentence-building skills that each student can develop using simple organizational principles that leverage their vast, innate grammatical knowledge. To develop each skill, this dissertation will provide four new pedagogical tools:

1. a formal metacognitive framework that describes the ranked structure of the written language using an accessible, consistent terminology

2. a constituent map that students can use to edit their writing in order to test the organization, readability, and conventionality of each sentence

3. visual punctuation resources that help students to choose the conventional mark that creates the right rhetorical impact

4. a formative grading system to help identify the mistakes that persist and guide students to get the right help to prevent mistakes in future work

The tools are designed so that wide range of students can use them to edit their existing writing and learn their own idiosyncratic writing strengths and weaknesses. With these resources, students can leverage their linguistic strength to gain the mechanical sophistication that they need for college-level writing. With repeated practice, students can eventually make these skills automatic, leaving more cognitive room for other writing concerns. These resources are developed with principles from composition theory, functional linguistics, cognitive learning theory, second language acquisition, and others.

CHAPTER 1: THE INTRODUCTION

First-year composition (FYC) instructors are expected to help their students to develop their knowledge of Standard Edited Academic English's (SEAE) written conventions, like punctuation, citation material, and spelling. The *WPA Outcomes Statement for First-Year Composition (3.0)* (*Outcomes*) and the *Framework for Success in Postsecondary Writing* (*Framework*) recommend developing these habits of mind, and most FYC courses have already adopted this as a learning objective. While the written conventions are finite, there are infinite ways to misspell, mispunctuate, and misalign sentences that all misdirect the reader and damage the writer/reader relationship. This range makes it difficult to effectively develop the students' knowledge of written conventions, particularly when the student group enters with a broad array of writing proficiency. Nearly every student makes some kind of mechanical mistake, but they don't all make the same mistakes or even the same mistakes every time. Instructors often rely upon grammar rules and editing lists to help students to catch or correct mistakes, but there are so many ways to damage a sentence that no set of rules or suggestions can cover them all. By focusing on an infinite range of likely mistakes made by a wide range of students with differing abilities, the teaching challenge can seem so overwhelming that instructors may logically choose to focus on more achievable objectives instead.

This dissertation provides a different approach. It moves the pedagogy away from the punctuation and grammar mistakes and towards the clause and the overall sentence composition. Cognitive learning theory asserts that teaching must connect to a learner's prior knowledge in order for new knowledge to be retained and transferred (Ambrose et al. 15). A typical FYC student's knowledge of writing mechanics is often unreliable and

eccentric, which makes that knowledge difficult to access and expand, especially as a group.

In contrast, students have a rich, elaborate, and innate knowledge of the clausal structure of their native language, even if it isn't an explicit knowledge yet. Linguist Harvey A. Daniels describes how humans have evolved to learn their native language's patterns "swiftly, efficiently, and largely without instruction" (4). As linguists David Butt et al. explain, the clause is the fundamental meaning unit of every known language, including English (50). While the clause may contain many complex words, the clausal pattern is actually quite simple. It is so simple that this learning system will recognize just two different kinds of clauses (essential and modifying) because that is enough to adequately understand how the punctuation conventions are employed.

As complex as the punctuation system may seem if it is described by grammarians, it is actually based on a few basic organizational components that are easy to understand if the resources stop focusing directly on the marks and focus on the clausal composition of the sentence instead. In other words, a FYC instructor can help students to leverage the strongest parts of their writing knowledge to find and then fill in their knowledge gaps about the conventions that are unique to writing.

It's All About Control

To be clear, I am not arguing that teaching punctuation and other mechanical conventions is more important than areas that have typically been considered higher order concerns. I agree with *Outcomes* that students must also develop rhetorical knowledge; critical thinking, reading, and composing skills; and knowledge of multiple drafting techniques (2-3). Instead, I argue that explicitly and effectively teaching mechanical

skills facilitates the mastery of writing's higher order concerns. All writing skills develop concurrently because writing is always multimodal, like semiotician Gunther Kress argues (28). Some writers use some modes far more intuitively and unreliably, but they are always using different modes of communication together. To apply multimodal concepts to the desired outcomes listed in *Outcomes,* a writer could more consistently "use key rhetorical concepts" if that writer understands which visual symbols will create their desired meaning, and a writer can more effectively "communicat[e] in a variety of rhetorical contexts" if the writer can perceive and mimic those contexts' rhetorical conventions, like punctuation strategies (2-3). Ultimately, a student will learn more about punctuation and grammar regardless of whether or not it is explicitly taught, but implicit teaching means that students may or may not make effective inferences.

The primary advantage of explicit education, as graphic artist Donis Dondis explains, is reliability (37). Essentially, an intuitive writer can create a text as complex as a composer with a formal metacognition, but the intuitive writer cannot explain its construction, test its accuracy, or predict its outcome. A skilled composer should be able to fully explain their rhetorical choices and test its efficacy by comparing it to guidelines and examples. Assured that their text meets the generic conventions, a composer will have a greater surety that their text will transmit its intended message. Granted, increased knowledge of the writer cannot guarantee that a reader will accept the text as intended; it simply allows composers the greatest chance for that control (Dondis 20).

The Implicit Biases of a Flawed System

This dissertation will argue that the lack of effective mechanical writing skills pedagogy reinforces, to use Asao Inoue's term, the "structural and systemic racism" that

is pervasive in higher education (58). Inoue explains that white students consistently outperform other groups on standardized testing, which show that the most linguistically, racially, economically, and culturally diverse students have the largest mechanical writing skill deficiencies (58). Standardized testing limits access to colleges and universities, privileging the privileged at the expense of others. As Inoue asserts,

> A good way to subordinate nonwhite groups…generally would be to maintain the EPT [English Placement Test and other standardized testing that focus on conventional fluency with the dominant discourse] as a placement and entrance writing assessment, since doing so would in effective keep more students of color out of college and allow more (relatively speaking) white students in. (58)

While the standardized tests are not explicitly racist, they are racist by function, segregating students by fluency in a privileged written discourse.

Without diminishing the needs of many traditionally disadvantaged groups, the statistics show that all students are struggling to achieve proficiency in this area. American students show massive learning deficits in reading and writing, particularly in using SEAE conventions. For example, the SAT's Writing and Language Test uses 45% of its questions to test a student's knowledge of written conventions as a key indicator of "college and career readiness" (College Board, "Redesigned SAT" 59, 62). According to the most recent National Assessment of Educational Progress report, only 37% of American seniors show college-ready proficiency in reading and only 27% show college-ready proficiency in writing ("The Nation's Report Card").

The Implicit Biases of a Human System

The standardized tests are part of the problem, but the human beings who created the test and the human beings who continually evaluate student writing are a much bigger part of the flawed system. Like neuroscientist David Eagleman explains, the human existence is possible because of the brain's ability to perceive, store, retrieve, and compare patterns of all kinds. In most cases, this neurologically embedded experience serves humans well, allowing most of decisions to be unconscious, efficient, and productive (5). In some cases, the automatic neurological processing works against people and their express ethical ideals. All human beings have implicit biases or biases that are running in the subconscious and outside of conscious scrutiny (60). Biases are not just opinions; biases are fully embodied neurological patterns that can and usually do launch automatically.

The brain's pattern recognition system says that people will prefer patterns that are like their own (which psychologists call *implicit egotism*) because those patterns are the easiest to recognize (Eagleman 62). So, a student who writes in a preferred dialect will naturally trigger more acceptance and less dissonance than one who writes in a distant dialect. For example, an unusual combination of words may trigger an implicit bias against international, Black, or Hispanic students, while a poorly structured sentence may trigger implicit biases against students with different literacy and economic backgrounds. An instructor must continually interrogate and guard against those biases, particularly since the university system assesses incoming students, knows many of their writing weaknesses, and still welcomes them (and their tuition.)

I agree with Inoue's persuasive argument that college writing instructors should deeply consider large-scale and classroom assessment measures, and I extend his argument to say that we should also change our teaching strategies to directly address this imbalance. It is not racist to expect a well-structured sentence that uses conventional punctuation, even though it may very well be racist to expect that a student can write such sentences when they begin college. A conventional sentence performs important biological functions. While modern composition instruction generally considers punctuation and other mechanical conventions to be a surface-level writing trait, they are actually an essential part of the embodied reading process. Conventional punctuation allows the reader to read far more efficiently while getting a more consistent message. Each societally shared symbol in a visual system is rhetorical. If a writer chooses unconventional marks or creates dysfunctional linguistic frames, the biological reading process is exponentially slower and more unstable. Unconventional structural choices degrade the semiotic potential of the text as they damage the reader/writer relationship.

The Glass Half-Full Perspective

To put it more positively, it is far easier and far more beneficial to teach students to build functional, conventional sentences than it is to train a world full of professional readers to overcome every implicit bias and their biological structure in order to accept flawed sentences. A FYC instructor can remedy a small part of the racial and economic imbalances in this imperfect system by improving a student's writing mechanics, writing's most extensively tested measure for college and career success. The existing pedagogy was created long ago, and composition theory's many advances suggest that

we reconsider the pedagogical materials and overall approach of mechanical writing skills. This dissertation will offer a strategic and comprehensive way to do that.

Conventional SEAE sentences generally have the same components, like Figure 1 shows. First, each sentence has a clause that explains an essential process of who did what. Second, if the author wants to add to or limit that process, any modifications are enclosed in

Fig. 1 The compositional elements of an SEAE-approved sentence

the same sentence. Last, conventional punctuation actively helps to create the meaning of the text, distinguishing clausal boundaries and establishing meaningful clausal relationships.

As with all relationships, the distinct connections are meaningful and rhetorically powerful. If a writer wants to restrict a reader to see two clauses as two separate ideas, then punctuation marks separate them, and the specific mark shows what kind of clauses are being related to one another. If a writer wants to restrict the reader to consider that multiple clauses are expressing one elaborate idea, then the writer uses just space to connect them. These organizational conventions and symbols are not simply habitual or disciplinary; they are rhetorical and cognitive. By using the same societally-shared symbols in the same ways, the writer can be more assured of transmitting a consistent

message. Because reading is an embodied process, conventional organization and punctuation allow the reader to read much faster and easier, giving the writer the greatest chance for success.

Critical Skills and Resources

This dissertation asserts that if FYC instructors provide explicit sentence-level instruction that focuses on the clausal structure, their students will be able to consistently write more sentences that meet the grammatical and punctuation conventions of SEAE. To strategically teach sentence-level structure, this dissertation delineates six critical sentence-building skills that each student needs to develop (see Fig. 2.) To develop each skill, this dissertation will provide four new pedagogical tools. The tools are designed so that students can use them to edit their existing writing, learning their own idiosyncratic writing strengths and weaknesses. With these resources, students can leverage their linguistic strength to gain the mechanical sophistication that they need for

CRITICAL SENTENCE-BUILDING SKILLS

1 FIND THE CLAUSES
Clauses are grammatically complete groups of signs. To know if you found the right clausal boundaries, hide it and look at the remaining words. They should sound grammatical and complete.

2 IDENTIFY THE CONSTITUENTS
Each clause may have four different constituents that perform different functions. Use the constituent map to help you see what constituents you have. If the constituents are hard to find, the sentence is hard to read. Consider rewriting it!

3 ESSENTIAL OR MODIFYING CLAUSE?
An **essential** clause has a subject group, verbal process group, and doesn't start with a conjunction/question group.
A **modifying** clause has a no verbal process group or starts with a conjunction/question group.

4 RESTRICTIVE OR NON-RESTRICTIVE?
Restrictive: Two clauses that give one elaborate idea. No punctuation marks separate them.
Non-Restrictive: Two clauses that give two separate ideas. Separate with punctuation marks.

5 GATHER THE PROCESS + ALL MODIFICATIONS
Each sentence should contain one essential clause and all its modifications. Look at how the clauses are related to see if they should stay in one sentence or move to another.

6 USE PUNCTUATION TO SHOW CLAUSAL RELATIONSHIPS
Choose conventional punctuation strategies by using the visual resources. Every mark and space has meaning. Choose the right one!

by Amy Brumfield

Fig. 2 The required skills to build a conventional sentence

college-level writing. With repeated practice, they can eventually make these skills automatic, leaving more cognitive room for other writing concerns.

The four distinct pedagogical resources work together to provide writing instructors with a comprehensive way to approach the teaching of writing conventions. Here is a short description of each:

Resource 1: Gaining a Formal Metacognition of the Written Language

The first set of pedagogical resources draws heavily on linguist M.A.K. Halliday's functional grammar concepts and his teaching techniques. The instruction defines each rank of language and shows how punctuated letters create different conventional meanings within each rank. While some of the terminology and the approach are new, this section is aimed at accessing, clarifying, and expanding on a student's prior knowledge about the language and the writing system, like composition scholars Kathleen Yancey, Liane Robertson, and Kara Taczak recommend (5). Drawing on concepts from cognitive learning theory and second language acquisition, this resource specifically aims to change a writing instructor's vast implicit knowledge about their language into explicit knowledge, define a shared vocabulary, and explain the foundational principles behind the rest of the resources.

Resource 2: Mapping the Constituents

The second pedagogical resource introduces the constituent map (see Fig. 3). This resource has students analyze their existing writing by mapping a rough draft. The draft is mapped by finding the individual constituents in each sentence and writing them into the map in the order that they would be read, left to right and line by line. The map is a

heavily adapted version of a teaching strategy that Halliday uses throughout *Introduction to Functional Grammar*.

Rather than describe how the map is filled out (which will be discussed in a later chapter,) I will just provide the immediate benefits to using such a drafting technique. First, mapping the sentence elements helps students to see that language is uses a

Mapping the Constituents

Punctuation marks don't separate constituents in the same clause, but they often separate one clause from another.

Clause	Conjunction or Question Group	Subject Group	Verbal Process Group	Objects and Circumstances Group	M or E	Mark
1				At its simplest	M	,
2		the English language	is	just a repeating series of these constituents	E	.
3	Because	there	are	many groups of words in each utterance	M	,
4		the reader	must decide	what words work together to make meaning	E	.
5		The punctuation	can help make	this visually apparent	E	.

Fig. 3 A sample of mapped constituents

highly patterned structure so that people can use a unique and infinite variety and combination of words while still making sense to another person. Second, the map helps writers to find the clausal boundaries, a task which is often difficult for many students and which is required for most punctuation placement. With a little more guidance and resources, writers can easily determine which clauses contain all the grammatically essential pieces to transmit a complete message and which are only capable of modifying another clause.

Ultimately, this process improves the grammaticality of the writing in several ways. First, it helps writers to choose conventional punctuation and to remove excess punctuation. More importantly, though, the map makes the writer's linguistic relationships apparent, so that they can see how the reader will experience their writing, at least from a structural point of view. The reading brain is always looking for linguistic relationships or how the words are related to one another. To borrow a common adage,

readers read each sentence in the hopes of finding out who (the subject) did what (the verb) to whom (the object). The easier it is for the writer to find that essential pattern, the easier the reader can find it, too.

Mapping the sentence elements helps writers to realize that they often create incredibly complex, mangled, incomplete, or just plain strange sentences that are at least as difficult for the writer to map as they are difficult for the reader to read. This system purposefully does not aim to make students into amazing grammarians who can block out incredibly complex sentences. Instead, it invites them to see the comprehension challenges that they are creating for their reader and determine if their rhetorical goals are likely to be obtained that way. For most difficult-to-map sentences, writers are encouraged to simply rewrite their ideas into a more coherent pattern, rather than spending hours dazzling people with their diagnostic brilliance.

Mapping the sentence elements also allows the instructor to make other writing concepts apparent, like looking at the column of subject groups to see if the writing is using a consistent point of view or if a paragraph has a consistent focus. With a shared vocabulary and a textual road map, it is far easier to help students see where their writing can be clarified. Many students do not yet have the editing skills to edit an entire essay all at once. The map allows them to break the essay into manageable, editable pieces.

Resource 3: The Visual Punctuation Resources

When writers can determine the boundaries, kind, and combination of their clauses, writers can use a highly simplified and visual set of resources to choose the punctuation that creates the right rhetorical relationship (see a sample in Fig. 4). With relatively little grammar terminology, the writer can choose conventional marks for each clausal combination.
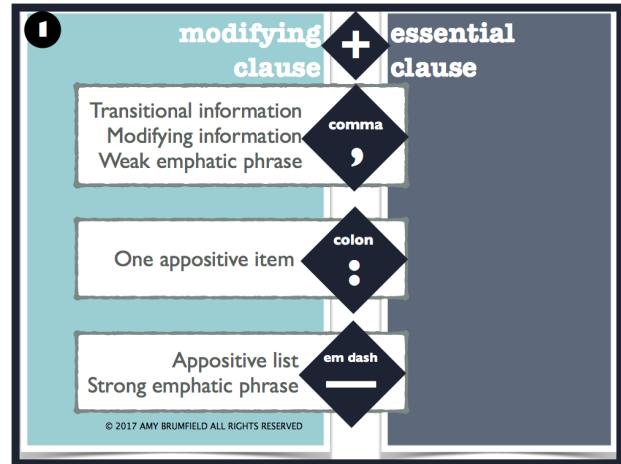
Fig. 4 A sample of punctuation resources

Resource 4: The Marking System

The last pedagogical resource that this dissertation will provide is a simplified, limited, illustrative marking system (SLIM) that can be used to help students see the grammar and punctuation errors that persisted into their final drafts. SLIM simplifies marking by using just four basic categories that students can easily repair (see Fig. 5). It limits the amount of marking that an instructor must do by offering simple explanations and limiting the number of mistakes that an instructor looks for. It also limits the damage to a student's grade by setting a maximum quota of errors that can be counted against a student's grade, making it more equitable for struggling students. SLIM is illustrative because it shows instructor and student alike what kind of errors the students make, how dense those errors are, and what campus resources exist to help the student eliminate them in future writing.

COMPREHENSION PROBLEMS	EXPLANATION	COMMON TYPES	WHAT SHOULD YOU DO IF YOU HAVE A LOT OF THESE PROBLEMS?
GRAMMAR g g	Words are not in the right order or form	• Missing or extra words • Using the wrong word • Misspelled words • Subject/verb agreement (Mary run today.) • Article/noun agreement (A girls played.)	Read more carefully. If that doesn't catch your problems, then visit the writing lab and ask them to help you with your grammar. Choose a writing tutor that specializes in ESL.
SHOULD BE TOGETHER > <	Extra punctuation: One meaningful group is broken into two ungrammatical pieces	• Extra apostrophe • Punctuation breaks one big group of words into two ungrammatical chunks	You could use some help organizing your writing into grammatical groups and using punctuation to help the readers to see the groups. Separation problems are really hard to solve on your own, but a writing tutor can help you diagnose your repetitive mistakes and see how to fix them in the future.
SHOULD BE SEPARATED < >	Missing punctuation: Two meaningful groups are combined into one group, making it difficult to read or changing the meaning	• Missing apostrophe • Two separate ideas that are written as one big chunk of words	Ask them to help you to see where the clauses start and stop, especially looking for your repetitive errors and their solutions.
RIGHT PLACE, WRONG TOOL ^ ^	The punctuation is in the right place, but the wrong mark/combination of marks was chosen	• Sentence fragment • Run-on sentence • Book title in the wrong font	You have a good grasp of language structure, but you need to refine your punctuation choices. See a writing guide or writing tutor for help.

Fig. 5 The SLIM System

Chapter Outlines

These resources are the result of eight years of my experimentation, but none of the ideas are fully my own. All of them are simply adaptations of earlier scholarship, or as Elizabeth Wardle describes it, "creative repurposing for expansive learning" (qtd. in Yancey et al. 9). Truly, these ideas are the result of *positive transfer*, which Earl C. Butterfield and Gregory Nelson define as the ability to effectively use existing knowledge in novel environments (5). As I asked questions about punctuation, many other fields provided different lenses that helped me to find this set of answers.

To show how these ideas developed, the dissertation will provide the following chapters: Chapter Two will define why the explicit teaching of grammar and punctuation is such a controversial topic and define the terms of the ongoing debate that prompted

this research question. Then, it will examine the current state of composition studies today, which views academic writing as a small piece of a much larger human ecology.

Chapter Three will examine the historical movements that created the composition's current relationship with punctuation. Punctuation used to be viewed as an essential rhetorical tool of a disciplined scholar, but that role was lost as the world raced to gain ubiquitous literacy. Punctuation was gradually defined as a lower order, mechanical skill that can be taught primarily through editing checklists and grammar rules, as composition studies developed and sought other more political aims.

Chapter Four will define the exigence of this dissertation by examining how many students are in need of sentence-building skills by studying college placement data. Standardized test results show that many students have significant learning deficits in this area, particularly students of diverse linguistic, economic, and racial backgrounds. It challenges the current assumption that punctuation can be taught implicitly through extensive reading and editing.

Chapter Five explains this work's multidisciplinary foundation that includes cognitive learning theory, second language acquisition, and functional linguistics. All three recommend shifting away from a direct focus on the text to focusing on the learner instead. Writing habits are all embodied, drawing on the learner's prior knowledge of spoken language which can help and interfere with the acquisition of SEAE. By seeing how the learner interacts with the texts, the instructor can see new ways to develop better writing habits.

Chapter Six is designed as a resource for instructors. It introduces the four main pedagogical resources of this dissertation in depth: seeing the overall language structure,

the constituent map, the punctuation resources, and the SLIM marking system. It gives a deeper and more intricate explanation of the language and the teaching resources than a student may need. It is designed to help an instructor to teach the next section with confidence.

Chapter Seven provides the pedagogical application of this material, including the ways to introduce all the pedagogical resources to students and to help them test their results.

Chapter Eight provides the initial results of teaching with this system. While more rigorous testing is needed, my initial results show that students can understand this system, employ its resources, and generally edit their way to more conventional sentences. I offer wisdom-of-practice results, offering advice on what works and definitely does not work. The rest of the chapter outlines the future testing before offering a conclusion.

CHAPTER 2: ENTERING THE DEBATE

Setting the Terms of the Debate

Traditionally, a dissertation would start with a chapter on its exigence and then offer a literature review. This dissertation, though, will embed the exigence into its literature review because composition studies' historical development created the exigence. Essentially, I will argue that FYC's inability to systematically teach and thus substantially improve a student's mechanical skills is a racial and economic class problem, not just a pedagogical one. Such a charge deserves careful disciplinary framing. It is important to know where the field stands now (Chapter 2) and how it developed (Chapter 3) in order to understand why there is such a large and immediate need for explicit mechanical instruction, especially and specifically in disadvantaged population groups (Chapter 4).

This dissertation will argue that first-year composition (FYC) students can and should be explicitly taught and given multiple opportunities to specifically practice the punctuation and other mechanical conventions of Standard Edited American English[1] (SEAE) at the clause- and sentence-levels. I hypothesize that such explicit teaching and serial practice will improve the overall grammaticality of student writing. This is a contentious claim in the fields of composition and second language acquisition (SLA). In fact, as Debra Myhill and Annabel Watson declare, the debate about explicit grammar education is so fierce on all sides that it is usually defined through the metaphors of battle

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[1] There are many descriptors for this written dialect, like Standard American English, Standard Edited American Academic English, Standard Written English, Edited American English, Language of Wider Communication, etc., I chose to model Asao Inoue's choice of SEAE.

and warfare, "pitting educational professionals against politicians, but also pitting one professional against another" (41-42).

It is not contested that FYC students should develop knowledge of mechanical conventions, as specified in both the 2011 National Council for the Teachers of English's *The Framework for Success in Postsecondary Writing* and the 2014 Writing Program Administrators' *Outcomes Statement for First-Year Composition.* Most colleges and universities, including Idaho State University, include a knowledge of written mechanical conventions among their general education requirements, and it is listed as a specific learning objective for FYC. It is contested that explicit teaching of such skills will help students to develop their mechanical skills or that such teaching can have any appreciable impact on the grammaticality of the text (see Braddock et al., 1963; Hartwell, 1985; Andrews et al., 2007; Blaauw-Hara 2006, 2007; Oaks 2011; Jones and Chen, 2012; Myhill and Watson 2014.) Before I enter that fierce debate, I need to narrow the argument and clarify its terms.

Mechanical conventions will be defined as the non-linguistic writing signifiers that have no representation in the oral language and are generally not pronounced when a text is read out loud. The three conventionally used forms of punctuation are space (e.g., the space between words or paragraphs), mark (e.g., comma, semicolon) and font (e.g., uppercase, italic.) Other mechanical conventions include writing-specific concepts like sentence structure, citation information, and spelling.

SEAE is a written variety of Standard American English, the dialect that is generally used in most academic American writing. According to linguists Victoria Fromkin, Robert Rodman, and Nina Hymas, SEAE is an idealization, rather than a

concrete entity since language is always as varied as its users (455). As writing studies scholar Charles Bazerman asserts, writers create text in response to a specific situation and that text is (or at least should be) shaped by the needs of that specific communication instance ("Writing Represents" 35). A biologist and a historian, for example, would both write in SEAE, and both are expected to make substantially different writing choices in vocabulary, citation, text form, etc.

This is an Intervention, not a Weapon of Mass Linguistic Destruction

Linguists Douglas Biber and Camilla Vásquez assert, "[Academic writing] is the most highly valued register of the intellectual elite in Western societies." They warn that this register is not better at communicating information or more linguistically evolved than other written registers; SEAE is privileged because Western scholars have typically used it. Further, because SEAE "shows extreme characterizations of informational density, elaboration, and precision," it maximizes the writing system's potential for "carefully planned and revised expression" (537-538). In other words, academic writing typically employs the most complex sentence structures, careful linguistic choices, and precise mechanical choices that can make such a complex structure far more readable. It is generally presumed (and challenged by scholars like Asao Inoue) that becoming more fluent in SEAE allows a writer to express ideas in the intellectual elite's most recognized form.

This dissertation will not seek to prescribe SEAE's writing choices in word choice or punctuation. Instead, this dissertation describes the consistent structural choices of academic writing and explains the rhetorical impact of such choices. For instance, it explains that conventionally placed punctuation frames the boundaries of clauses, rather

than interrupting them because, as linguists David Butt et al. explain, the clause is the

"fundamental meaning structure in … linguistic communication" (50). Conventional

punctuation strategies reinforce that structure by placing punctuation at the clausal

boundaries, rather than interrupting it. The visual frame allows the brain to recognize the

linguistic patterns more easily. If a reader can read more easily, they are more likely to

continue through to the end of an extensive text. A writer is always free to choose a more

effective writing strategy for any particular writing situation. Knowing the typical

conventions does not demand their use; instead, it allows the writers to more accurately

predict how conventional/unconventional choices will impact the reader.

Redefining and Redeeming Grammar

Grammar, according to linguist Harvey Daniels, has two primary linguistic

definitions. First, *grammar* can be defined as "the system of rules we use to arrange

words into meaningful English sentences" (7). Linguist Noam Chomsky explains that the

grammaticality of any particular utterance can be determined by whether another native

speaker would find that particular word arrangement to be acceptable (13). Second, as

Daniels continues, *grammar* is used to describe the whole linguistic system, including

arranging and marking sentence elements as well as the lexical, phonological, and

syntactic patterns of usage (7). Outside of linguistics, there are other common definitions

for grammar. Composition scholar Patrick Hartwell offers three additional definitions of

grammar that involve linguistic etiquette, prescriptivist rules, and stylistic grammar.

Multimodal scholar Gunther Kress describes *grammar* more generally as "rules,

conventions, certainty: phenomena that are fixed, settled" (*Multimodality* 7).

Outside of academia, *grammar* has a generally negative connotation. According

to composition historicist Robert Connors, most non-academics would define *grammar* as "a set of rules about words and sentences that define mistakes as perceived by an English teacher" (*Selected Essays*, 126). This widely held belief, Connors believes, arises from America's long history of *formal grammar instruction*, "an absolutely formal discipline that demanded a great deal of rote memorization of terms, complex analyses of given sentences, and suspicious patrols through other sentences searching for errors" (118). For most people including many college students, *grammar* is something to be dreaded. It is a series of bizarre rules described with an obscure vocabulary that guarantees mistakes, rather than a communicative tool.

In reference to Daniels' first linguistic definition, this dissertation assumes that my target group, American college composition students, are fluent English speakers who can already consistently utilize English grammar, or "the system of rules we use to arrange words into meaningful English sentences" (7). Second language acquisition scholar Rod Ellis makes an important distinction between a student's mistakes and errors. A mistake is a performance flaw; the student has adequate knowledge but made a dysfunctional choice in that particular instance. In contrast, an error shows gap of knowledge; the student does not have a certain piece of knowledge or understanding of the principle that needs to be applied (17). A mistake can be repaired through careful editing, where an error cannot. Fluent language speakers may make occasional mistakes in the performance of grammar rules, but they rarely have consistent grammar errors, which show a true gap of knowledge (17). When fluent adult English speakers slow down and arrange their words carefully, they need little help to *say* the words into the right

order and form to be acceptable to other native speakers.[2]

The Grammatical Grapholect

In contrast, fluent adult English speakers often have trouble *writing* their words in the right order and form. To extend Chomsky's definition of *grammatical*, a spoken utterance is grammatical if it is acceptable to another native speaker, and writing is grammatical if the composition of punctuated letters is acceptable to a fluent reader/writer of that particular grapholect (13). A *grapholect*, according to Walter Ong, is a "transdialectical language formed by a [society's] deep commitment to writing" (8). As a society or a subset of society (like an academic discipline) invests in writing, it translates and transcribes the oral language into new grapholect, which then takes on a power and structure of its own. A grapholect, as linguist M.A.K. Halliday explains, is always parasitic upon the spoken language system, but a well-developed writing system is a language of its own, capable of "reaching directly into the wording of the language rather than accessing the wording via sound" (7).

According to linguists Victoria Fromkin, Robert Rodman, and Nina Hymas, all the dialects of a language "are mutually intelligible versions of the same basic grammar, with systematic changes among them" (446). In other words, while there may be systematic dialectical changes in word choice, pronunciation, and grammatical rules, these changes should not impede the speakers of the same language from understanding one another (445). The written grapholect is transdialectical, in that it can transcribe any

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[2] There are certainly dialects of English (like African-American Vernacular English) that vary so much from the SEAE that students may need extensive grammar help to meet university expectations for SEAE usage, which is a contested learning objective,too (Inoue 29). English language learners also often need specific grammatical help. Both groups have extensive and ongoing scholarship and will not be addressed in depth here.

dialect of the language. Biber and Vásquez explain that Multidimensional Analysis of Spoken and Written Register Variation has shown that "there are few, if any, absolute linguistic differences between stereotypical speech and stereotypical writing" (537). Like spoken dialects, grapholects may have systematic changes (like MLA or APA citation style or punctuation differences between a tweet and an essay,) but the basic grammatical structure remains the same.

It's All an Abstraction

According to John E. Joseph, linguistics' modern founder Ferdinand de Saussure established that language is a socially shared system of arbitrarily connected abstract concepts and acoustic images (59). Writing, by extension, represents those arbitrarily connected concepts and sounds with a set of visual symbols, which are arbitrary, too. Like Saussure and linguistics as a whole, modern composition studies focus a great deal of attention on the social function of spoken and written language. Composition scholars, like Kevin Roozen, agree with Saussure that "writing is a social and rhetorical activity" that always connects the writer to other people (17). The social, semiotic connection between writer and reader, as semiotician Gunther Kress explains, "is always joint and reciprocal work" (*Multimodality* 44). The writer and reader of each grapholect agree to use an equally abstract and arbitrary set of visual symbols to represent speech's arbitrarily-connected concepts and acoustic images.

In contrast to speech, composition scholar Dylan Dryer asserts that none of writings' signs and symbols are naturally acquired, but like speech, none of the signs and symbols have meaning in and of themselves (27-29). Because a grapholect is an agreement between readers and writers to use certain symbols in conventional,

meaningful ways, every sign matters. Misplaced, missing, and unconventional punctuation does not simply break an English teacher's rules, like many students believe; it damages the grammaticality of the linguistic utterance. If a writer uses unconventional symbols or uses known symbols in unconventional ways, their written words can be ungrammatical, even if all the pronounced letters are in the right order.

To give a brief example, the English-reading society agrees that the abstract and arbitrary collection of symbols of *I love dogs* is grammatical, while the homophonous *I love dog's* is ungrammatical. It should be noted that both examples contain perfectly acceptable English words. It is the entire composition of those words that is problematic, not the individual components. By improving a student's ability to compose their message using the shared symbol system that includes punctuation, the writer's overall ability to communicate with other reader/writers improves, too.

Seeing the Elements

To help students to become more grammatical writers, this dissertation focuses on one aspect from Daniel's second definition of grammar: the appropriate arrangement and marking of sentence elements (7). Those elements are shown in my adapted and expanded version of the linguist M.A.K. Halliday's rank scale of language (see Fig. 6). Like Chomsky, Halliday shows that language is organized into ranks, and each larger rank is composed of one or more of the next smaller rank (5). So, a sign is composed of one or more signifiers, a constituent is composed of one or more
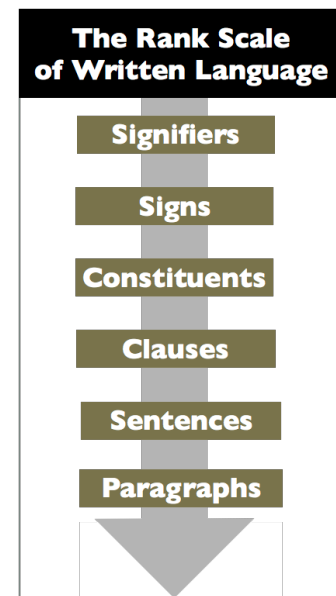
Fig. 6 An adaptation of Halliday's rank scale

signs, etc. Like Halliday, I will argue that the meaning of each of these ranked elements is created by both its spelling and its punctuation (7). *Spelling* is the grammatical arrangement of letters or other pronounced symbols, and *punctuation*, which will receive a thorough definition in later sections, can be briefly defined as the non-linguistic signs that work with the letters to create the meaning of each linguistic rank. Writing conventionally creates meaning with three primary forms of punctuation: specialized fonts, spacing, and punctuation marks.

To give examples from the rank of words, the use of italic font makes it clear that I want the word *butterflies* to be considered as an example, rather than its conventional use and meaning as a descriptor of an insect. Adding a space—butter flies—now shows that it is two words describing an aerodynamic dairy product, rather than one word describing insects. If an apostrophe is added (*butterflies'*), the reader will assume that they will soon find out the insects' possession. Because all the linguistic ranks follow the same principles, a writer can change the meaning of a constituent, clause, sentence, paragraph, etc., by adding or removing punctuation, which may express and enhance or disrupt the writer's intended meaning.

Breaking with One Tradition to Uphold Another

Traditionally, composition pedagogy has artificially divided the linguistic symbols from the non-linguistic symbols, teaching each separately, and this dissertation will reunite them by applying concepts from cognitive science and multimodality. As cognitive neuroscientist Stanislas Dehaene explains, the brain simultaneously interprets every meaningful aspect of a word: "the roots of words, their meaning, their sound patterns, their motor articulation schemes" (64). Kress's multimodality argues that every

mode of communication must be considered together in "*modal ensembles*, designed so that each mode has a specific task and function" (emphasis in original, *Multimodality* 28). Each linguistic rank—like words, clauses, and sentences—are individually and collectively a modal ensemble, where each punctuated series of symbols has specific meaning-creating functions. Essentially, writing creates meaning through a cohesive system of punctuated letters, not a collection of letters interspersed with punctuation. Because of this, a writer must understand the conventional uses of each kind of punctuation to see how it can construct (and easily destruct) the meaning of the text, even if all the letters are in the right order.

This dissertation supports the existing learning objective for FYC since developing academic punctuation conventions is already established in many FYC courses, including those at ISU. As the 2014 *WPA Outcomes Statement for First-Year Composition* articulates, FYC students are expected to "develop knowledge of linguistic structures, including grammar, punctuation, and spelling, *through practice in composing and revising,*" rather than an explicit teaching strategy (emphasis added, 5). It is the method of development—practice—that this dissertation aims to refine. Simple repetitive practice of these skills is insufficient for many students because they do not possess effective skills to practice. The SAT's Writing and Language Test employs 45% of its questions to assess "students' *revising* and *editing* skills in the context of extended prose passages … across a range of content areas" (emphasis added, *College Board*, "The Redesigned SAT"). The 2016 SAT scores show that only 46% of tested students exhibited enough revising and editing skill to meet the college readiness benchmark, or having a 75% chance of passing a writing-based course like FYC, history, or philosophy

(*College Board*, "SAT Benchmarks " 2). More than half of the nation's students have test scores that show that they are unable to edit their way to a conventional text, so more opportunities to repetitively practice composing and editing are not sufficient to improve student writing and may, in fact, entrench dysfunctional writing habits.

Practice of a Different Sort

Digital rhetorician Casey Boyle extends the field's understanding of practice, asking that the field replace its current-critical rhetoric, which focuses on "critical reflection about an object," with a posthuman practice instead (534). Posthuman practice shifts the focus from the writer and the produced text to helping the writer to see their place in the entire ecology through an "ongoing series of mediated encounters" (534). As Laura R. Micciche explains, writing can be considered as "codependent with things, places, people, and all sorts of others" (qtd. in Boyle 533). Through a more evolved practice, writers can develop habits of mind that the *Framework* recommends, habits that allow them to see how their writing is impacted by and impacts the greater world.

It has been difficult to develop these habits of mind in the area of writing conventions, which is why the battle over the explicit teaching of grammar has raged so fiercely. It seems fitting to enter the grammar debate with its most cited quote:

> The conclusion can be stated in strong and unqualified terms: the teaching of formal grammar has a negligible or, because it usually displaces some instruction and practice in actual composition, even a harmful effect on the improvement of writing. (37-38)

The quote is so powerful that it settled the entire grammar debate for Patrick Hartwell, who cited it more than twenty years later in 1985 (105). That quote is taken

from Richard Braddock, Richard Lloyd-Jones, and Lowell Schoer's 1963 pamphlet entitled *Research in Written Composition* (RiWC), which is rightfully one of writing studies' foundational documents. As with any strongly worded sound bite, it is easy to misconstrue its intended application. This quote will be contextualized and analyzed at length in the literature review, but for now, as RiWC explains in the beginning of their report, though, it is crucial to define the important terms. *Formal grammar instruction*, as it is being used in RiWC, refers to the teaching practice that instructs students to identify grammatical items in sample sentences, labeling words with terms like *verb, adverb,* etc. Teachers then use objective testing (like multiple choice or true/false questions that also use sample sentences) to gauge student mastery, rather than appraising student writing (37).

In line with Braddock et al.'s findings, composition theory has rightfully abandoned formal grammar instruction because it has frequently been proven ineffective (Blaauw-Hara, 2006, 2007; Myhill and Watson 2014). College composition courses have not yet updated the punctuation pedagogy that still relies on formal grammatical terms and a randomly organized collection of prescriptivist rules. Current punctuation resources focus on each mark and leave each disconnected from the other marks. The grammar rules tell writers where to place or not to place a mark, but they don't explain why such placement matters. Altogether, a rule-based approach is insufficient at the college level. Students should go beyond simply applying a grammar rule to understanding why punctuation was created, what purpose it serves, and how that underlying logic can be transferred to their writing to make sound, explicable decisions that can be tested for efficacy.

Offering a Replacement for Formal Grammar Instruction

This dissertation will reintegrate punctuation back into the rhetorical foundation of the text in order to give writing instructors a metacognitive framework about the writing system that they can transfer to their students. It will also combat punctuation's description as a lower-order concern as one small battle in the larger war waged over the explicit teaching of grammar and mechanics. Contemporary composition studies tend to neglect punctuation's rhetorical power. As composition historian Robert Connors asserts, punctuation is often labeled as "one of the lowest-level skills in the range of mechanical writing skills" (*Composition-Rhetoric* 134). In the pursuit of larger, politically motivated concerns, composition scholarship has, as Connors argues, erased the sentence from the pedagogy altogether ("Erasure of the Sentence" 97).

Like Connors, I advocate that composition courses can achieve the established learning objectives for developing effective writing conventions by explicitly teaching the structure of a well-punctuated sentence, including all the linguistic elements that create such sentences. Across the disciplines, nearly every feature of writing is variable. Different disciplines require different vocabulary, forms, formats, thesis development, citation style, etc. For example, creative writing encourages active sentences with vivid action verbs, while the sciences prefer passive voice sentences. Creative writing tends to abhor an explicit thesis, while most other fields require one, and creative writing expects the author to fabricate every piece of evidence, which almost no other disciplines allow at all.

Perhaps the only expectation that is consistently present across all the academic disciplines is that all expect well-punctuated sentences in their extensive writing. After a

thorough study of punctuation usage across a wide variety of disciplines and media, I assert that academic writing, like any published writing that extends past a few sentences, favors complete sentences with a moderate allowance for rhetorically effective fragments, distinctions which students often cannot make. Those sentences use punctuation to reinforce the linguistic elements, like marking clausal boundaries, which students often cannot find. Those linguistic elements are created by a nearly universal usage of the same marks, spacing, and fonts, which students often cannot identify.

To be clear, I am not arguing that my method is the only way to achieve better punctuation skills or that it can solve every structural problem. I am arguing that with more than half the nation's students struggling to master the conventions of their written language, it is at least worth experimenting with new and more direct methods of teaching grammar and punctuation. Further, such experimentation may allow FYC students to improve in the most tested aspect of writing: the ability to edit and revise according to convention.

Placing Punctuation into the Writing Ecology

The explicit teaching of punctuation and other mechanical skills have a long and complex history within composition. Parkes asserts that punctuation placement was considered a higher-order skill throughout much of its history, an essential rhetorical tool that allowed the writer to refine the text and control the reader's interpretation of it (3). Currently, punctuation skills are currently labeled with terms like *remedial*, *lower-order*, and *surface-level*, which continually reinforce the idea that they are a small, insignificant part of the writing process. So small, in fact, that some may wonder if punctuation pedagogy even needs more critical scholarship. Throughout this research process, I have

had multiple occasions where peers have expressed that it seems unnecessary and even perhaps unethical to focus valuable classroom time on such a surface-level element like comma placement (which seems teacher-prescribed rather than functionally driven) when the world has such larger problems. More often, writing instructors have expressed an inability to improve writing mechanics, no matter how much time they devoted to its improvement. The decision to teach one thing is always at the expense of teaching something else, and explicitly and ineffectively teaching punctuation divert resources that could go elsewhere.

But, as this chapter on current state of composition explores in depth, everything is tied together into one large, continually shifting ecology. What may seem small in one context actually has a large impact in others. Punctuation may seem like a minor writing aspect to someone who is already highly fluent in it, like a college instructor. Punctuation may even seem like a minor writing aspect to some college students, particularly those who have already proven their conventional fluency through college entrance exams like the SAT. It is not a minor concern to students without those skills who often work very hard to write proficiently, but their efforts are not apparent to the instructors assigned to grade them.

The Separated Curriculum

There is a profound gap between those educational requirements and the existing pedagogical resources. I performed a survey of 27 commonly assigned FYC textbooks to see how much material was devoted to sentence-level development and revision, as well as other mechanical concerns. Essentially, I counted pages that covered higher-order concerns, like argument development or critical reading skills, and compared them to the

number of pages that discussed mechanical concerns. I found, on average, that 2% of

FYC textbooks are dedicated to mechanical concerns, and many have no sentence-level

help at all. Some offer editing lists and grammar rule sections but did not offer cohesive

way to work such information into the curriculum. This is not surprising, largely because

FYC has a distinct pair of pedagogical resources, rather than a unified one. According to

Robert Connors, this pedagogical schism has been present in FYC since its inception

(*Comp-Rhet* 130).

As ISU's approved FYC textbook list exemplifies, there are two basic kinds of

teaching material that are generally assigned together: rhetorical textbooks and writing

handbooks. In theory, the rhetorical textbooks *teach* students to develop the higher-order

concerns and the writing handbooks *provide* information to clarify existing conventions

so that students can rectify any mechanical insufficiencies. That distinction is important:

Rhetorical textbooks are designed to be taught; they have organized lesson plans, syllabi,

and structured activities that gradually develop skills over time and through careful

practice. Writing handbooks are designed to be referenced, which means the material is

designed to aid someone who has already learned its principles. Essentially, the field

seems to be saying that a student needs extensive help to develop rhetorical principles,

but the student should be able to teach themselves to repair any deficiencies in writing

mechanics.

In fact, as composition scholar Nancy Mann explains, it is impossible to

effectively teach the material in a grammar handbook.

Handbook-based teaching fails because the handbooks aren't effectively

organized. The usual practice of arranging punctuation rules by mark (one section

on the comma, one on the semicolon, and so on) generates long lists of rules that
are hard to learn because they're *apparently* unrelated, irrational, highly complex,
and communicatively irrelevant. Anyway, organizing a reference book is
backwards: the writer's question is never 'How do I use the semicolon?' but
'How do I punctuate X?' The trouble is that X is unknown; most students—
again—lack the terminology to label the construction they're trying to punctuate
(a pair of 'independent clauses' combined without a 'coordinate conjunction') so
they couldn't look it up even given a differently organized handbook. (360)

I agree with every claim that Mann makes. The grammar rules are illogical,
unrelated, and organized in a way that does not work as a writing support system. Like
Mann discusses, many of my students cannot perceive or label the grammatical
constructions that they are creating, so the rules cannot help them to find adequate
guidance. Further, the more mistakes a student makes, the less such a complex system
will help them, even just because of the increasing intellectual burden of sorting through
the many rules over and over to find adequate solutions. More to the point, a student has
to know that a sentence is malfunctioning to seek extra help, and many students have no
way to discern which sentences are conventional or unconventional. Language is all
about people sharing the same signifiers to indicate the same general concepts. If students
and instructors don't share the same usage of the same words, they cannot communicate.
The grammar rules use a distant dialect that many students (and many instructors) do not
fluently speak.

The grammar handbooks do function well as a punitive grading tool. Even if
struggling students have little way to access or apply this information, grammar

handbooks provide instructors with ample resources to punish students' grades for writing that fails to meet convention. An instructor can find the grammar rules in the course-required textbook that the student should have applied, and instructors can justify lowering the grade accordingly. Such grading practices are not always this explicit. In fact, often, the standards for mechanical convention are completely implicit in the grading criteria. There is a general misconception that because grammar and mechanical advice is so widely available through handbooks, websites, etc., that it is widely accessible and applicable. Because the information exists and is assigned, it should be easy to use it. As Inoue describes, students who fail to apply all that advice can be viewed and view themselves as "lacking in ability, desire, or work ethic" (4). This implies that student writing mistakes are personal failures, rather than educational system failures.

The Functional Impact of a Segregating Curriculum

As Asao Inoue discusses in depth in *Antiracist Writing Assessment Ecologies*, the field must reevaluate its assessment measures—large-scale like the SAT and small-scale like essay grading—because they consistently privilege white and/or middle- and upper-class students over students of color, multilingual students, and first-generation college students (22). Higher education chooses to test fluency in SEAE, a typically white discourse, as a primary admission criterion, which effectually "keep[s] more students of color out of college and allow[s] more (relatively speaking) white students in" (55). While Inoue argues such tests are not explicitly designed "to subordinate students of color or deny them opportunities in a writing classroom," he presents evidence that assessment measures functionally subordinate those racial and linguistic groups instead

(55). Inoue asserts and I agree that typical assessment measures are evidence of structural racism (4). If measures consistently reward one racial group at the expense of others, then the assessment measure is functionally racist, even if that is not its express or intended purpose (55).

Certainly, assessment is not the only racially problematic site in FYC. Fluency in SEAE's written conventions a learning objective, which necessitates measuring a student's proficiency in those conventions. It also reassures professors of other disciplines that students who successfully complete FYC have demonstrated their ability to use SEAE's conventions and so they can be held accountable for those writing skills. It is deeply problematic to be unable or unwilling to actively teach any university-required learning objective. It is even more problematic when that learning objective is already within the grasp of privileged students and difficult for the underprivileged to gather on their own.

Ineffective or absent pedagogical resources privilege the already proficient and disproportionately damage underprepared students. The SAT scores show that white students and/or middle- and upper economic class students are better able to edit and revise extensive writing according to the conventions of SEAE than students of color, multilingual students, and students of lower economic classes. This means that underprivileged students will need to teach themselves more often using grammar handbooks more than their white and/or economically privileged peers. If those resources are ineffective teaching tools, then the field's reliance on them is functionally segregating, not just practically separated.

Historically, the field has tended to view mechanical writing deficiencies as a student problem, generally caused by K-12's inability to teach effectively. Current composition theory, though, looks at the entire writing ecology, investigating how all the smaller pieces are woven together. It is capable of using a much more nuanced lens to see why students arrive with the deficiencies they have, who determined those deficiencies matter, and what propagates/eradicates those deficiencies. Viewed from a more ecological angle, the whole system—students, instructors, institutions alike—requires remediation. To see where the field of composition studies might go next, it is essential to see first where it is (this chapter) and then explain how it got there (Chapter 3) before looking at the specifics of how to define and address our current educational needs (Chapter 4).

The Writing Ecology

As composition scholar Kathleen Blake Yancey discusses, composition studies have always centered itself in the "practice of writing and its teaching" ("Introduction" xvii). Writing is an incredibly vast descriptor, though, much like arguing that a field will study the humans that write or the English language that some speakers use to communicate. Such a broad initial term has allowed composition studies' central focus to swing widely throughout its history. While the next chapter will explore the field's history in depth, it is important to know now that composition had a racially and linguistically troubled beginning that set the field's foundation on shifting political, rather than scientifically established, pedagogical ground. As composition James Berlin asserts, FYC was brought into being in 1874 as the result of Harvard's entrance exam, which was a rapidly constructed linguistic barrier designed to keep the nation's recently expanded

educational population out of Harvard and in the practical universities where they belonged (23). Since that time, composition studies has struggled to define itself as a discipline. In 2015, Yancey draws on Richard Fulkerson to explain that composition studies has struggled to establish a coherent "core set of beliefs or values….What seems to be missing, since the beginning of the field and even in this late age of print, is any consensus of what we might call the *content of composition*: the questions, kinds of evidence, and materials that define disciplines and thus define us as well" ("Introduction" emphasis in original xviii).

Now, 150 years since composition's awkward beginning and particularly in the last 50 years, the field has developed a strong, disciplined base. Composition scholars Elizabeth Wardle and Linda Adler-Kassner's *Naming What We Know*, for example, has gathered the field's knowledge into a series of threshold concepts and outline how those concepts can be practically applied to writing programs and classrooms. Such work, as Yancey explains, is not the creation of a canon, but an evidence of continual questioning, "an exigence, an opportunity to uncover and interrogate assumptions…a collective philosophical exercise involving exploration as much as a consolidation of what we know" ("Introduction" xix). In other words, composition studies certainly does not have all the answers, but it absolutely has been asking and will continue to ask disciplined questions about writing and its pedagogy.

Initially, the college system's careful delineation of academic departments made it appear that each college discipline was an island unto itself. Writing seemed separate from biology, which seemed like completely different disciplines than art, medicine, and engineering. As composition scholars Elizabeth Wardle and Linda Adler-Kasser discuss,

academic writing was seen as "a finished product that represents ideas in seemingly rigid forms…[and] as a 'basic skill' that a person can learn once and for all and not think about again" (15). Composition's pedagogical movements throughout the 20th and well into the 21st century have continually chipped away at such arbitrary disciplinary separations and redefined writing. Now, as Wardle and Adler-Kassner assert, writing is seen as an ideologically driven individual and group activity that can unite the disciplines as easily as it can distinguish groups within in them. Because of writing's power and complexity, writing is both an activity and a subject of study (15).

For me, the current state of composition pedagogy seems best captured by a quote from composition scholars Kathleen Yancey, Liane Robertson, and Kara Taczak's *Writing Across Contexts:* "The singular writing practice described as academic writing is being replaced by a pluralized sense of both genres and practices that themselves participate in larger systems or *ecologies of writing*" (emphasis added, 2). Every field— writing, biology, art, medicine, engineering, etc.—can be seen as a small part of an integrated intellectual ecology that are each a small part of the larger human ecology, which has been de-centered, too. As neuroscientist David Eagleman explains, humans have gradually and often painfully realized that they are not the center of the universe or this planet. They cannot even claim to be at the center of their own decision making, since the human brain relies on unconscious processing to make the vast majority of its decisions, and those decisions are always embodied in the physical processes of the brain that is always perceiving and reacting to its environment (11, 177).

It's All About the Brain

Composition studies and cognitive science agree, as Eagleman explains, that

human behavior is always engaged in causal relationships with the surrounding environment (166). Linking that idea directly to writing, education scholar Charles Bazerman and composition scholar Howard Tinberg describe "writing [as] an expression of embodied cognition," a tangible product of the writer's physiological reaction to some stimuli received in the larger environment (74). In fact, writing must be seen as an embodied reaction to some triggering event in the environment because, Eagleman says, "there is no meaningful distinction between [human] biology and … decision making. They are inseparable" (177). Linguist George Lakoff and philosopher Mark Johnson agree, saying that "as human beings, we have no special access to any form of purely objective or transcendent reason. We must necessarily use common human cognitive and neural mechanisms" (7). In other words, thinking is a completely physical experience that must use the brain's neurological structure which is always reacting to the environment, and writing is a completely embodied response to some external stimuli.

In line with cognitive scientists Berninger and Winn, this dissertation argues that "the writing process is supported by a single system—the writer's internal mind-brain interacting with the environment" (qtd. in Dryer 74). Applying cognitive science to the composition classroom is already a well-established practice. Dylan Dryer explains that composition studies have been examining writing's cognitive aspects since the 1960s, and composition studies appear to be taking a *neurological turn* (70, 74). He argues that advances in cognitive science have confirmed much of what earlier composition scholars, like Linda Flower and John R. Hayes, studied observationally. For example, Dryer discusses how the neurological turn is challenging many long-held views on basic writing concepts, like error correction. He argues, "Neural processes essential to writing must be

successfully coordinated across different areas of the brain; revision, even for seemingly uncomplicated 'errors' is cognitively quite complex" (73). To put it another way, a student's errant placement of a comma was a complex, neurologically based task, and the teaching process to correct that error must take the student's embodied learning into account.

Boyle argues that composition should move away from the current-critical rhetoric, which uses reflective practice as a way for the writer to "focus conscious attention on an object or set of tasks as a way to build her metacognitive ability" (535). He argues that such practice encourages the writer to think largely about their own experience with the text, which is a limited and limiting viewpoint. Instead, Boyle advocates for a posthuman practice, one that challenges the writer to develop habits of mind through a series of mediated encounters that show that writing is "a way of being in the world" and "a way of becoming," sculpted to take advantage of the embodied process of writing that produces a tangible text that has observable interactions with the greater world (534, 538). Rivers and Weber assert that the field would benefit from "an expanded scope that views rhetorical action as emergent and enacted through a complex ecology of texts, writers, readers, institutions, objects, and history" (qtd. in Boyle 538). By placing writing into its larger environment, the writer can read the environment more broadly in order to question (and hopefully answer) many more reader concerns.

Writing and Writing Instruction's Causal Relationships

The writing student is always engaged in a causal relationship with the environment, but the writing instruction and entire university system are in causal relationships with the environment, too. Traditional educational models tend to center on

the student and the student's deficiencies. The ecological model challenges the student's

engagement with the greater world, but it also challenges the field's own egocentric

biases that have—intentionally and/or unintentionally—created the deficiencies that FYC

is supposed to correct.

Throughout *Antiracist Writing Assessment Ecologies,* Inoue focuses on the

assessment aspects of college writing programs. He argues that higher education is

structurally racist, relying on placement measures that create a student that can be labeled

with deficiencies, and those deficiencies have distinct racial patterns. Historically,

middle- and upper-class white students outperform every other group on every classroom

and large-scale assessment measure, all of which have a strong reliance on a student's

ability to utilize the conventions of SEAE (22). Essentially, by privileging the dialect that

white students tend to speak, the educational system can offer fewer, limited, and limiting

opportunities to students who traditionally speak other dialects (8, 26). Linguistic bias is,

as Inoue argues, a '"new racism', one that uses different terms to accomplish the same

old racial hierarchies and pathways of oppression and opportunity" (9). To be clear,

Inoue does not argue that such the educational system or the writing instructors are

intentionally racist; the racism is functional rather than purposeful (55). By studying the

whole writing ecology, writing studies scholar Asao Inoue shows how to see

composition's implicit biases and move towards the ultimate goal of challenging and

uprooting its deep-rooted institutional bigotries (12).

In agreement with Inoue, I argue that composition's focus on higher-order

concerns has profound racial and class implications. Students of color, English language

learners, and students from low literacy backgrounds all consistently score lower than

white and/or middle- and upper-class students on the SAT's questions about writing conventions (*College Board*, "Total Group" 2). Inoue raises excellent questions about using such a measure to limit students' access to universities, classes, etc., but I extend his questioning to ask why college composition courses place such little value, textbook support, and classroom time on one of the biggest measures that allows university access in the first place. Certainly, the entrance exams are problematic, but a FYC instructor is unlikely to be able to change such a measure. FYC absolutely can change whether or not students receive help to develop all aspects of their writing skills.

Writing is Always a Reaction and a Relationship

So, writing responds to some trigger in the environment, and it assumes that it will trigger other reactions within the environment, too. Writing is not and cannot be a solitary act pursued by a solitary person because, as composition scholar Kevin Roozen asserts, "writing is a social and rhetorical act" (17). Because humans live in a closed and completely interconnected system, every written word changes the world at least a little, even if the change seems limited to just the subtle alterations in the patterns of the writer's neurons. Because of that small alteration, the writer/reader will respond at least a little differently in the future. Roozen explains that people do not write for themselves; they always write for other people. Even when someone writes a personal diary or note, they are not writing for their current selves; they are writing for their future self (17). That future self will, quite literally, be biologically changed by the process of writing it and then of reading it again (and countless other life experiences in the interim.)

Writing always assumes reading, even if the only reader is also the author. As Roozen argues, "writers are always doing the rhetorical work of addressing the needs and

interests of a particular audience, even if unconsciously" (17). A frustrating day may trigger a diary entry, a Presidential tweet may spark a Facebook post, and a biology teacher may inspire/require a lab report. As Roozen continues, writing always connects "us to other people across time and space in an attempt to respond adequately to the needs of an audience" (18).

The ecological model is at least as concerned with the reader as it is with the writer because a writer is always communicating with other people, who have idiosyncratic brains of their own. Bazerman and Tinberg assert that writers must learn that readers "do not share the initial writer's attachment to the anticipated meaning and have only what the inscribed words bring" (62). In other words, inexperienced writers often assume that readers will approach their text with the writer's intentions in mind, but experienced writers know that readers bring their unique life history to the text. That may or may not help them to find the same meaning that the writer intended. Second language writing scholar Paul Kei Matsuda argues that "writing involves the negotiation of language differences." Each language user has a distinct and unique knowledge of their language, and a writer is constantly negotiating language differences, even when it seems like the reader and writer are both using the exact same words ("Writing Involves" 69).

The Form Helps to Bridge Between the Brains

Generic conventions are one way to smooth linguistic negotiations by clarifying a discipline's expectations. Bazerman explains that writing "addresses social situations and audiences organized in social groups and does so through recognizable forms associated with those situations and social groups" (35). Instead of rules, composition instructors aim to teach students the transferable skills of a disciplined writer. In line with the 2011

Framework for Success in Postsecondary Writing, FYC courses do not focus on producing a product as much as thinking through the production process. FYC can "establish habits of mind and experiences that are critical for college success" (1). As composition scholar Kristine Johnson says, "Introducing habits of mind into the landscape of American education asks writing teachers to consider not only what student writers should know and be able to do but also how students write, think, and move in the world" (518).

Composition instructors can teach students to ask the right questions that allow the writer to critically challenge the initial text in productive ways. Further, as Boyle suggests, the FYC course can offer a series of mediated encounters that allow a writer to gradually automate many of those writing habits (534). Then, the writer can shape their own text so that the writing can best meet the reader's expectations, usually by following the conversation's generic demands. The discipline of composition teaches students how to reliably compose that writer/reader relationship to form the intended outcome.

It's All About Adaptation

The writing ecology also embraces the fact that everyone is an author, like the title of a popular FYC textbook title by Andrea Lunsford et al. While composition students may also write in an educational setting, they certainly do not only write there. College students arrive as seasoned writers who participate in a hyper-literate world where anyone with Internet access can compose a message with a global reach (xxvi). In contrast to earlier times when the ongoing nature of a conversation was often difficult to see, students are immersed in a culture where the ongoing conversation is almost impossible to avoid. As Lunsford et al continue, social media sites challenge every idea

of intellectual ownership as they allow, distribute, and encourage any writer to "build on what others have thought and written, ... create mash-ups and remixes, and ... practice teamwork at almost every turn" (xxvi).

Composition's ecological model embraces the fact that the writer is not the creator of the ideas which they captured. As Dryer asserts, all "texts get their meaning from other texts" (44). Readers and writers alike live in a closed system where the ideas circulate, mutate, and evolve, just like the DNA of the people who apply them. That evolution can have positive or negative impacts, but the ideas cannot stay the same because the human beings who think them are always changing, too. Every idea is an adaptation of earlier ideas, part of an ongoing conversation that has been in existence as long as humans have been.

A FYC classroom can use that abundant conversation to show how academic work is a long series of adaptations, too. Rather than teaching students to create ideas, they are taught adapt, repurpose, and give credit for other's ideas in order to meet their own intended outcomes, like the teaching for transfer (TFT) course design in Yancey et al.'s *Writing Across Contexts*. As stated earlier, an ecological approach to writing seeks to give our students transferable skills instead of correct answers to preset problems. Indeed, as Butterfield and Nelson explain, teaching's primary goal is to promote *positive transfer* (the ability to effectively use existing knowledge in novel environments) (5). Yancey et al. argue that FYC can offer a space to investigate the conversations that college students are already participating in and transfer those conversational skills into their professional writing. FYC can help students to analyze those conversations critically, of course, but it can also offer ways to help students to think through all of

those complex and varied rhetorical situations to see what common writing concepts can transfer from one to another. For example, the teaching for transfer (TFT) model uses "the ecosystem itself as the beginning lens." TFT explicitly teaches the writer how to see the systematic activities of the contexts that they seek to join. The writer's previous experiences in ongoing conversations are used to develop new skills, in line with Wardle's creative repurposing for expansive learning (Yancey et al., 10). The TFT course design helps students to experiment with "big-picture thinking, in which they consider how writing in one setting is both different from and similar to the writing in another, or where they theorize writing so as to create a framework for future writing decisions" (4).

As Gerald Graff and Cathy Birkenstein instruct, students are expected to listen closely to the ongoing conversation, summarize the author's views in a way that the author will recognize their part in this conversation, and then respond in kind (3). This is not simply intellectual protocol. Instead, it recognizes that the human brain is designed to look for familiar experiences. If readers recognize some semblance of their ideas and their preferred format in the current document, then it is far more likely to accomplish the author's purposes.

Writing in the (Un)Real World

In the greater intellectual ecology, composition instructors realize that school-based writing practices seem (and almost certainly are) the least authentic texts that a student create on any given day. As Charles Bazerman explains, writing for an academic audience is often stylized and repetitive with skewed social relationships where students are supposed to display competence to an authorial teacher, rather than join in an

authentic writer/reader relationship. Writing students (as opposed to writers) focus on getting a good grade and avoiding correction, rather than thinking through the "complex and varied situations, exigencies, motives, and genres" ("Writing Represents" 37).

As Yancey explains, this is particularly problematic in an era of increasing standardized outcomes testing. It places the writing focus on problem answering (with the correct answers foreordained by some assessment board), rather than viewing the entire writing process as heuristic in and of itself (11). In a world where a Google search can put almost any fact (and any alternative fact, for that matter) in reach, a writer cannot simply to search for a known answer. A writer must also recognize the rhetorical specifics of an ongoing conversation, see the exigence that the situation creates, and recognize that the situation can be significantly improved by composed communication— all of which can be specifically taught within the FYC classroom (Bazerman "Writing Represents" 36).

In line with David Perkins and Gavriel Salomon's theory of transfer, instructors can help students to utilize their prior knowledge by considering "the conditions and contexts under which and where transfer might occur" (qtd. in Yancey et al, 6). The academic and professional world expects our students to write everything from an argumentative essay to a biology lab report to social media posts. In such diverse writing ecologies, composition courses should focus less on creating a static series of documents, and more on how to find and replicate the conventions of any conversation that a student may be asked to enter.

Swinging the Pendulum Back

The ecological lens looks broadly at the writing process, but I believe it looks so

broadly that it has lost nearly all of its focus on the actual written artifact that a student writer will produce. More specifically, like Robert Connors' aptly titled "Erasure of the Sentence" explained in 2000, composition studies have nearly erased the sentence, the primary written communicative unit, from composition pedagogy. The pendulum has already begun to swing back. As Casey Boyle argues, there are already "emerging appreciations of materiality and mediality" (533). While writing is a relationship between the author and the reader, the physical text is the actual, tangible representation of the writer in that relationship. There were certainly good reasons for shifting composition's complete focus on the material aspects, but as the next chapter will show, there are equally good reasons for shifting the focus back from its social aspects to a more middle ground.

CHAPTER 3: WRITING'S LONG HISTORY INTERSECTS WITH COMPOSITION'S SHORT HISTORY

Starting at the Beginning

Writing can certainly be credited as at least one of, if not the, greatest tools humans ever invented. As composition scholars Collin Brooke and Jeffrey T. Grabill argue, "writing has always been a technology for thinking and communicating," a way to make ephemeral human thoughts material and permanent (32-33). Alphabetic writing is such a ubiquitous part of human existence that it is easy to think that people have always had some form of writing or that writing has always looked like it looks now, but writing is a technology that continues to develop through an ongoing evolutionary process. Its development was not linear, constant, or inevitable. Brooke and Grabill show that, throughout history, writing has enabled commerce and other social organizational practices and created new social relationships (32-33). Different writing systems have arisen, propagated, evolved, and then disappeared altogether as the societies that created them have shifted in and out of existence, too.

Writing doesn't just record language; it radically changes language, too. Walter Ong says, "Writing, commitment of word to space, enlarges the potentiality of language almost beyond measure, restructures thought, and in the process converts certain dialects into 'grapholects'…A grapholect is a transdialectical language formed by a deep commitment to writing. Writing gives a grapholect a power far exceeding that of any purely oral dialect" (7-8). For example, while an oral dialect's speaker may have thousands of words at their disposal, a grapholect's reader can have access to millions of words, both through their own usage and through shared media like dictionaries, novels,

tweets, and newspapers (8). While an oral dialect is limited to a word's current usage, a grapholect can preserve the society's entire history of a word (8). As Ong continues, "Written words are residue [of human thought.] Oral tradition has no such residue or deposit. When an often told oral story is not actually being told, all that exists of it is the potential for certain human beings to tell it" (11). Once the spoken story fades out of memory, it is lost, but writing can be immortal and can bring its writer immortality along with it.

The Technology of Writing

As writing historians Denise Schmandt -Besserat and Michael Erard explain, "Humans created two major system of visual symbols to express themselves and to communicate with others: art and writing" (7). Both kinds of visual symbols are capable of creating a shared meaning for their communities, and humans are equally capable of literacy in both or either visual symbol systems. Schmandt-Besserat and Erard distinguish writing from art by explaining that "writing is a system of graphic marks that represent the units of a specific language" (7). So, while an image may convey a stable concept to other community members, each reader would likely choose different words to describe that image. Writing allows the reader to exactly reproduce the author's words instead. Schmandt-Besserat and Erard also assert that many people believe that writing's origins can be traced back to art, but the two systems developed independently and achieved different societal functions (7).

Throughout human history, many societies developed pictographic and other symbolic writing systems, but it has been a fairly rare occurrence. According to Walter Ong, only around 106 societies out of likely tens of thousands of societies "have ever

been committed to writing to a degree sufficient to have produced literature, and most [spoken languages] have never been written at all" (7). According to Schmandt-Besserat and Erard, the earliest writing systems were designed to accommodate trade or represent other simple ideas, rather than attempting to transcribe language. They typically employed "various specific and striking shapes [like a measure of grain,] that were easy to recognize, remember, and duplicate" (8). Symbolic writing, like art, differs in its communicative potential from true writing. According to quantitative linguists Mirko Eposti, Eduardo Altmann, and François Pachet, true writing allows "the content of a linguistic utterance [to be] encoded so that another reader can reconstruct, with a fair degree of accuracy, the exact utterance written down" (1). So, an image transmits a concept, but true writing transmits specific words that the reader could repeat just as the author captured them. As trade grew more distant and complicated, multiple societies developed more extensive writing systems that could express more complex thoughts, but very few societies invested enough resources to develop true writing.

To recreate an exact utterance rather than just a concept, an alphabet is required. Millward defines an *alphabet* as a writing system where each symbol represents a single phoneme rather than a syllable or a concept (359). Schmandt-Besserat and Erard explain that "the alphabet was invented only once" around 1700 BCE, "probably in present day Lebanon," and "all the present alphabets, from Latin, Arabic, Greek, Cyrillic, Hebrew, Ethiopian, and Tamil to Navaho derive from the same first alphabet" (15). Dyslexia scholar Maryellen Wolf explains that the first alphabets represented only consonants, though (58). The ancient Greeks are credited with developing the first full alphabet that represents all the consonants and vowels, an intellectual milestone that can be marked

around 700 BCE (58). While the Greeks get credit, the alphabet was not solely their own invention. Linguist Celia Millward explains that "the Greeks borrowed the Semitic syllabary, and probably over a fairly long period of time, began using unneeded characters to represent vowels separately from consonants" (359).

Millward continues that the Romans adapted the Greek alphabet to write Latin, which required them to delete five Greek letters, change the orientation of four letters, and add a tail to one (359). As the Roman Empire conquered Europe, including modern-day England, the Latin alphabet came with them, frequently in the form of scripture. English has had two alphabets: prior to Christianization, English was represented by a runic alphabet called the *futhorc*, which was superseded with the Latin alphabet by late sixth century CE. Today, the English alphabet is considered a modern adaptation of the ancient Latin alphabet, mixed with a few Old English runes to represent the English sounds that aren't present in Latin (360).

While this will be discussed further in a section on gaining literacy altogether, it is important to note that writing radically changes the cultures that embrace it. David Jury, an expert in typography, argues that every technological advance in writing and printing can be explained by shifting cultural demands, political needs, and available resources, and in turn, the material opportunities of each technological development shift culture. For example, Renaissance readers voraciously read secular literature, which wasn't widely available until the printing press made it affordable. That voracious consumption encourages more investment into presses, which brings the cost down further, which accelerates literacy as more people have access (36). As Brooke and Grabill explain, "The tools we use to produce writing (pens, keyboards) and those media where writing

takes place (pages, books screens) ... shape what we are able to write and the ideas we can express, and they condition the expectations of those who read our writing" (33). Writing always adapts to the language that it represents, the technology that represents it, and the culture that uses it, all of which are always adapting, too.

Writing's Low-Tech Start

Early writing was a big technological advance over just speaking, but the technology was still quite simple. Like the alphabetic evolution, it would take more than a millennium and many attempts for modern punctuation system to evolve. This section relies heavily on punctuation historian M.B. Parkes' *Pause and Effect,* an excellent historical survey of the evolution of punctuation. In line with Halliday's view of functional grammar, Parkes also believes that "punctuation should be studied according to the ways it has been used rather than the ways some have thought it ought to have been used" (xi). Parkes explains that "punctuation was developed by stages which coincided with changing patterns of literacy, whereby new generations of readers in different historical situations imposed new demands on the written medium itself" (391). Brooke and Grabill agree with Parkes' history, which shows that writing is a process shaped by its users and its available mediums (33).

Ancient writing was a very simple technology, at least by modern standards. Writers used symbols that were almost entirely linguistic signifiers (LS) or symbols that represented the sounds of the oral language. (The most common LS

Linguistic Signifiers	Punctuation
Letters Numbers Mathematical symbols Emoticons	Spaces Specialized fonts Punctuation marks
Any symbol that is typically pronounced when a text is read aloud	The non-linguistic signifiers and signs that are unpronounced when a text is read out loud

Fig. 7 Writing's pattern-based symbols

are letters, but numerals, mathematical symbols, emoticons, or any other pronounced symbol would also be considered LS.) Throughout writing's development, writers also developed non-linguistic signifiers that are not pronounced when a text is read out loud. The most typical examples are those embedded directly into the LS, like the space between words, marks like a comma, and specialized fonts like italics and capitals, as well as formatting tools like page numbers and indentations. For simplicity, non-linguistic signifiers will be collectively referred to as *punctuation* describing any symbol that punctures the text and is not generally pronounced (see Fig. 7).

Parkes argues that in most early writing employed a system called *scriptio continua*, or a continuous line of what would now be called capital letters, which were easy to make with the hit of a chisel (11). To maximize the writing space, according to Keith Houston, they often wrote in boustrophedon (5). See Figure 8 for a modern interpretation of boustrophedon.

INTHEBEGINNINGOFALPHABETICWRITINGITALLLOOKEDLIKE
THEWORDSWEREWRITTENLIKETHEYWERESPOKENWITHOU
TANYSPACESPUNCTUATIONMARKSORSPECIALIZEDFONTSLIKE
LOWERCASEANDCAPITALSTHISKINDOFWRITINGTOOKALON
GTIMETOREADNODOUBTASAMODERNREADERYOUDISLIKEI
TVERYMUCHYOUARECERTAINLYANNOYEDWITHTHEWRITER
WHOISMAKINGYOUDOALOTOFWORKTHATYOUUSUALLYDO
NTDO

Fig. 8 A modern adaptation of boustrophedon

Boustrophedon meant that the writing lines were ox-turned. The first row might read left to right, the next would read right to left, and so on, like Figure 9 shows.
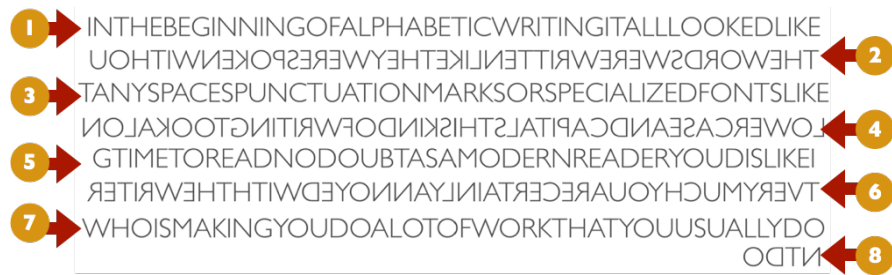
Fig. 9 The reading directions of boustrophedon

As you no doubt notice, *scriptio continua* and boustrophedon presents many reading challenges to the modern reader who are used to ample amounts of marks, fonts, and spaces that make reading easier and faster. To be clear, though, it isn't that boustrophedon's continuous lines are completely unpunctuated. As Houston explains, boustrophedon generally utilized a specialized font (the reversed letter forms shown in the even lines) when it changed direction so that the readers could see the reading pattern (4). Of course, each line is punctuated with space at the end. The ancient punctuation system was quite different from modern writing's system, but it wasn't absent. Like the writing system itself, punctuation's development is slow and erratic, as various writers experiment with ways to make their texts more useful.

Parkes explains that it wasn't that punctuation marks didn't exist in ancient Greek and Roman writing systems; the text's author just didn't place the marks. The reader was expected to do the work of punctuating the text. The first reason for this was practical: Ancient Greek and Roman writers often dictated their words to their scribes, who simply tried to faithfully reproduce the information so that the reader received a fairly neutral text (9, 11). The second was rhetorical. As Parkes explains, "Reading involved an interpretation of the text, an activity requiring literary judgment and therefore one properly reserved for the reader" (11).

The ancient writers saw the text much like the modern literary theorist Mikhail

Bakhtin, who expressed, "Language…lies on the borderline between oneself and the other. The word in language is half someone else's. It becomes 'one's own' only when the speaker populates it with his own intention, his own accent, when he appropriates the word, adapting it to his own semantic and expressive intention" (677). The reader received the writer's words, and then would carefully prepare to read each text aloud with the reader's— not (necessarily) the writer's—desired pronunciation and expression (10). It is important to note, as Parkes does, that the principle reason for punctuation in texts is not to point out where the reader/speaker should breathe, but to control the speech delivery and thus sculpt the meaning for the listener (19). Punctuation was used to indicate rising and falling pitches, volume, rhyming, and other key rhetorical aspects. Punctuation was (and should be) seen as a way to control the reader's understanding of the text. As Kress explains, "[Punctuation] draws the reader willy-nilly into the act of performing someone else's text in their own preferred or habituated speech-form...It is a highly effective rhetorical device, a highly coercive strategy" (*Literacy in the New Media Age* 133).

Parkes continues that such reading work took practice and skills, which students gained through the grammatical teaching method of *praelectio*. Students analyzed texts and placed marks to indicate things like linking or separating words, long vowels, or the duration of pauses (11). While stress and intonation certainly changed the performative meaning of the text, even the words themselves could be ambiguous. It was often possible to break a set of letters into different sets of words, which radically changed the meaning (and often made the reader look foolish in front of others who knew the text better) (11). To avoid mistakes, students would often seek the examples of other emended

texts by more experienced readers to guide their own decision making, a habit that would become more entrenched in future centuries (11).

The World's First Prescriptivists

Scriptio continua gave readers ample control over the text, which was problematic. Parkes explains an ancient problem that will sound familiar to modern composition instructors: Around 400 CE, scholars bemoaned the younger generations' "declining standards in the comprehension of literary language" which resulted in deteriorating integrity of their canonical texts. To preserve the original meaning (or at least their meaning,) authors began to publish textual commentaries, complete with grammatical treatises, "for the benefit of friends and posterity" (12). The first prescriptive grammar guides came out in full force. These writers were so enthusiastic about their emendations that they begin subscription services that show many readers exactly how to interpret each text, partly by adding punctuation (12-13). Around the fifth century CE, this practice becomes more standard, and many more people relied on expert guidance to understand the texts rather than simply decoding it for themselves. Punctuation shifted from being an inexperienced reader's crutch to giving a text enhanced, scholarly status (13).

While scholars are displeased with poor readings of their favorite philosophical or other popular texts, Parkes explains, theologians have even more reason to be concerned about allowing a reader to have interpretive control. Most early Christians listened to, rather than read, the Bible. "The punctuation of the Bible became especially important when it was intoned in church so that the reading and its Christian message might carry to the whole congregation" (14). Because of this, Augustine of Hippo produces special

grammatical guides that focused specifically on the Bible (14). Throughout the next centuries, different societies move in and out of power. Scholars and others try to preserve their culture and knowledge through increasingly punctuated texts, trying to maintain their integrity and facilitate their use for future readers (Parkes 16).

One of punctuation's functions is that it allows the writer to reduce ambiguity and increase reading efficiency. By using marks to clarify the boundaries of words, for example, the writer can control which letters the reader should group together, which saves the reader from performing that task or creating groups that the writer did not intend. Efficiency and clarity are not always desirable reading qualities, though. Parkes argues that 6th century CE monastic readers preferred an unpunctuated text because it slowed the reading process down. That gave the reader ample time to analyze and ruminate on a text in order to gain the greatest spiritual benefits, not the least of which was that a reader was too busy decoding the text to become ensnared in any other "harmful thoughts" (17).

The Challenges of Ancient Second Language Acquisition

Parkes explains that by the sixth century CE, Latin slips out of common usage, but it remains the Biblical language and the language of learning and the learned (20). It is important to consider the difficulty of having a lingua franca with no native speakers. Parkes shows that punctuation gradually begins to take a more consistent shape and meaning as readers experience similar problems in writing and transcribing a non-native language. Essentially, eccentric punctuation systems worked well when the reader applied them and was the sole performer of the text in their native language. When scribes in multiple countries are trying to transcribe and translate a foreign language, a

consistent set of meaningful symbols was required.

To offer a few examples, in the sixth century CE, Isidore of Seville clarifies the uses of the *comma*, *colon*, and *periodus* (Parkes 21). Houston explains that the seventh century CE Carolingian writers develop minuscules (which will become known as lowercase scripts when printers keep them in the lower drawers of printing cases.) While a stonemason's chisel required the square shapes of the majuscules (what would be known as uppercase or capital letters,) a scribe's quill could make the more fluid Carolingian miniscules (12-13). Parkes says that Anglo-Saxon writers would use the capitals (*litterae notabiliores* or "more noticeable letters") to indicate the beginning of and subject of each sentence around the seventh century CE (25). The development of a minuscule form presses writers to clarify the majuscule letterforms as well. All of the letters become more uniform as the writers develop distinct visual forms from their majuscule counterparts (23). Houston says that when there were no more native speakers to sound out Latin's word boundaries, translation became far more difficult. English and Irish priests develop consistent spacing between words around 800 CE in order to aid translation (13).

Punctuation, like literacy itself, shapes and is shaped by the needs of its readers and writers. A second century CE reader would have punctuated their own text to show their mastery of the material. A sixth century CE religious text was purposefully unpunctuated so that a monk had to slow down and spend more time with the word of God. This is in direct contrast to the Cistercian and Carthusian monasteries. As Parkes explains, from 1113 CE, they had a very consistent punctuation system because they sought to control every aspect of a monk's life, and punctuation allowed the monastic

leaders to prescribe how a text could be read (38).

Punctuation Enters the Modern Era

Stephen Greenblatt's *Swerve* argues that Renaissance occurs in part because ancient texts reappear, allowing a historically acceptable way to introduce old/new ideas that challenge the Catholic Church's stranglehold on information. Humanists in the 1300s actively gathered, translated, and discussed ancient texts, "forming the basis for what became known as 'the study of the humanities'" (23). Initially, as Parkes says, scholars vigorously tried to mimic all of the punctuation strategies of previous generations, but they were stymied by the vast inconsistencies. Ancient writers often adopted their own system of marks and used them eccentrically. When scholars tried to read the ancient grammar guides for assistance, they found that ancient grammarians often prescribed their preferred punctuation system, but these texts were often specifically railing against common usage, rather than explaining it (19). Ancient writers, just like current ones, tended to ignore prescriptivist edicts, using the language as they saw fit rather than following anyone's rules.

Throughout the 15th and 16th centuries, the printing press greatly speeds punctuation advancement, as printers' uniform metal typefaces can control printing standardization in ways that scribes' handwriting cannot (Parkes 50). New fonts (like Aldus Manutius's roman and italic fonts) and new marks (like the parentheses, upright *interrogativus,* and the semicircular comma) become available, even though they take a long time to be consistently used (Parkes 51). Altogether, the writer (and/or the printer/editor) takes more control of the reading experience. As the world becomes more literate, reading efficiency, clarity, and uniformity becomes far more important. *Scriptio*

continua and reader-applied punctuation is banished in favor of pre-punctuated texts.

Because there aren't ancient guides to follow, printers and writers gradually develop a more uniform use and meaning for each form of punctuation. Each kind of punctuation has its own history, well told by Parkes' *Pause and Effect* and Houston's *Shady Characters*. For this dissertation, it is enough to know that all the forms of punctuation are technological advances. Each evolved to solve specific comprehension and societal problems. Equally importantly, there has never been and never will be a single, unified, correct way to use any kind of punctuation. Even the spaces between words are flexible, as Twitter hashtags seem to bring a form of *scriptio continua* back into popular use (#scriptiocontinuaishawtagain #grammargeeksrule).

Controlling Mass Literacy

To understand the problems that American college composition faced when it was introduced in 1874 and still faces now, an explanation of British and eventual American literacy is required. Historical literacy statistics vary incredibly widely, largely because they are based upon indirect methods such as the ability to sign a marriage register and publication sales. But while scholars like Ian Watt and J. Paul Hunter disagree about the precise arc of the gains in literacy or the level of skill one needs to be considered literate, they agree that the percentage of British citizens who could read steadily grew from 1600 onward to near ubiquitous literacy by the end of the 1800s.

It would be difficult to understate that societal achievement. In a few hundred years, as literacy scholar Randal Holme explains, literacy has transformed from a rarely held, upper-class skill to a nearly worldwide expectancy (14). According to David R. Olson, as literacy becomes a social and economic necessity, writing education evolves,

too (283). It moved from an upper-class private or religious venture to a publicly funded, empire-building initiative and an anti-empirical force that publicly critiques the unjust power structures that persist today. Current composition pedagogy shows the traces of its many iterations along that divisive path.

Reducing the Whole to the Sum of Its Parts

Literacy pedagogy in the 1600s is deeply influenced by reductionism. It is the dominant approach to science, according to mathematician Melanie Mitchell (9). Reductionists study the world in the hopes of reducing it to its most elemental parts. By seeing how something is composed at its smallest levels, they hope to understand the whole (9). As historical linguist Robert Connors discusses, early grammarians deeply analyzed the written language, and they classified each individual punctuation mark, tense, etc., much like their contemporaries classified the genus and species of animals. "Grammar was not, in any sense, a creative field of study; rather it meant as a mental discipline, training the mind for rigorous thought" (*Composition-Rhetoric*116). Grammarians isolated punctuation from its linguistic elements as they looked for the natural habitat of commas, for example. They made extensive notes about where a comma should and should not be found, and they wrote examples of how it should and should not be used. This approach still guides the grammar guides of today, which are organized by mark and explained by rules.

Throughout this time period, punctuation is pulled in several distinct ways. It often retains its initial role as a speaking guide. For example, the colon was often used to note that words rhymed with one another (Parkes 88). But there is scholastic pressure to use texts differently. Francis Bacon, for example, makes distinctions between the

transmission of knowledge (logic) and making that knowledge apparent and accessible to a reader (rhetoric) (Parkes 88). The marks are no longer aimed at simply guiding a reader's public performance, but they are increasingly becoming an essential rhetorical tool of the writer who is writing for an increasingly broad reading audience. That reading audience is also beginning to read privately, outside of the public sphere where the educated scholars can control the message and clarify misconceptions. Writing must become easier to understand because so many more people are trying to understand it.

The Need to Control Literacy

As Winifred Horner argues, the Industrial Revolution ushers in upward mobility as the merchant class becomes established and gains in power. "Good English" becomes an essential step on the social ladder. In order to help people to gain the preferred dialect, there is a strong movement to banish Latin as the main language of art and letters; embrace teaching, reading, and writing in English; and standardize English's pronunciation and spelling. This reform is more than simply pedagogical; this is a patriotic and empire-building restructuring that aims to unite a country and a world (33-34). Literacy is no longer a luxury item for the elite. English literacy in particular is becoming a utilitarian necessity of a worldwide empire (35).

Still, the ruling class believed that literacy must still remain under tight control. A worldwide empire brings with it a new set of powerful readers who are employing a range of Englishes. To counter such linguistic diversity, scholars produce many prescriptive grammars (Parkes 90). As Parkes explains, in the late 1600s, John Locke's philosophy approach begins to shape the approach to the English vernacular, arguing that writing should be carefully regulated with a goal of achieving correct and precise

expression (90). For example, Robert Lowth's *A Short Introduction to English Grammar,*

for example, is first published in 1762 and has 45 editions by 1800 ("Lowth's

Grammar"). Lindley Murray first publishes *English Grammar* in 1795, which will go on

to be the most popular guide of the 19th century.
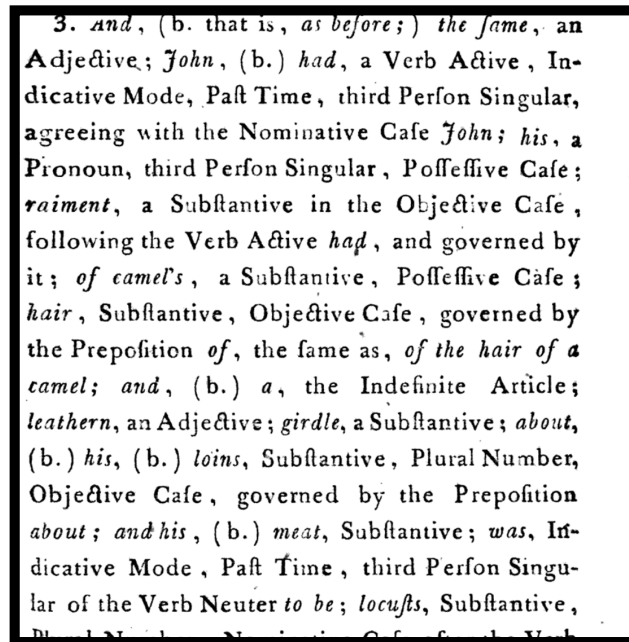
Fig. 10 A Sample of Parsing from Lowth's Grammar Guide

In 1794, Robert Lowth, like many of his contemporaries, believed that the English

language had been much improved and polished over the last two hundred years, but "it

hath made no improvements in Grammatical Accuracy" (2). His *Short Introduction to*

English Grammar was aimed to redress this, which would only take a short 183 pages

because "the Construction of this Language [English] is so easy and obvious that our

Grammarians have thought it hardly worth while to give us anything like a regular and

systematical Syntax" (vi). In order to teach his readers to express themselves with

propriety, Lowth argues that "the plain way of doing this, is to lay down rules, and to

illustrate them by examples" (xi). Since Lowth, like his peers, is sure that "there is no

Grammar in English," he plans to teach "us what is right by shewing what is wrong," a

precedent for the grammar guides of today (see Fig. 10 for an exemplar) (xi).[3]

The expansion of literacy to the middle and lower classes represents far more than just having access to written texts. It is a radical restructuring of the aristocratic social order. Like John Ward argues in 1759, "the social dynamics that lead people of middle class to seek to improve their conversational manners, … lead people of the upper class to make that improvement difficult" (qtd. in Douglas 81). As Thomas Sheridan argues, dialectical differences were (and often still are) clear demarcations in an oppressive class system, and erasing those differences would be a large step towards destroying "the odious distinctions between subjects of the same king, and members of the same community" (qtd in Andrew Elfenbein 77).

British literature historian Andrew Elfenbein explains that there were many different languages spoken in Britain, but English ruled print. This gave reformers a clear target. They could, in theory, eradicate social injustice by elevating, unifying, and standardizing the most common language, English (77). As usual, the theory is exceptionally difficult to put into practice. Without the benefit of formal education or an organized educational system, many people are not only struggling to teach themselves to read and write; they are teaching themselves to do that in a second language and in the prestige dialect that contains ample classical references.

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[3] Intriguingly, the fiction writers, like 18th-century author and printer Samuel Richardson, will shape punctuation as much or more than the scholarly texts, according to Parkes. As fiction authors try to recreate the real world for their readers, they require an increasingly broad range of punctuation marks, like quotation marks, em dashes, and ellipses (92). The novel's wide readership ensures that such marks propagate quickly, and they allow reading to become a different, private, and more mimetic experience than the typical oral performance of a text.

The American (Linguistic) Revolution

The American Revolution, understatedly, changes much in the world, including education. According to composition historian William Riley Parker, Harvard's Boylston Professorship of Rhetoric and Oratory (funded in colonial 1771 and formally established in the young American republic in 1803) was the first endowed chair dedicated to the art of speaking and writing in British North America. Before this, student writing instruction was handled piecemeal by tutors in other fields like Latin, metaphysics, and geography (Goodfellow 375). Composition historian Wallace Douglas explains that the Bolyston Professor was established to consolidate student instruction "in the important Art of Rhetoric…[and] in the theory and practice of writing and speaking well, that is, with method, elegance, harmony, dignity and energy" (76). Parker notes that that the first North American courses in speaking and writing were not speaking and writing in English; instead, they followed in the British educational tradition of teaching in Greek and Latin (10). Those languages had long been the educational standard in Britain, a standard that received more status as urbanization and industrialization took hold in the eighteenth century.

Grammar was considered an essential part of composition instruction. Horner explains that elementary school children were expected to learn Latin grammar textbooks by heart, based on the assumption that there was a universal grammar common to all languages. In theory, a child's learning of Latin's precise and unchanging grammar would give an elegant and complete understanding of their native English, which was regarded as far too changeable and degenerate to be studied directly (34). Connors explains that grammar pedagogy in the early 1800s had nothing to do with composing

essays or even sentences. In line with the scientific drive of the day to name and classify everything, students memorized immense quantities of terms, performed complex sentence analysis, and performed "suspicious patrols through other sentences looking for errors" (115). As Charles Fries shows, language study was not aimed at prediction, but at classification (qtd. in Connors *Comp-Rhet* 113). Connors continues that "pupils were made to memorize the parts of speech, all the rules of declension, conjugation, gender, number, case, degree, tense, mood, person, and countless others" (116).

The American Revolution put everything in flux. Independence brought the opportunity to create a new nation, but it wasn't clear what form this nation should take. Social scientist Maria Camboni explains that the newly independent colonies sought to create an identity that was entirely separate from what was certainly seen as a corrupt, class-bound, and immoral Britain. Sharing a common language was viewed as a serious impediment to that separation. There were public debates that demanded that the American dialect be declared a completely different language, demanding new dictionaries and grammars be compiled in the "American tongue." (112).

Camboni continues to explain that there were also public debates about breaking away from the educational focus on Greek and Latin of the inherited English educational system. John Adams had argued in favor of the formation of an American Academy. He saw language as a "foundation of science, and medium of communication among mankind, it demands our first attention, and ought to be cultivated with the greatest assiduity in every seminary of learning" (qtd in Camboni 112). Reverend James Muir argued in 1791 that Americans preferred the "*useful to useless,*" making the radical argument that American students would be better learning "the Indian languages of our

country than to speak or write Latin." By embracing the colloquial language over Greek

and Latin, power could be "wrested from the hands of kings and priests, and exercised by

its rightful owners" (qtd in Camboni 110). The country's founders worked to put that

wrested power into the hands of the people. As Connors argues, America in the first half

of the nineteenth century was "almost contentious in their rejection of imposed

hierarchies of social value," and education and language were central to that rejection.

Primary education became nearly ubiquitous in the new nation, and most white children[4]

concluded their education around the age of twelve in possession of basic literacy skills

(*Composition-Rhetoric* 113).

While elementary education was nearly omnipresent, higher education was rare,

still limited to a small number of colleges that taught an elite group of students who

primarily entered medicine, law, and clergy. This imbalance lead Alexis de Tocqueville

to say that "there is no other country in the world where, proportionally to population,

there are so few ignorant and so few learned individuals as in America. Primary

education is within the reach of all; higher education is hardly available to anybody" (qtd

in Connors *Comp-Rhet* 113). This distinct educational imbalance had profound linguistic

implications. With so few college-educated men who were limited in such a small range

of occupations, they simply didn't have enough presence to form a linguistic aristocracy,

and common usage held sway. America's melting pot melted linguistic borders, and for a

time, America seemed like a country free of linguistic class distinctions (Connors *Comp-

Rhet* 114).

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[4] The pathway to literacy was much broader and varied than the collegiate system, which
is all this writing will cover. Scholars like Anne Ruggles Gere and Tom Fox offer other
alternative pathways to literacy in this century.

That educational imbalance also meant that colleges were fairly insulated from the changes that surrounded them. College writing curriculums were remarkably similar to those taught two millennia before. According to Douglas, college students followed a prescribed course modeled on the classical rhetorical study of *progymnasmata* (78). Composition historian John C. Brereton explains that even right after the Civil War, college populations were too small to create much impact in a rapidly growing nation, schools designed to build moral character rather than transmit knowledge (3). College writing was aimed at being a mental discipline in a dead language, not a pedagogical program aimed at a practical outcome. In the mid-nineteenth century, all that would begin to change.

Going Public

As Jean Ferguson Carr et al., argue, education's purpose shifted in two profound ways throughout the 19th century. First, education shifted from being a private enterprise for the wealthy to a public institution that crossed most (though certainly not all) class lines. Second, education's goal shifted from providing "mental discipline" to more practical applications (4). According to W. B. Stephens, Britain begins to offer and monitor public education in the 1830s (15). It is tempting to think of this educational expansion in our modern terms: Britain builds charming little schoolhouses and stocks them with bright, highly educated teachers who engage their willing students with an effective pedagogy covering the basic academic disciplines of reading, writing, and arithmetic. The reality was far different. Throughout the 19th century, the educational system and the pedagogy that guide it grow haphazardly and painfully with a huge variation in the quality of instruction, attendance, curriculum, and the outcomes.

Most 18th and early 19th century schools were offered by churches and aimed at teaching religious doctrine and social discipline, rather than reading, writing, and arithmetic. Lower class students often *finished* their education by age six (Watt 38). Middle class students attended grammar schools that quite literally taught intensive courses in Latin grammar with almost no education in reading or writing English (Horner 36). While many people were given at least the minimal exposure of letters and some obtain functional literacy, few have enough literacy skills to truly grapple with the intricacies of the abstract process of reading and writing at an advanced level, which is just becoming standardized at the close of the 18th century.

The upper classes have the only consistent access to education (which is in Latin, rather than English), and they don't take menial jobs teaching the lower classes. This means that there is a significant lack of teachers who are qualified to teach reading and writing, as those hired to teach often lack advanced skills themselves. Even by 1851, two decades after Britain began public funding and monitoring of education, more than 700 teachers signed educational returns with marks, rather than signatures (the ability to write one's name is considered to be the lowest possible evidence of literacy) (Stephens 267). To compensate for a lack of trained teachers, schools offered an academic curriculum that used stringent memorization and recitation, supported by growing market of syllabaries, readers, rhetoric, and composition books. As Quaker Elizabeth Buffum Chace wrote in the 1820s, she was required "to recite every word of Murray's large volume over and over…. for months before we were permitted to tell what might be done with the smallest preposition of all" (qtd in Carr 8-9). Even college students were not allowed to question either the material or their instructors; they were simply supposed to perform tasks like

translation and parsing without comment (Carr 9).

The textbooks became increasingly important, as they were often educating teachers and students alike, but the texts were problematic. They were nearly all compilations of various materials that are gathered with little or no critical justification, and they are replicated with little justification as well (Carr 2). The early 19th-century texts tended to aim at elocution, rather writing production. Methods and teaching materials show a slow shift to more practical application (like actually writing a student's own thoughts) starting in the 1830s and a practical education that involves extensive writing and interaction with the material gains a foothold by the 1860s, presumably because enough teachers are finally capable of teaching and evaluating writing (Carr 9). Connors explains that grammar exercises evolve, too, as "creative and compositional elements are added to the memorization and dissection exercises already used" (*Comp-Rhet* 117)

Oratory Takes a Tumble from its Pedagogical Pedestal

As Wallace Douglas explains, Edward Tyrrel Channing, Adam's successor to the Boylston chair from 1819-1851, opened the curriculum to the study of and in English as America's mother tongue (75). The focus on English was seen as a way to strengthen the national identity by privileging on its own texts and in its own language (75). Channing, channeling the egalitarian views of his time, wanted to purge rhetorical studies of the classic view that the learned upper class expounded from a pedestal in order to sway their "uneducated, uninformed, and untrained audience." To make this change, his curriculum shifted from a focus on public oratory designed for an assembly to writing that would be consumed in private rooms. The orator needed to become a writer (90). Channing's initial

foray into the field lead to a rather vague definition of teaching composition. Channing's writing practices were so entangled with social practices that "'composition' … meant little more than the study of the mother tongue, or of a selection of dialectical items regarded as defining Good or Appropriate or Standard or Prestige English" (75).

Connors says that Channing's example took hold and spread, leading to a wide range of pedagogical writing practices throughout the mid-nineteenth century. Colleges proliferated, ranging from proto-universities to small frontier seminaries. While they increased in number, they stayed small and held to the same narrow purposes, still aiming at producing lawyers, doctors, and the clergy. There was a low student-to-faculty ratio, and students could expect intense interaction with their professors throughout their education (*Comp-Rhet* 9).

The Awkward Embrace of Our National Language

The Morril Act of 1862 radically changed the American collegiate landscape. It established the Agricultural and Mechanical Colleges, providing funding for the major state universities whose goal was to promote the "liberal and practical education of the industrial classes in the several pursuits and professions of life," including specifically military tactics, engineering, and agriculture. This radically expanded the student population and brought in a student body unprepared for the writing challenges of the collegiate world, and a collegiate world that was not prepared for the newly educated masses, either. Professors who had been trained to teach upper-class students in Latin using ancient educational practices to achieve philosophical purposes were now expected to teach practical material to the masses in English.

Latin's Funeral and the English Department's Beginning

The transition from Latin to English is a key part of why the field of English has struggled so long to define its content. As composition historian Robert Connors argues, "More than any other college subject, composition has been shaped by perceived social and cultural needs; less than any other college subject it has been informed by a genuine body of knowledge crying out to be disseminated" (112-13). Part of composition's undefined content problem is that the department of English was quite literally created to help the collegiate system move from its Latin base, and in that respect, as Parker discusses,any subject that used English as its primary teaching language and that wasn't housed in other traditional studies (like mathematics) could logically fall under its jurisdiction (13). Over time, the English department would become home to composition classes; linguistics; journalism; business, technical, creative, and play writing; contemporary, comparative, Biblical, classical, and global literature studies; world classics in translation; the humanities; and English as a second language, among others. Instructors from that whole range of disciplines would also be asked to teach composition, the English department's most widespread course. Such diverse scholarship approached (and still approach) teaching composition very differently.

College Composition is Officially Created

According to Brereton, college composition's official beginning can be traced to Harvard and its president, Charles W. Elliott. To be clear, Harvard's writing program was not the first college writing course since college had a long history of requiring extensive writing. Instead, Eliot allied "the modern university with a new emphasis on English [rather than Latin] and to raise writing and English literature to the level of more

hallowed studies like mathematics and the classics" (9). Writing courses also had new competition. The old college system had a unified, four-year classical curriculum; the new university had disciplines and electives that drew student enrollment away from the core curriculum. Writing courses dwindled from a four-year program to the required first-year series that remains today (9-10).

That rapid transition causes Berlin to wonder "how a course that had required three years of upper-division work in the nineteenth century was at first relegated to the freshmen year, and then by many English department members declared to be a job that should be accomplished in high school" (23). He argues that the transition is result of class bias. In 1874, Harvard President Eliot institutes an entrance exam that tests a student's ability to write in English. While certainly aiding the transition from a Latin-based curriculum to an English-based one, it also served to ensure "that the new open university would not become too open, allowing new immigrants [or recently freed black slaves], for example, to earn degrees in science or mathematics without demonstrating by their use of language that they belonged to the middle class" (23).

Connors explains that the writing entrance exam had completely unintended consequences. More than half of even their elite applicants from the best preparatory schools in the country couldn't pass the entrance exam (128). Writing skills, or more particularly, the lack of writing skills became a nationwide controversy. In response, Harvard instituted *English A*, "the first great wave of college-level remedial English." The course became a permanent fixture and a model for other universities. Out of that awkward and racially charged beginning, "Freshmen Composition was born" (129).

It is worth putting this information into a larger and contemporary framework,

too. Berlin charges that Harvard used the ability to write the national language as a way to keep out undesirable students, like recent immigrants of questionable social class. Since this occurs just a few years after the Civil War, the nation's citizens of color were already effectively excluded from higher education. As all well know, the racial segregation system solidified throughout the first half of the 20th century, and race became the prominent exclusionary factor from schools, voting, jobs, and every other societal aspect. After the Civil Rights movements of the 1960s, race cannot legally and explicitly be an exclusionary factor, but bias against language speakers was not legally prohibited. In 2017, almost 150 years after college composition's inception, Inoue argues that the university system is rife with structural racism, and it has returned to its linguistic biases as a functional (though/if not purposeful) means of stemming the tide of undesirable students (4, 55). The SAT, ACT, and EPT are reminiscent of Harvard's old entrance exams. As Inoue continues, such tests designed to make judgments about a student's intellectual abilities and offer opportunities by measuring proficiency with SEAE "with populations of people who do not use that discourse on a daily basis" (*Antiracist Writing* I6). Statistically, those linguistically undesirable students are also predominantly students of color and lower economic classes (50). This structural racism is certainly far older than college composition, but it is important to note the college composition's troubled start and the full circle back to it.

What Can a Scholar Study About Writing Anyway?

The radical expansion of the collegiate system created opportunities and problems. Brereton says, "From 1870 to 1900, the American college moved from a unified, small, elite school to a diverse, large, fragmented university organized by

academic discipline" (4). James Berlin argues that the college system needed to teach an entirely new curriculum to a completely different set of students in order to certify that they were ready for a wide range of professions. Universities expanded into graduate education to train instructors. Johns Hopkins University was first, importing European (predominantly German) educational methods and ideals (22.) Parker explains that as college instructors became more specialized, their role expanded from an instructor to an "investigator and producing scholar," and those scholars brought a "'scientific' approach to literary and linguistic research" (11).

Brereton asserts that in composition's beginning, it "did not have a research agenda of its own; the principles of writing were not in question, so what was there for a scholar to study?" (10). As Brereton continues, the general scholarship asserted that rhetoric was an art, not a science, a position that would devastate composition's position within a scientifically driven university. He says,

> Art was often related to skills that could be inculcated, which science was
> connected to knowledge, to research, in short, to new disciplines that were
> embarked on expansion. To argue that rhetoric was not a science, not a way of
> knowing, was to consign it to training, to an introductory level of college
> pedagogy…. There was nothing to discover, only some pedagogical arrangements
> to be worked out, some teaching methods to be made more efficient. And that is
> where the energy went, into teaching, correcting countless themes, and writing
> textbooks. (10)

With a teaching (rather than research focus,) relatively untrained instructors taught a vast majority of composition classes. The simplest reason for this is practical:

Student enrollment at universities doubled at the same time that composition classes began to be universally required. A huge number of new instructors were necessary, but there was little time and few resources to train them. As Parker notes, by 1883 when composition classes had spread widely across the university system, there were "no trained teachers (period). The typical professor…was a doctor of divinity who spoke and wrote the mother tongue grammatically, had a general 'society knowledge' of the literature and had not specialized in this or any other academic subject" (10). Serious scholarship was deemed rather unnecessary since the class was considered to be remedial anyway. It was assumed that anyone who could competently write in English was able to teach it. Composition classes became the place where instructors started, even instructors who were specialized or who planned to specialize in other areas. There was and is a heavy reliance on graduate students and adjunct faculty. The experienced professors who were drafted to teach composition were scholars of other fields.

Connors argues that with an untrained and often unwilling group of teachers and no body of scholarship to draw upon, the early years of the English Department (1885-1910) saw a great experimentation with and then a rapid consolidation of composition teaching methods. The consolidation was not a scientific process of study and elimination of failed techniques. Instead, composition pedagogy was based on the simple principle of pragmatic necessity: the teaching theory had to be simple enough for largely untrained instructors to implement because that is almost certainly the untrained and inexperienced who would implement them (*Comp-Rhet* 12). Advances in linguistics and other fields were abandoned because they were too complex to teach to low-level teachers in a short period of time. The textbook industry, rather than research scholarship, shaped the

pedagogy by offering an avenue to train new teachers, and composition became (and remains) the only college level course where teachers gained their knowledge of the field from student textbooks (*Comp-Rhet* 15).

Several textbooks arrive in the 1870s that mark the introduction of "grammar" into the composition classroom. It had become apparent that elementary Latin grammar studies (the typical elementary school curriculum) had done little to get students ready for collegiate writing in English (Connors *Selected Essays* 124). Rather than assuming that more composition practice might be needed or even that a young student may not be capable of transferring complicated grammar skills from Latin to English, the primary dogma insisted that earlier grammar lessons simply hadn't taken sufficient hold. Early grammar texts aimed at codifying grammar violations and prescriptive rules that should prevent that error from recurring (Connors *Selected Essays* 124). The grammar handbook became increasingly popular, becoming central to teaching and grading practices (Connors *Selected Essays* 126).

The Great Divide in the 20th Century

In the first half of the 20th century, America was busy with two World Wars and a Great Depression in between. Literature strengthens its position in English departments as the warring nation uses literature to strengthen patriotism and build national identity. English scholars embrace the study of literature as the real business of the English department, arguing that literary criticism is as scientific as other fields (Berlin 27). Connors explains that college composition courses offer increasingly more grammar education and increasingly less rhetorical study. The focus is almost entirely practical and aimed at basic correctness, "reflect[ing] the most old-fashioned, rigid, and puristic

prejudices of the nineteenth century" (*Selected Essays* 126-7).

In 1949, Rachel Salisbury describes her own 1910 grammar and punctuation instruction as memorizing "one hundred and fifty-seven rules for punctuation." Each day, she would take a few paragraphs from a famous author and locate every punctuation mark. Then, from memory, she would write above each mark "the number of the rule that governed its use....I knew those one hundred and fifty seven rules better than I know now my ABCs" (795). She continues that she remembers no explicit connection between the rules and how such punctuation placement could impact the meaning. The punctuation exercises were simply aimed at helping her to understand the grammatical elements of each sentence (795). Such pedagogical tactics come under great scrutiny a few years later, when many scholars begin to question and empirically test whether teaching grammar with such a rigid and complex structure is useful or effective.

In the mid-20th century, the cultural and social needs shift composition's pedagogical focus. A blood war like WWII may demand more patriotism through literature, but, as Joseph Harris explains, it looked like the Cold War would be won by scientific accomplishments (6). It was no longer enough to simply classify the world as it was; a superpower needed to be able to change the world. Harris continues that Cold War America obsesses over with improving the educational system to compete with Russia. Alongside the New Mathematics and the New Science, there is a strong drive to have a New English that would employ an empirically-researched, well-developed set of classroom practices (6).

The drive for a New English pushes scholarship, and Stephen North asserts that "we can…date the birth of modern Composition, capital C, to 1963" (15). In that year,

several seminal writings are published, including Albert Kitzhaber's *Themes, Theories, and Therapy*, where he continues his argument that composition classroom practices must be based on formal research on writing and learning (qtd. in Harris 6.) To create those research-based classroom practices, the NCTE appoints an ad hoc committee to survey the existing empirical research and make recommendations based on that research. That committee—Richard Braddock, Richard Lloyd-Jones, and Lowell Schoer—publish their results in the pamphlet, *Research in Written Composition* (RiWC).

Explicating Grammar's Most Cited Quote

While it covers the breadth of composition research, RiWC has one quote that is crucial to my dissertation topic: "The conclusion can be stated in strong and unqualified terms: the teaching of formal grammar has a negligible or, because it usually displaces some instruction and practice in actual composition, even a harmful effect on the improvement of writing" (37-38). This quote has been cited thousands of times in subsequent work, and it seems to condemn the explicit teaching of grammar, which goes against the primary argument of this dissertation. As with many strongly worded soundbites, the context is often overlooked, which allows the quote to be easily misconstrued.

As RiWC explains in the beginning of their report, it is crucial to define the important terms. *Formal grammar instruction*, as it is being used in the study, refers to the teaching practice that instructs students to identify grammatical items in sample sentences, labeling words with terms like *verb, adverb*, etc. Teachers then use objective testing (like multiple choice or true/false questions that also use sample sentences) to gauge student mastery, rather than evaluating student writing. Formal grammar

instruction is abstract, decontextualized, based in another language, and rarely applied to actual writing practices. It is unsurprising that it fails in the empirical models cited by the RiWC. (It is more surprising that such methods are making a comeback now, which will be discussed soon.)

To be clear, RiWC does not say that FYC should never explicitly teach grammar or other mechanical writing skills. In fact, two paragraphs above that famous quote, RiWC cites Butterfield's study that showed that students do improve punctuation strategies when given direct instruction and when they are given opportunities to write their own sentences (37). The report goes on to say that multiple scholars, including Kitzhaber, have written about teaching techniques that described student gains from productive programs and procedures. Because those reports were descriptive and analytic, rather than controlled empirical studies, they are mentioned but were excluded from the overall findings of RiWC (38).

Lloyd-Jones, one of RiWC's authors, later critiqued the report itself. He argues that the RiWC was supposed to be considered a starting point for research, rather than a definitive guide to all composition teaching practices (74). Indeed, RiWC contains its own warnings about the research findings in another highly quoted passage: "Today's research in composition…may be compared to chemical research in the period of alchemy; some terms are being defined usefully, a number of procedures are being refined, but the field as a whole is laced with dreams, prejudices, and makeshift operations" (5). RiWC uses a large portion of the report to lay the groundwork for future empirical work, explaining the experimental research process for future researchers. They encouraged scholars to carefully design studies that answered new questions. They

realized the difficulties of empirically testing something as variable as teaching writing, and they encouraged scholars to couple their "honest search for knowledge…with a rather antithetical unwillingness to believe anything without being show, moderated a little by the realization that some things cannot be shown as conclusively as others" (23).

The RiWC encourages a vast amount of scholarship, and it presses the field to explore well beyond formal grammar instruction. The next half century would change so much that now many writing instructors have no formal grammatical knowledge at all. But in one prominent way, formal grammar instruction remains at the center of college pedagogy: punctuation. FYC textbooks and modern writing guides seem to follow the reductionist/prescriptivist model used by Lowth in 1794 (and frustrated Latin scholars in 4th century CE). While modern explanations have been adapted for a text that is read silently rather than out loud, punctuation resources are still organized by mark, even though students struggle mightily (or refuse to try) to navigate them. Indeed, modern grammar guides have become even more reductionist than Lowth's version. Lowth directly compares the marks, but modern guides offer few clear comparisons. Further, Lowth could be assured that his students would have a vast lexicon of grammatical terms that would make his descriptions accessible to his readers, but modern students do not possess an extensive or explicit grammatical vocabulary for reasons that will be discussed throughout this chapter.

Writing guides study punctuation so closely that it is impossible to see the larger ecology that punctuation functions within. In essence, learning from punctuation guides is much like trying to learn a second language by reading a dictionary. The problem isn't that the information about each mark isn't accurate or useful; the problem is that

language is a series of relationships that must be understood. It will take composition theory until the late 20th century to solidify this viewpoint, following a long, twisting theoretical path.

Empirical Evidence that Punctuation Can Be Taught

After the RiWC, composition scholars actively researched new teaching methods, integrating the advances in linguistics and other sciences. Empirical testing was prevalent. But, like the cultural shift towards a New English, the composition community radically shifted away. In 2000, Robert Connors' "The Erasure of the Sentence" examines how 1960s sentence-based pedagogies—including generative rhetoric, sentence combining, and imitation exercises—rose in prominence, were empirically tested and found successful, and then effectively erased from composition pedagogy. Francis Christensen's generative rhetoric reacted against the prescriptivist, formal grammar practices and argued that students could gradually build more complex and sophisticated sentences, rather than just diagnosing abstract examples (99). In 1978, Lester Faigley ran a full-scale empirical examination of Christensen's methods with four experimental and four control sections that confirmed that students who were taught with Christensen's method produced writing that was "measurably more mature" and "received better average ratings" than students who were taught with "blind holistic readings" (qtd. in Connors, "Erasure of the Sentence," 100).

Sentence-combining exercises, based on Chomsky's transformational grammar (TG), took short sentences and, as the name implies, combined them in order to give students practice "with embedding, deletion, subordination, and coordination" (Connors, "Erasure of the Sentence," 103). Donald Bateman and Frank J. Zidonis studied sentence-

combining strategies, and they found that students taught TG-principles reduced errors and developed the ability to write more complex sentences. Kellogg Hunt, also using TG as a base, created the T-unit as a way to more empirically measure sentence sophistication than simple word counts (Connors, "Erasure of the Sentence," 104).

Imitation exercises also became popular in the 1960s. Just like ancient rhetoric students, writing students would take examples of good sentences and imitate their structure (Connors, "Erasure of the Sentence," 100). Rosemary Hake and Joseph Williams ran experiments that compared imitation to generative rhetoric. They found that students who were taught to imitate writing showed more improvement with fewer flaws than sentence-combining pedagogy (qtd. in Connors, "Erasure of the Sentence, 102).

Errors and the Many Expectations of Errors

There was certainly a need for such pedagogy. As Mina Shaughnessy's *Errors and Expectations* explains, the Civil Rights Movement of the 1960s pressured colleges to admit "students who were not by traditional standards ready for college" (1). Just like the Morrill Act of 1862, politics had changed the collegiate landscape, and just like a century before, the educational system itself wasn't ready for the change. Shaughnessy's City University of New York guaranteed any NY city resident with a high school diploma a tuition-free seat in any of its 18 colleges, and the city responded. Their classes were soon filled with the

> academic winners and losers from the best and worst high schools in the country,
>
> the children of the lettered and the illiterate, the blue-collared, the white-collared,
>
> and the unemployed, some who could barely afford the subway fare to school and a
>
> few who came in the new cars their parents had given them as a reward for staying

in New York to go to college; in short, the sons and daughters of New Yorkers, reflecting that city's intense, troubled version of America. (2)

Shaughnessy and her colleagues find themselves on the frontier of remedial writing (4). She claims that there were no studies, guides, or suitable textbooks available to help a group of scholars trained in the previous centuries' belletristic achievements to get a group of illiterate students to write (3). Shaughnessy and her peers struggle to define this new collection of educational needs and to find some way, any way to remedy it.

Shaughnessy's description of her students would neatly fit my students, even though we are teaching nearly fifty years apart. For her students, "academic writing is a trap, not a way of saying something to someone" (7). By committing their ideas to a teacher's scrutiny, students expose everything that they don't know to "a stranger who reads [their text] with a lawyer's eyes, searching for flaws" (7). Then and now, such a process can be paralyzing. Students know from past experience that their writing will betray them and show all their educational failures. They have repeatedly asked for help from a system that can offer very little besides judgment.

Shaughnessy's text certainly includes ways to help remedy a student's writing mistakes. Her focus on error is not by her choice, though; searching for errors is a prejudiced obsession of the system that she is working in. The academy and the professional world tend to classify students by the mistakes that they make, rather than other, more positive attributes. Through a deep examination of student writing and abundant examples, Shaughnessy classifies student stages of development and offers advice on how to help them progress. Shaughnessy includes strategies like sentence

combining into a larger program of lesson strategies. Her work is not intended as a "tightly and fully structured writing program." Instead, she offers new way for teachers to view the remedial population. She wants to reorient a group of instructors as much as she wants to teach her students (6). Rather than seeing students as slow, non-verbal, indifferent to and incapable of academic excellence, Shaughnessy paints them as beginners who will always make mistakes and who should be allowed to learn by making them (5).

The errors and expectations of the college instructors are far more troubling to Shaughnessy. Public schools had been desegregated in 1954, and all public segregation was legally abolished in 1964. The massive wave of college admissions starts just six years later, and Shaughnessy's book is published only seven years after that. While the Supreme Court could order physical integration, changing a highly biased system is a long (and not nearly over) process. Shaughnessy's ideas provided one small step by pointing out that the educational system itself needed to do far more to be equitable than just to place students into the same room.

Trying to Change an Unjust System from the Inside

The Conference on College Composition and Communication (CCCC) agrees with Shaughnessy that the system—not (just) students—needs remediation. Compositionists' strong desire to support the Civil Rights Movement prompts the CCCC to issue the "Students' Right to Their Own Language" (SRTOL) in 1974, which embraces new concepts of linguistic diversity over such a rigid focus on grammatical correctness. It states, "We affirm the students' right to their own patterns and varieties of language—the dialects of their nurture or whatever dialects in which they find their own

identity and style. Language scholars long ago denied that the myth of a standard American dialect has any validity" (qtd. in Perryman -Clark et al., 19). African American Language literacy scholar Geneva Smitherman, one of the document's collaborators, explains that the SRTOL was "a clarion call on behalf of the language rights of ALL students in composition classes, including the currently emerging populations of speakers in English varieties from nations and communities outside the United States" ("Foreword" emphasis in original vii). Drawing on sociolinguistic advances from scholars like Chomsky and Hymes, the document challenged the field to reconsider concepts regarding language appropriateness, as well as Latinate and prescriptivist grammar teaching methods (vi). It has had ample critics and criticism since it was published, but problematic as the document is, it "laid the foundation for a national policy on multilingualism" according to Smitherman (ix). It asked bold questions and, as scholarship is supposed to do, it started decades of discussions assuming that all the answers had not yet been found.

Nearly fifty years after SRTOL's publication, these two points—students are entitled to their dialect and there is no standard American dialect—still frustrate its critics and often confuse its supporters. As Smitherman noted, "many compositionists and other language arts professionals greeted the Students' Right policy with high enthusiasm, but still a great deal of lingering confusion existed: 'Well, then, if I don't correct grammatical errors, what do I do?'" (72). The mistaken concept that composition studies will not teach writing conventions in order to honor other cultures is ludicrous and damaging. This is a misinterpretation that deserves direct explication.

Smitherman wrote a retrospective essay that addressed this point. She explains

that the document focused on the right to *speak* and to be respectfully *heard* in the dialect of one's choice ("Student's Right" 143). SRTOL advocates that students learn the writing conventions of Edited American English (EAE), stating that "dialect…pays little if any part in determining whether a child will ultimately acquire the ability to write in EAE" ("Student's Right" 143). In fact, there was little need to advocate for teaching EAE's written conventions because, as Smitherman notes, when SRTOL was written, composition courses taught spelling, punctuation and usage almost exclusively ("Student's Right" 143). It was revolutionary to privilege content over rigid adherence to the mechanical standards of an idealized grapholect ("Student's Right" 141). In other words, SRTOL gave composition instructors permission to validate the ideas a student expressed, even if the expression itself had mechanical flaws. That did not excuse the field from teaching students to remove the flaws; it just challenged teachers to see beyond the flaws to encourage the student to continue to develop. Smitherman acknowledges that SRTOL was certainly not perfect, but at least it was action in a time when many privileged people sat back in silence, and SRTOL was a small step towards reforming the educational system from the inside ("Student's Right" 141).

As many articles, books, and edited collections discuss, the SRTOL has not aged well nor been interpreted as intended by many inside and outside of the field, who often see it as a way to avoid teaching SEAE to students fluent in other, non-privileged dialects. Since the topic is covered in such depth by such a range of scholars, this dissertation will not take up this particular critique, though it will resurface in the description of this dissertation's exigence. Instead, it will show the SRTOL was a foundational document that shifted composition pedagogy. As Smitherman argues,

[The SRTOL] was a policy formulated to address the contradictions developed in the midst of a major paradigm shift in higher education, itself the result of a major paradigm shift in the social order. Language arts professionals across the Nation and on all levels were encountering the new brand of students and experiencing classroom crises similar to those of composition instructors. The CCCC Students' Right policy opened up a national dialogue about language diversity and professional responsibility. ("CCCC's Role" 71)

As with all major paradigm shifts, the SRTOL had consequences that are still an active part of the composition field. To return to Connors' argument, the 1960s had developed multiple pedagogical pathways that focused on the sentence and sentence-building and that were distinctly *not* formal grammar instruction. Connors explains that from 1976-1983, no fewer than 49 articles in major journals focused on some aspect of sentence-based pedagogy ("Erasure of the Sentence," 107). He says,

The research was there; the pedagogy was usable by almost any teacher and provided results that could be seen impressionistically as well as measured: the method had powerful champions…the venerable Kellogg Hunt was suggesting that sentence-combining was so useful that it should take up all class time in a first-year course, that 'in every sense, sentence-combining can be [a] comprehensive writing program in and of itself, at least for one semester.' (qtd, in Connors, "Erasure of the Sentence," 107)

Then, as Connors describes, composition abandoned sentence-based pedagogy nearly completely. The scholars who argued that "students needed to write good sentences before they could write good essays" disappeared from publication (110). To

briefly summarize Connors' extensive exploration of this massive shift in composition pedagogy, anti-formalism, anti-scientism, and anti-empiricism supplant all sentence-based pedagogy (110, 117). Scholars like James Moffett argue that composition courses should focus on the bigger picture like meaning and motivation, rather than atomic principles like the sentences themselves (qtd. in Connors, 110). Creativity and self-expression become far more highly valued as any formal requirements are viewed with increasing suspicion (115). Composition distances itself from empirical measurement altogether in its quest for higher-order skills that defy quantitative measures.

Writing Process Theory and the Social Turn

Russel K. Durst's "Writing at the Postsecondary Level" surveys empirical and non-empirical composition studies that span from 1984–2003. He explains that this time frame represents "a sharp decline in empirical studies of writing at the postsecondary level, in favor of more humanistically grounded theoretical and critical work" (1655-1656.) Looking broadly at the whole, Durst argues that the field of composition studies began the 1980s with writing process theory and then moved "to a more social, ethnographic, and political examination of context," which is generally called composition's *social turn* (1656).

As the name implies, writing process theory focuses on how the writer works through the process of writing, and Linda Flower and John R. Hayes' cognitive rhetoric had the most impact on the writing process movement. Cognitive rhetoric challenges students to "build or create new concepts out of the raw material of experience" by studying "writing as a problem–solving, cognitive process" (468). Previous scholars had suggested that writing is used to make previously formed intellectual discoveries

available to other audiences, but Flower and Hayes argue those ideas are more myth than reality. Instead, Flower and Hayes push students to see that "writers don't *find* meanings, they *make* them" (italics in original, 467.)

To guide their pedagogy, Flower and Hayes had novice and expert writers explicitly describe all their thoughts about their writing as they work through the writing process. By studying their verbalizations, Flower and Hayes could specify how people actively represent the aspects of a rhetorical problem and how representing the problem helps writers to generate new ideas, as well as delineating any specific differences between the ways that good and poor writers tackle their writing problems (469). With expert tactics delineated, novice writers could adapt those successful writing techniques and be able to more fully understand the rhetorical situation, defined by using Lloyd Bitzer's concepts of exigency, audience, and constraints (qtd. in Flower and Hayes 471). Writing process theory, exemplified by Flower and Hayes' cognitive rhetoric, defined the writer as a "more or less universal or generic student, with no discussion of potential cultural or gender differences, and a mainly rational writer, responding to the demands of the task in an effort to produce a successful piece of writing for the audience in question" (Durst 1657). In other words, the pedagogical focus studies a generic students' skill gaps and seeks to correct them with better writing processes.

Composition's Social Turn

David Bartholomae (Bartholomae)can be credited with beginning the social turn with his 1985 essay, "Inventing the University." Bartholomae argues that students do not learn to write as a monolithic and unified process; instead, Bartholomae argues that students learn (or at least try to fake the competence in) the language of every discipline

whenever they are instructed to write within it (605-606). While writing process theory focused on making the writer aware of the audience's needs, Bartholomae argues instead that students must become fluent in the reader's language first by becoming aware of the commonplaces of each discipline. The writer must be able to "see herself within a privileged discourse, one that already includes and excludes groups of readers. She must be either equal to or more powerful than those she would address" (609). The central problem of academic writing, according to Bartholomae, is not that the students don't have enough tenacity or that they don't have enough discipline; the central problem is that students are writing for an audience that already knows more about their topic than they do, and the reader has a full understanding of the commonplaces that should be used, too (610). Because students lack awareness or understanding of the commonplaces, they cannot fully mimic them and decrease their credibility in the process.

Bartholomae presses the field to expand on the main premise of writing process theory, arguing that it is inadequate to simply consider that a writer is solving a problem. The writer must also consider how "subjects are located in the field of discourse" (610). Bartholomae is concerned with "the difficult, and often violent accommodations that occur when students locate themselves in a discourse that is not 'naturally' or immediately theirs" (615). Patricia Bizzell agrees, arguing that students need less introspection and more community engagement (213).

The Social Turn's Impact on Grammatical Errors

As Deborah Mutnick and Steve Lamos explain, Bartholomae's approach also shifts basic writing pedagogy. The field shifts away from Mina Shaughnessy's error-based theories and embraces a different vision. Writing instructors should consider that

grammatical errors are not a sign of linguistic or cognitive immaturity, but a sign of lack of academic socialization, and thus likely to fade as the writer masters the commonplaces of an academic audience. Generalized problem-solving skills, like those espoused by cognitive rhetoric, have limited use, especially when compared to the ability to see the conventions of and adopt a field-specific schema (612).

Bartholomae offers advice that is specific to this dissertation's argument in regard to basic writers, which like Pat Bizzell, he defines as "students who are refused unrestrained access to the academic community" (614.) Bartholomae argues that "the cognitivist's failure to acknowledge the primary, shaping role of convention in the active composing makes them 'particularly insensitive to the problems of poor writers'" (615). To help initiate student writers into our disciplines, composition theorists should demystify the field's conventions so that they can offer more precise and useful advice. They should also study patterns in student writing in order to see where students are failing to match the conventions (615).

Durst argues that composition's social turn changes pedagogy, but it also changes how students are described. Writing process theory describes students by their deficits, but those deficits tended to be skill-based. Students were lacking in "writing and thinking skills, a certain lack of discipline and intellectual tenacity, the tendency to conform and to avoid risk" (1657). While hardly flattering, this portrayal of students paints them as missing a set of skills that composition courses could provide. Presumably, students can be taught strategies to gaining more discipline or take more intellectual risk, for example.

With the social turn, the writing process slips out of focus and a student-centered pedagogy emerges. Scholars abandon controlled empirical studies for more ethnographic

research, and the field begins to study the commonplaces of writing across the disciplines (Durst 1658). Scholars like Pat Bizzell, Perl and Wilson, and Sommers offer a distinct and "increasingly anti-cognitive/social science perspective" (Durst 1658). They engage in more qualitative and ethnographic approaches that focus on political awareness and action rather than controlled empirical studies (1658, 1660.) Durst remarks that numerous scholars examine writing as a whole and FYC in particular as a "vehicle for students' personal and intellectual development, understanding, and creative expression" (1659). While this certainly sounds positive, Durst is struck by how this social turn pushes composition specialists to redefine composition students themselves in terms of their ideological failures and shortcomings, rather than having "academic, linguistic, or literary" weaknesses (1656). The writer is flawed and in need of ethical correction, rather than simply producing flawed writing.

To provide that correction, the field embraces a more politically motivated pedagogy, influenced by Paolo Freire, Raymond Williams, and poststructuralist theory (Durst 1661). Durst argues that the field redefines the typical student, arguing that the average FYC student is not "disadvantaged, but ...a somewhat privileged middle-class person in need of greater awareness about social inequities and improved ways of critiquing dominant discourse for the purpose of uncovering such inequities and helping to effect change" (1661). As Paine argues, the primary pedagogical goal shifts to "influence (perhaps manipulate is the more accurate word) students' values through charisma or power" and "inculcate into our students the conviction that the dominant order is repressive" (qtd. in Durst, 1661). It isn't just the middle-class, presumably more college-ready students who are redefined. According to Mary Louise Pratt, basic writing

pedagogy is reconceptualized, too. In the 1970s, Shaughnessy's error-based pedagogy assumes that students make mistakes that vary from the dominant discourse and should be corrected. In the 1980s, Bartholomae's strategies assume that a student needs more socialization into the academic community. The next wave of scholarship questions the overwhelming and overbearing privilege of academic discourse as a whole.

The Battleground of Remedial Writing

Mary Louise Pratt argues that composition as a whole and basic writing in particular become far more politically charged, seen as an intersection of cultures that "meet, clash, and grapple with each other, often in contexts of highly asymmetrical relations of power" (34). The field is charged to reconsider how it marginalizes basic writing students through labels like "beginners" or "outsiders," and their literal placement into remedial classrooms that are outside the typical, credit-bearing educational system (Mutnick and Lamos 25). Bruce Horner argues that writing errors should be viewed as "flawed social transactions, instances of a failure on the part of *both* the writer and reader to negotiate an agreement...as to the kind of significance to be attributed to the written notations offered" (qtd. in Mutnick and Lamos, 25). In other words, both the instructor and the student need become more aware of each other's cultures and both sides need to adapt.

Throughout the 1990s and reaching into next century, the composition course becomes increasingly explicitly political. As Bizzell argues, her primary purpose is to "interest [her students] in a social justice project for which they may not presently see any compelling reason" (qtd. in Durst, 1662). Composition research describes courses aimed at "an acknowledgement of middle class privilege; a critique of consumerism; an

awareness of class, race, and gender discrimination; a willingness to question injustice; and a desire to correct inequities" (Durst 1662). It isn't just the students that need to change; the institutions need to change, too. According to Mutkin and Lamos, scholars like Min-Zhan Lu, James Paul Gee and Brian Street, along with other New Literacy theorists start to shift the composition dynamic. They assert that the field has spent too much time thinking about the changes that the students must make to appease the institution. Instead, the institution should spend more time thinking about the impact of its dominant culture upon the student (25). They argue that "literacy is always ideological, local, and inflected by specific historical and social circumstances as opposed to being universal, natural and normative" (Mutkin and Lamos 26).

This turn in composition scholarship has its critics, too. Placing a heavy focus on political ideals eliminates class time that had been and could be spent on day-to day writing skills (Mutkin and Lamos 26). Maxine Hairston challenges such a heavy-handed political agenda as "putting dogma before diversity, politics before craft, ideology before critical thinking, and the social goals of the teacher before the educational goals of the student" (qtd. in Mutkin and Lamos 26). Durst questions such politically motivated FYC courses, arguing that his research shows that students actively resist such political challenges. Students continually found ways to avoid writing about the politically-charged doctrines that centered such courses. Along with other scholars, he found that such confrontational pedagogies are "ineffective and alienating," and preferred to offer alternative approaches to "practical skills and certification" with the subtler addition of critical challenging a student's pragmatic views (1663).

Ironically, I believe the ideologically driven composition course disadvantages the

struggling student the most, even though the field's dialogue is usually aimed at bringing underprivileged voices into the mainstream discourse. Many college courses offer no appreciable way for students to show off their newly expanded political views, but lab reports, essay questions, and other writing-based assessments offer many ways to show a student's understanding/misunderstanding of writing conventions.

Creating Meaning Through Multiple Modes

Multimodal composition shows another primary shift in composition pedagogy. While composition still has a deeply political aim of informing and improving the students' ethical ideals, multimodality encourages composition to consider how our students are already authors who are fluent in a variety of writing contexts and who already fluently use a variety of modes to create meaning. Multimodality extends the definitions of writing conventions, pushing past the historical privilege of the written words to see the many modes like that create the meaning of each text. The focus shifts away from just improving the writer to improving the writer's relationship with the text.

Multimodal composition is based in Gunther Kress's multimodal social-semiotic theory (MSST). MSST is derived from M.A.K. Halliday's systemic functional theory of grammar (SFG). While SFG was primarily interested in how people use language to create meaningful interactions, multimodal social-semiotic theory expands far past SFG's linguistic focus into all modes of communication. Kress explains that a mode is "socially shaped and culturally given semiotic resource for making meaning," so MSST looks at every communication mode that people use to create meaning through social environments and in social interaction (*Multimodality* 54). The sign is central to that interaction. Each sign is a fusion of form and meaning (62). A writer always *makes* a

sign, rather than simply *uses* an existing one because meaning is constantly made through social interaction, rather than existing as a static entity (62). Kress limits modes to resources that are specifically used in representation and communication, including examples like "image, writing, layout, music, gesture, speech, moving image, soundtrack, and 3D objects." These modes are distinct from objects like clothing, furniture, or food which have a cultural meaning, but aren't specifically created to transmit a message themselves (*Multimodality* 79).

Based on Kress's ideas, Claire Lutkewitte shows that multimodal composition is concerned with the final product, but it is more focused on the composition process itself. Each author uses multiple modes at once, all of which contribute to the overall meaning of the text. The composition process is not limited to just the author's immediate writing experience; the writer and the entire writing process "is situated in and thus shaped by context, history, audience, place, time, and other factors" (3). A writer must consider all these factors to consistently create effective texts.

Multimodality is not a new idea in writing studies. As Cheryl Ball and Colin Charlton explain, while multimodal concepts have had increasing acceptance in writing studies since the turn of the century, writing is and always has been a performative, multimodal activity. Certainly, writing studies focus on and greatly privilege the linguistic mode of communication, but every mode of communication is considered essential (43). Even in a primarily alphanumeric text, like this one, a writer chooses modes like typeface, color, and size, and each mode creates meaning.

Some modes transmit a more consistent meaning than others, but none are completely stable. For example, writing students usually assume that our words have a

stable meaning, thinking that a typical language speaker could grab a dictionary, find the meaning of any word, and generally understand how another language speaker would use it. But, as Dylan Dyer argues, language isn't determined by a dictionary (which often lists many definitions for the same word) but by the writer and reader's motives and contexts. Every important term requires careful framing because every word's meaning is so unstable (25). (The term *grammar*, with its plethora of definitions, is a perfect example.)

Punctuation is no different. In agreement with Doug Downs and Liane Robertson, my dissertation argues that writing integrates form and content as specifically "*arranged material*….[and] writing does not equal grammar or formula" (italics in original, 108). Students cannot follow a set of rules to become good writers. Every text is created to solve specific problems, and the writing must adapt to those problems. Unlike the prescriptivist views of the past, I argue that punctuation is as unstable as the words that it frames; the same punctuation can transmit a wide range of meanings depending on its context. For example, in professional writing, we expect that every statement will be framed by a capital letter and a period; those punctuation choices have no emotional message. Texting has different punctuation conventions. In texting, even the addition of a

capital letter can translate into emotional states, at least among my daughter and her friends (which my students also corroborate.) She informed me that I often come across hostile in my texts because I use such flagrant capitals and periods. While she acknowledged that capitals and periods were essential in
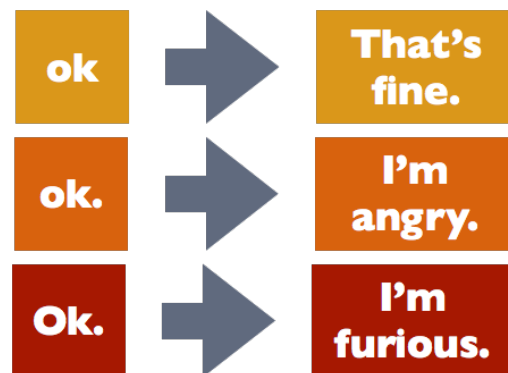
Fig. 11 The emotional aspects of texting punctuation

some writing, they transmit a different message in her texting dialect (see Fig. 11).

Summarizing the Whole Writing Timeline

In summary, writing developed throughout time, creating an increasingly complex symbol system to accommodate for the increased literacy needs of its societies. As literacy grew worldwide, writing developed new conventions that granted the writer more rhetorical power over the reader's interpretation of that text. American college composition education began as the Western world shifted from Latin to English as the lingua franca, as writing displaced public oratory as the primary means of mass communication, and as the whole country began to shift from having an enslaved population to a free one. Those transitions were not easy. The pedagogical shifts that they inspired were not always informed by rigorous study or universally applied. Throughout composition's tumultuous existence, the explicit teaching of grammar and mechanical conventions has cycled from a key rhetorical feature of a spoken text to consuming the entire composition curriculum to disappearing from the curriculum altogether. Composition studies is already shifting back to a more material, embodied, and ecological approach to writing that takes the entire social and historical context into account as it helps students to develop habits of a disciplined writer.

CHAPTER 4: THE EXIGENCE

How Big is This Problem?

College students enter with a vast range of writing skills. As Mina Shaughnessy describes them, there are students who are ready for college writing, students who survived high school but clearly did not thrive there, and students whose writing seems so far behind their peers that they may never catch up (2).To accommodate that range, Idaho State University, like many other colleges and universities, places students into three possible composition courses: English 1101P, 1101, and 1102. English 1102 meets the university's general education requirement. Students may only enroll in 1102 if they have successfully taken English 1101/1101P or if their SAT writing score is 570+ or the ACT English score is 25+. Students can enroll in 1101 if they have an SAT writing score between 18-24 or an ACT English score between 450-560. If a student's test scores fall below those ranges or the student does not have test scores, they must enroll in English 1101P.

Before June 2015, ISU placed its lowest scoring students into English 0090, a remedial course that did not grant any collegiate credit. In June 2015, the Idaho State Board of Education disallowed all non-credit-bearing remedial coursework at state universities and colleges ("Remedial Education"). Therefore, in Fall 2015, ISU began offering English 1101P to replace English 0090. While the name and the ability to earn credit changed, the placement standards did not substantially change; in general, a student who would have been placed into English 0090 would now be placed into 1101P instead. Because of that recent change, the data for English 0090 is much more extensive, and I will use ISU's statistics that combine English 0090 and 1101P. ISU computer analyst

Doug Fleming reports that from Fall 2010-Fall 2015, ISU enrolled 3,298 students into 0090/1101P, 8,791 enrolled directly into 1101 (never enrolled in 0090/1101P), and 2,601 enrolled directly into 1102 (never enrolled in 0090, 1101P, or 1101.) (See Fig. 12).

ISU Direct Enrollment Fall 2010-Fall 2015

Less than 75% chance of passing a writing-heavy college course — 0090/1101P

75% chance of passing a writing-heavy college course — 1101

Prepared to pass a writing-heavy college course — 1102
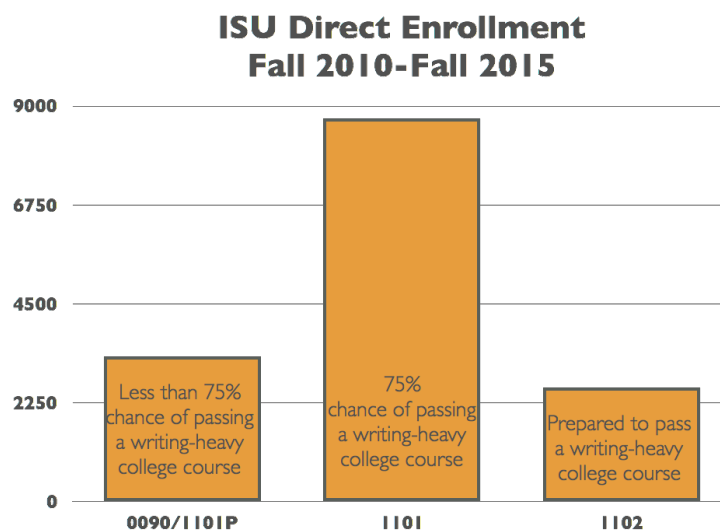
Fig. 12 ISU Writing course placement, data provided by Doug Fleming

In 2011, Idaho adopted the Common Core Standards for K-12 with full implementation in 2013-2014. The Common Core Standards set specific learning goals for each K-12 grade, which also includes using periodic unified assessment measures. Idaho chose the SAT as its assessment measure for high school students, and Idaho requires that all 11th-grade students take the SAT as a high school graduation requirement. Because of this, the SAT is now the predominant placement test for incoming ISU students. In 2016 and 2017, only 62% and 60% respectively of Idaho high school students reached the SAT College and Career Readiness Benchmark, and at ISU in particular, about 40% of incoming freshmen will require remediation (see Fig. 13). According to the College Board, the non-profit organization that administers the SAT, "Students with an SAT Evidence-Based Reading and Writing (ERW) section score that meets or exceeds the benchmark have a 75% chance of earning at least a C in first-semester, credit-bearing college courses in history, literature, social sciences, or writing classes" ("Benchmarks Defined"). So, in Idaho, just three out of five high school students

have the basic reading and writing skills to have a 75% chance of being able to pass predominantly reading and writing-based college courses.

ISU, the open admissions university for the state, has considerably higher numbers than other state universities and lower numbers of remedial students than other state colleges (see Fig. 13). Altogether, there is a large need for effective ways to improve remedial writing and reading skills.
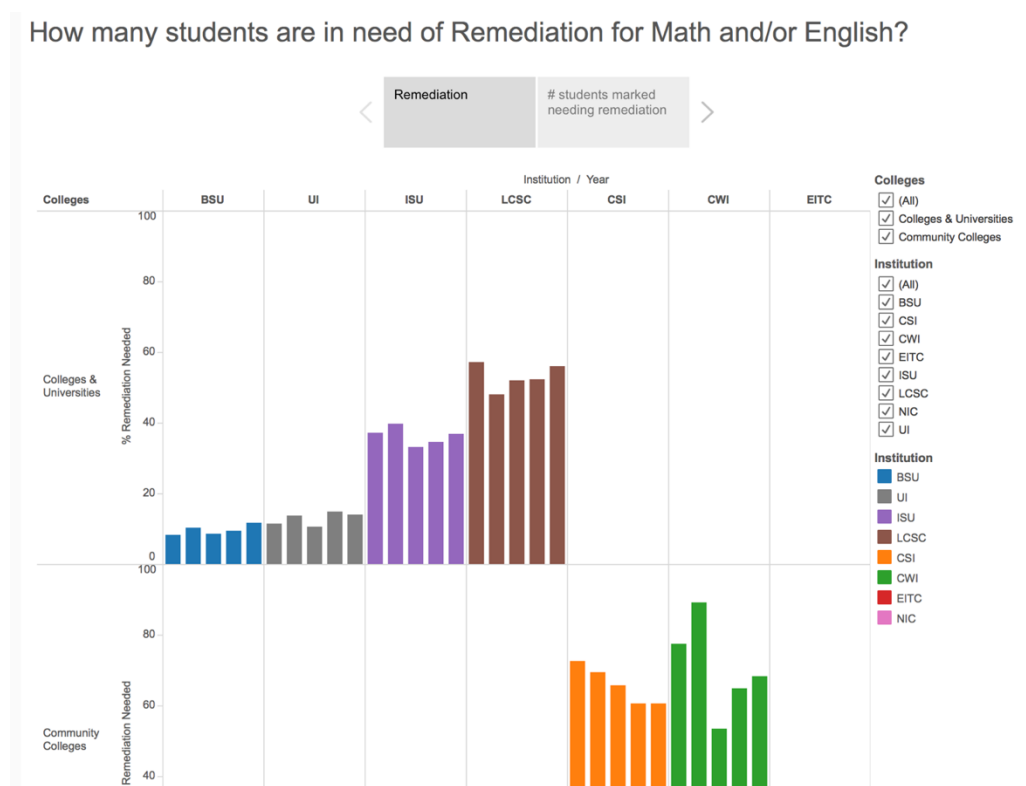
Fig. 13 Idaho College and University Remediation Statistics,
Provided by Educational Analytics System of Idaho

What the Placement Tests Measure

To determine if students have college-ready writing skills, the most current version of the SAT has students answer an extensive set of questions, specifically "A Writing and Language Test focused on the assessment of students' *revising* and *editing* skills in the context of extended prose passages (sometimes associated with one or more

informational graphics) across a range of content areas" (emphasis added, "The Redesigned SAT"). This revising and editing testing was 45% SAT question bank in the reading and writing section ("Test Specifications" 62). Since these are the same skills that composition courses assume that students will improve by editing practice, this test is a reliable measure of whether students are likely to be successful at catching and correcting unconventional mechanical writing practices in a college course. By test score, 78% of ISU writing students have known skill gaps in this area.

Why Have the Skill Gaps Developed?

Federally mandated outcome testing has become increasingly part of our educational landscape at the K-12 grade levels. The Every Student Succeeds Act (ESSA), effective 2017-2018, is the replacement for the No Child Left Behind Act (NCLB). While ESSA is more flexible and places more responsibility in the states than NCLB, it still maintains rigorous standardized testing, including annual evaluations from grades 3-8 and at least one standardized exam in high school. Idaho, for example, uses the SAT exam to meet this requirement, so every Idaho high school junior is required to take the SAT.

States are also required to adopt some kind of challenging academic standard in reading, math, and science, and 45 states have fully adopted the Common Core. The Common Core sets a schedule for educators so that all will "work under the same guidelines for what students need to know and are expected to do" ("Common Core State Standards"). Essentially, the Common Core establishes baseline skills and provides a teaching timeline for every basic skill in the core areas. In particular, the English Language Arts standards "place a new emphasis on nonfiction content, increasing text

complexity, the ability to write logical arguments, and literacy skill building across all subjects" ("Common Core Talking Points "). The Common Core also establishes a standardized testing schedule to assess that students are hitting the established benchmarks. Teachers and administration alike are pressure to justify their teaching methods with empirical data that shows that it's effective.

In 2014, Debra Myhill and Annabel Watson reviewed the empirical studies on direct grammar education since RiWC. They offer substantial evidence that de-contextualized formal grammar instruction is ineffective in helping students to improve their writing (Hillocks and Smith 1991; Wyse, 2001; Andrews 2005; Andrews et al., 2006; Graham and Perin 2007; Sheard et. Al, 2012). Sentence-combining experiments again find that sentence-combining is effective and helps students to build more complex and sophisticated sentences (Daiker et al., 1978; Hake and Williams, 1979; Graham and Perin, 2007; Andrews et al., 2006, among many others). As Myhill and Watson discuss, though, very few of these studies look beyond the students' abstract examples to see if writing quality improves.

Echoing RiWC's assertions from fifty years earlier and Connors from a decade before, Myhill and Watson contend that the grammar debate still has "an impoverished theoretical base" (45). They argue that "there is relatively little coherent and developed articulation of the contribution that grammatical understanding might make to students' learning about language" (45). That is deeply problematic at any time, but it is especially problematic right now. In the US, UK, and Australia, standardized testing and nationalized curriculum (like the Common Core) are unintentionally bringing prescriptive grammar back into elementary and secondary classrooms in force (Myhill and Watson

44). Pauline Jones and Honglin Chen did a survey of primary and secondary English teachers that found that most teachers would need to expand their grammatical knowledge to meet the state-issued educational standards (147). Lauren Gartland and Laura Smolkin argue that Common Core Standards require that students be tested (and teachers be held accountable for those test results) on grammatical concepts, but teachers haven't been given a clear or scientifically evaluated path to get students to that proficiency. Because so many K-12 writing teachers never received any grammar education themselves, they feel obligated to use grammar worksheets that utilize prescriptive grammar pedagogy because they can offer no better solutions (393). Quite literally, K-12 is shifting back to a disproven pedagogy from more than a century ago.

There is pressure to adapt quantitative measures at the college level, too. As Chris Anson argues, stakeholders are increasingly asking college writing programs to defend their theory and design (11). The empirical testing of pedagogical methods that composition scholarship largely abandoned in the 1980s are making a comeback as an accreditation requirement and seemingly unavoidable part of composition's future. Unlike the earlier anti-empirical movement, current scholarship is not trying to resist the university's demands for evidence of program efficacy; instead, scholars are currently trying to define the field in order to control what measures are tested and how they are evaluated. While Anson doesn't agree with the motivation that often drives such challenges, he does call for a reinvigoration of research agendas. As he states, "if we continue to rely on *belief* in our pedagogies and administrative decisions, whether theorized or not, whether argued from logic or anecdote, experience or conviction, we do no better to support a case for those decisions than what most detractors do to support

cases against them" (italics in original, 11-12). It is not enough to simply logically argue that the courses do what the learning objectives say that they will; documented evidence of efficacy is now required and that documentation should be expected to increase in the future.

As Tony Scott and Asoa Inoue explain, student assessment is never a neutral, objective process. Like writing itself, assessing writing is a social activity that is shaped by many factors like our "disciplinary philosophies of literacy and learning, political agendas, efficiency imperatives, and common cultural assumptions about writers and literacy" (30). Wardle and Scott contend that outcome-based assessment (OBA) measures "locate the evidence of writing at the end of key experiences" rather than looking at the entire writing process (qtd. in Adler-Kassner and Wardle, xx). At younger grades, OBA for language arts make some sense. Younger students are mastering the physical acts of writing, like forming the letters, and these acts lend themselves well to OBA. An objective test can fairly and adequately gather reading speed, spelling accuracy, etc. By the time a student reaches college, they are far past gathering the rote skills involved in writing. A writer is not just trying to create a visual record of a spoken act or typing without substantive errors. While some aspects lend themselves well to OBA, other aspects of writing require a far more nuanced approach to assessment.

Appeasing the Big Stakeholders

University stakeholders reasonably assume that the college writing courses, which use standardized testing measures to place students into courses, will rectify the deficiencies that the placement tests make apparent. In theory, the placement scores should be replicable, and a student who advances from each course should have a

satisfying increase in scores. There is a long history of standardized testing which argues

that mechanical writing skills can be quantifiably tested, and there is a direct correlation

between how students perform on this testing and their eventual success in college. ISU's

graduation statistics concur with the placement testing assessment: Only 24.72% of

1101P students will graduate, while 51.57% of students who place directly into 1101 will

graduate, and 60.01% of students who place directly into 1102 will graduate (Fleming).

The State of Idaho has a vested interest in having more college graduates, which

is clarified in the Idaho State Board of Education's Complete College Idaho Plan. The

plan specifically aims to increase college graduation rates—not just attendance—to 60%

of all Idahoans between the ages of 25-34 by 2020, an absolutely ambitious timeline.

Amongst the plan's features, colleges and universities are expected to improve their

assessment measures and increase reporting of student metrics to their state stakeholders.

The program offers economic incentives to universities that can improve those metrics

(Complete College Idaho).

I assert that the easiest way to meet the state's objectives is to improve the

measures that are already tested the most extensively: the ability to edit and revise

according to the conventions of SEAE. This is a highly contentious claim on multiple

fronts. First, standardized testing is incredibly problematic and its merits are highly

contended (see the 1999 *NCTE's Resolution against High-Stakes Testing;* 2015 *NCTE*

Resolution on Mandatory Grade Retention and High-Stakes Testing; Langer and Pradl,

1984; McClaskey, 2001; Schafer, 2005; Laughter, 2016; and at least 1,378 journal

articles in 2017 alone). Second, the composition field strongly resists such an outcome-

based measure. As Linda Adler-Kassner argues, rhetoric and composition scholarship

embraces threshold concepts—"foundational assumptions that inform learning across time"—rather than pursuing abstract outcomes that force learners into a decontextualized, standardized "linear trajectory of learning" (xxii, xx). I concur that we cannot simply place students into a conveyor belt theory of learning; students learn writing skills over time throughout a context of use.

Still, sentence-building is an essential part of becoming a disciplined writer, and stakeholders—students, parents, institutions, funding agents, future employers—all have a reasonable expectation that college courses will teach all the parts of the discipline, especially those already specifically outlined in the learning objectives. Basic writing scholars Deborah Mutnick and Steve Lamos agree with second language acquisition scholars Paul Kei Matsuda and Matthew J. Hammil that "our assessment practices ought to reflect what we explicitly attempt to teach rather than some mythical 'standard' that we assume students should meet" (29). Matsuda and Hammil's offer assessment suggestions English language learners in a FYC course, but I think their suggestions apply equally well to all students. They recommend that grammar can be part of the grade if the instructor sets "a reasonable level of attainment in the course objectives, … provide[s] appropriate instruction that facilitates language development, and … establish[es] clear criteria for assessing language development—not just by counting the number of errors" (278).

Students may not gain complete fluency in any of the learning objectives in one or two semesters because writing is a lifelong, continually adaptive process, but it is reasonable to expect that the curriculum will systematically address all of its learning objectives, provide some measurement that assesses all of them, and continually employ

its scholars to research any areas with pronounced deficiencies.

The Functional Power of Race and Language

By the history of the placement measures, we can assume that 78% of ISU incoming students will have documented writing skills that are significantly below the necessary standards to attempt the course that would meet the university's general learning objectives. Because of how the placement measures are assessed, we can also assume that they will have significant deficits in their ability to recognize and correct texts to meet standard English conventions. So, in contrast to the WPA *Outcomes* expected learning method, almost 4 out of 5 ISU students will enter college courses with documented skill gaps in editing their texts in order to meet conventions of standard academic English.

As Paul Attewell et al., maintain, "students of color, students from less affluent families, and students for whom English is a second language are greatly overrepresented in remedial courses" (887). Dinah Sparks and Nat Malkus's report shows that, nationwide, Black and Latino students are 50% more likely to be placed into remedial coursework than white students. The enrollment in my 1101P courses follow the national statistics. In two different semesters, every Hispanic student was enrolled in 1101P, rather than 1101. If writing courses fail to remedy the mechanical writing skills that test scores show know remedial students are missing, composition courses disproportionally disadvantage the most racially and socioeconomically diverse group.

Asao Inoue explains that such statistics are evidence of structural racism (7). Inoue does not argue that universities or writing programs are racist on purpose, instead they are racist by function (55). While society used to overtly use race as a subordinating

category, now language performs the same separating and segregating function. A student's fluency in English and/or in SEAE is used to determine access to power, like access to universities, jobs, and all the other societal benefits that come with them. As Inoue charges, "While no one is denying college entrance to, for instance, Black students because they are Black, almost all colleges use SAT and ACT scores to help determine candidacy" (58). By placing a high value on testing measure historically disadvantage students of color and economically disadvantaged students, society can "in effect keep more students of color out of college and allow more (relatively speaking) white students in" (55). Inoue argues that writing assessment measures within college classrooms can perform the same function, an argument that I extend to teaching practices as well.

Access to generic expectations, like citation practices or sentence structure, can grant social power and status, but that necessarily restricts others from the same privileges. Literacy scholar Randal Holme argues, "Even where the spread of literacy does not create greater prosperity for society as a whole, it may do much to ensure the marginalization and continuing impoverishment of its illiterate members" (23). Applying that idea to this dissertation's focus, some students (who also tend to be white and/or middle and upper class) enter college with a sufficient mastery of punctuation to be able to utilize the academy's conventions. This mastery may not grant those students prosperity, but it does confer advantage, particularly in an academic system where instructors must grade massive quantities of repetitive material. Mispunctuated texts can greatly slow down reading, damage comprehension, and show that student is not yet a literate member of that particular conversation.

Ending College Careers Altogether

According to Doug Fleming, on average, 40% of ISU students fail to return to college after their first year. Fleming's statistics also show a distinct difference between a student's initial writing course placement and their ISU graduation rate. If a student is initially placed into 1101P, only about 1 in 4 will graduate with any certificate or degree. If a student is initially placed into 1101, the odds improve to about 1 in 3, while 1 in 2 students who place directly into 1102 will graduate. So, while colleges and federal funding have made college far more accessible to every student, the graduation rates do not show that the benefits of a college degree are equally available. Inoue questions such discrepancies, pointing out that systemic patterns help to diagnose problems within the higher education ecology (8). Poe, Elliot, Cogan, and Nurdeen's define four criteria for *fairness*: "lack of bias; equitable treatment in the testing process; equality in testing outcomes; and the opportunity to learn" (qtd. in Inoue *Antiracist Writing* 8). Entrance testing statistics point to an unfair system outside the university, and ISU graduation statistics show that inequities persist inside the university as well.

Unsurprisingly, students who enter at an educational disadvantage (who are most likely to be the most linguistically and culturally diverse group) are considerably less likely to graduate and more likely to incur debt in the process. While the prevailing argument is that students' mechanical writing skills will gradually improve over the course of their college career, it is also possible that the college process simply weeds out the weaker students, and the remaining students who show improvement entered the university with the least glaring errors to improve.

Inclusivity and Exclusivity of Dialects

As discussed in the literature review, composition studies has a long history of challenging social norms in order to achieve a more socially just world. For now, it is worth clarifying why this dissertation argues that students should be taught to use the punctuation conventions of SEAE, when the field has such a long-standing history of dialectical inclusivity. In 1974 and in support of the Civil Rights Movement, the Executive Committee of the CCCC published the position statement entitled "Students' Right to Their Own Language" (SRTOL). It states, "We affirm the students' right to their own patterns and varieties of language—the dialects of their nurture or whatever dialects in which they find their own identity and style. Language scholars long ago denied that the myth of a standard American dialect has any validity" (qtd. in Perryman-Clark et al., 19).

Nearly fifty years after SRTOL's publication, these two points—students are entitled to their dialect and there is no standard American dialect—still confuse people outside the field (and occasionally within it.) For some, it seems as though writing studies is arguing that students do not need to be taught to write within the conventions of SEAE because their own dialect should be honored instead. As a case in point, I'll use the 2017 controversy over the University of Washington-Tacoma's writing center statement. Writing center director Asao Inoue and his writing center team created the collaborative statement entitled, "Statement on Antiracist and Social Justice Work in the Writing Center." Like SRTOL, the document aims to improve the institution's policies and its instructors' attitudes and actions, rather than assuming that all of the improvement should come from the student. The first paragraph reads as follows:

The [University of Washington-Tacoma] writing center works from several important beliefs that are crucial to helping writers write and succeed in a racist society. The racist conditions of our society are not simply a matter of bias or prejudice that some people hold. In fact, most racism, for instance, is not accomplished through intent. Racism is the normal condition of things. Racism is pervasive. It is in the systems, structures, rules, languages, expectations, and guidelines that make up our classes, school, and society. For example, linguistic and writing research has shown clearly for many decades that there is no inherent "standard" of English. Language is constantly changing. These two facts make it very difficult to justify placing people in hierarchies or restricting opportunities and privileges because of the way people communicate in particular versions of English.

A number of bloggers misread the statement and wrote provocative pieces that misinterpreted the *Statement*'s words and its intent, including Paul Sacca's "The University of Washington Says That Proper Grammar is 'Racist.'" Sacca asserted that "the Writing Center at the University of Washington is telling students that expecting people to use proper grammar perpetuates racism and 'unjust language structures.'" UW Tacoma immediately explained the position, arguing that "The Writing Center statement is not about changing the standard for how UW Tacoma teaches commonly accepted English, grammar and composition. UW Tacoma students achieve thorough proficiency in grammar and English expected in higher education and the workplace. Faculty demand a high level of writing proficiency" ("Response to Inaccurate Reports"). High grapholectical standards remained a viable learning objective; the UW Tacoma writing

center was reaffirming its commitment to welcome linguistic diversity and help students

to see their language (and the language of others) in a broader, more inclusive context.

I concur with the intention behind the SRTOL's intent and agree that the

educational system still (and almost certainly always) requires reform from the inside.

Until the society that created the educational system is fair, equal, and just, the

educational systems that it creates will struggle to be fair, too. I concur with each of

Inoue et al.'s claims. Racism is pervasive throughout our society, and it is often

manifested and perpetrated in insidious, unintentional ways. One way is the privileging of

Standard American English/Standard Edited American English, which is rightfully

challenged as an imagined construct that exists as a way to limit access to universities,

classes, employment, etc. (Inoue *Antiracist Writing* 55).

Higher education has repeatedly extended the invitation to attend college to

students from across the racial and socioeconomic spectrum. Community colleges in

particular see the biggest range of diversity, largely because they accept the largest

amount of the least prepared students. According to Darin Jensen and Christie Toth, as of

2016, there were 7.3 million students enrolled in 1108 community colleges across the

United States—that is 45 percent of all undergraduates. Many of these students come

from groups that have historically been underrepresented in postsecondary education: 62

percent of Native American students, 57 percent of Hispanic students, and 52 percent of

African American students are enrolled at two-year institutions, and more than one third

of community college students are among the first generation in their family to attend

college (570). According to statistics compiled by Complete College America, 51.7% of

community college students and 19.9% of 4-year college students are classified as

remedial. Low income, African-American, and Hispanic students are far more likely to be classified as remedial, too ("Remediation " 6). Since the tests are designed to test fluency with SEAE, it is unsurprising that student who are the most likely to be nurtured in linguistic communities that are the most likely to vary substantially from SEAE will also be labeled remedial.

The Privilege of Teaching Privilege

Inoue challenges the field's assessment measures, but the course curriculum should be challenged, too. I performed a survey of 27 commonly assigned FYC textbooks to see the ratio of so-called higher-order concerns (like argument development) to so-called lower-order concerns (like sentence construction or punctuation placement.) Essentially, I looked at each book page by page, noting how many pages described information in either category. Even excluding readers, many FYC textbooks have no pages that contain information about lower-order concerns. Some, like Andrea Lunsford et al.'s *Everyone's an Author*, offer grammatical handbook-like sections that are not integrated into the rhetorical material. Some, like Thomas Cooley's *Back to the Lake*, offer a chapter of editing and revising which often includes a list of strategies to edit writing. Taken as a whole, I found that less than 2% of FYC textbook pages were dedicated to sentence-level construction and other writing mechanics.

This heavy focus on so-called higher order concerns has serious consequences. To be clear, I am not discounting the importance of teaching students about argument development or ethical development through challenging readings on race, culture, religion, economics, etc. It is important to bring in a wide range of writers who address an equally wide range of ideas. Ironically, I believe the ideologically driven FYC course

disadvantages the struggling student the most, even though the field's dialogue is usually aimed at bringing underprivileged voices into the mainstream discourse.

Disadvantaging the Already Disadvantaged

By focusing largely or completely on the higher order concerns without significant dedication to improving sentence-level writing, I argue that FYC is practicing a form of insidious, structural racism, to borrow Inoue's term and concept (4). The inability or refusal to improve sentence-level skills disproportionately disadvantages students of color, who are documented to have the biggest skill gaps in this area. Like Inoue, I do not believe that instructors or institutions act with purposeful racist intent, seeking to discriminate against their students of color (52). In fact, when composition instructors find out that I'm studying ways to improve mechanical instruction, many instructors have expressed deep dissatisfaction with their inability to adequately teach these skills because they have noticed such apparent racial and class divisions in their remedial student populations. Instead, I argue that most instructors lack the resources to improve this area and wish for more scholarship in it.

Still, institutional practices in composition studies disadvantage many students who enter at an educational disadvantage already. For instance, the field continually labels punctuation and other mechanics as "surface features" like the *Framework for Success in Postsecondary Writing* does (9). An equally common term is *lower-order concern*, as contrasted with the *higher-order* concerns like argument development. The *surface-level, lower-order skills* label implies that such skills are easy to teach, master, and practice (at least to anyone who hasn't tried to teach them.) Instructors from other disciplines, employers, university stakeholders, etc., can logically assume that writing

students who has passed FYC have been taught or already possessed mastery of writing's lower- and higher-order concerns. For most disciplines, it is assumed that students must have mastered the lower-order concerns in order to fully grasp the higher-order concerns.

Labeling writing mechanics as lower-order skills reinforces racial and economic stereotypes. When underprivileged students leave FYC with the same disproportionate skills gaps in writing mechanics that they had when they entered, it can imply that underprivileged students are less able to master the structural aspects of writing than their white and/or economically privileged peers. It can also imply that underprivileged students have access to those aspects and simply lack the work ethic or focus that should allow them to remove simple, surface-level grammatical mistakes. Most importantly, such mislabeling damages students and their perceptions of themselves. As Inoue describes, "I'm concerned with the structural racism, the institutional kind, the kind that makes many students of color like me when I was younger believe that their failures in school were purely due to their own lacking in ability, desire, or work ethic" (4). Such beliefs make students accountable for their failures to learn, rather than holding the system accountable for its failure to teach.

FYC's teaching population has its own racial and racist implications. Like Connors notes, since college composition began, the field has relied on new instructors, instructors from other fields, and adjunct faculty with a high teaching load. With absolutely no disrespect for the excellent work that these dedicated instructors perform, it is still worth exploring the fact that the most challenging writing students are often assigned to courses with the least specialized instructors. Further, they are instructors who are unlikely to research in this area, either because they plan to or are already

specialized in other areas or because they have too high a teaching load to assume that they will also pursue an active research agenda. While the history of the field shows how such labor conditions developed, it is certainly time to discuss whether they should continue.

The Inhabitants of a White Racial Habitus

Many students of every color and economic class leave FYC bewildered at their inability to execute a punctuation system that seems so simple to composition instructors, who are, as Inoue explains, predominantly "white, middle class, and female" (*Antiracist Writing* 30). As Bireda and Chait say, "Racial minority students make up over 40% of students in all schools in the U.S., but only 14.6% of all teachers are Black or Latino/a, and in 40% of public schools there is no teacher of color, not one" (qtd. in Inoue *Antiracist Writing* 30). It is hard to challenge the dominant discourse of the academy when, as Inoue argues, it is "taught almost exclusively by white, middle class teachers," teachers like me who need constant reminders that I enjoy the privileges of living in a "white racial habitus" (30, 47). Inoue's concept of racial *habitus* describes a life has been built through a racially determined

> set of structuring structures, some marked on the body, some in language practices, some in the ways we interact or work, write, and read, some in the way we behave or dress, some in the processes and differential opportunities we have to live where we do (or get to live where we can), or where we hang out, work, go to school, etc. (43)

Inoue says that we experience our racial habitus, whatever it may be, in two profound dimensions. First, there is the subjective experience, or the dimension that

allows one to "organize one's own subjectivity in the world" through action, speech, relationships, and behavior (43). Second, the projective dimension is the perceptions and expectations that humans place upon others, often through institutional practices (44).

White racial habitus can be implicated in several prevalent beliefs. There is a common belief that FYC students should learn punctuation and other mechanical skills through extensive reading, on the assumption that most composition instructors gained their own skills this way. This subjective belief often projects itself as a belief that composition instructors gained their punctuation knowledge through extensive reading, and their students should, too.

Why You Almost Certainly Didn't Learn Punctuation from Just Extensive Reading

Throughout Chapter 4 of *Proust and the Squid*, dyslexia researcher Maryann Wolf explains how every step of the reading process must be consciously learned: gaining a literary lexicon, expanding the syntax, learning to read a book from front to back, learning to read from left to right, recognizing the symbols, etc. For children raised in a high literacy environment, these skills are often well established by the time the children start school. They enter the educational system with almost incalculable learning advantages that allow them to automatically process many aspects of the text that students from low literacy environments are struggling to consciously understand. In fact, literacy is a "self-reinforcing spiral: the more coherent the story is to the child, the more easily it is held emerging schemata; and the more schemata child develops, the more coherent other stories will become and the greater the child's knowledge base for future reading will be" (90). In other words, each literacy acts makes the next literacy act easier and more automated. More automation frees up the brain's conscious focus for higher

processing tasks.

Wolf applies this idea to a child's development of referential skills, but I extend her argument to punctuation skills as well. A student who is already fluent in the technology and vocabulary of reading will have less cognitive challenges understanding the text and can focus more (almost certainly teacher-directed) effort on the structure of the text. Elementary schools have had and continue to have a structured introduction to the basic punctuation strategies, so even if an instructor has no conscious memory of formal punctuation lessons, they almost certainly experienced them. Students from a high literacy background, like most language arts teachers, were best prepared to absorb those lessons. It is unsurprising that most language arts teachers are also white and middle-class because they likely experienced early success in this literate world, which reinforced their desire to seek more literate experiences. A human's subjective dimension also makes it difficult to see how other people's literacy development was different, which allows a projected belief that students will somehow naturally gain the same skills that seem so intuitive now.

Why Students Won't Learn Punctuation from Extensive Reading

This concept will be covered in more depth in a later chapter, but reading and writing are both fully embodied processes. As neuroscientist David Eagleman explains, learning is always a physical act where the brain rewires "its own circuitry until it can accomplish the task with maximum efficiency" (71). College students have already learned how to write, creating vast networks of neurons that allow many of the tasks of writing to be handled subconsciously. In other words, students have a vast wealth of prior writing knowledge that can cause conflict with any new information. As education

scholars Susan Ambrose et al. explain,

> Inaccurate prior knowledge can be corrected fairly easily if it consists of relatively isolated ideas or beliefs that are not embedded in larger conceptual models (for example, that Pluto is a planet or that the heart oxygenates blood.) …. Some kinds of inaccurate knowledge—called misconceptions—are remarkably resistant to correction. Misconceptions are models or theories that are deeply embedded in students' thinking. (24)

Students have already learned how to place a comma, for example, and they have done so hundreds or thousands or hundreds of thousands of times by the time they reach a college course. They may not place a comma conventionally each time, but they certainly can place it with almost no conscious effort at all. College composition teachers are not simply teaching students about punctuation; they are challenging previous belief systems so that students can rewire their own brains away from a highly established, neurologically encoded habit to a new habit that must be neurologically encoded, too.

The brain has limited capacity for processing new information. The cognitive load of college reading is so high that it is unlikely that any college student has extra cognitive energy to devote to understanding the writing structure of a highly proficient writer, at least in the process of normal class reading. Because the punctuation system is designed to be silent and supportive of the language, punctuation rarely gets conscious attention unless it is malfunctioning. Because students often lack explicit structural knowledge of sentences, it would be quite difficult or impossible for them to compare well-punctuated structures to their own writing. It isn't that the brain cannot perceive such patterns; it certainly can and does. It is just that the learning process will be far slower than if there is

explicit explanation and iterative practice to help speed up the learning curve.

In a concentrated course of study like an undergraduate degree, time matters. As the graduation rates show, a student whose writing shows prolific errors will drop out more often. Even if they persist, their writing will earn them lower grades throughout college even if they master the content. Since many professional degree programs are highly contested and base admission on high GPAs, even the grade loss of a letter or two will mean that students will be denied admission to graduate programs or employment. FYC can and should actively intervene in order to give students these desirable academic skills.

Coming Back to the Bigger Argument

I agree that "there is no inherent 'standard' of English" and that insisting upon any unified standard language works to uphold, rather than controvert, unjust systems that discriminate against race, socioeconomic class, culture, and other linguistic markers. Further, no course or instructor can prescribe what language to use; writers must always look to the dialect and grapholect of their particular conversation to determine the language that best suits its needs.

But.

Mutnick and Lamos argue that composition instructors "may agree with critiques of dominant cultural discourses and honor the multiple literacies students brings to college yet still insist that they compose relatively error-free, Standard Written English for particular purposes and audiences" (21). To extend their point, it is not enough to simply encourage students to critique the dominant culture without providing support to help those critiques be heard. As Matsuda and Hammil explain, some linguistic

differences add "to the richness of the text," but differences in grammar features "may distract the readers from focusing on the meaning and overall strengths of the text" (278). Students should be able to leave FYC, the last dedicated writing course that many students take, knowing the difference between useful linguistic difference and distracting mistakes.

In my opinion, the best way to dismantle an unjust linguistic system is to create more accomplished writers who write fluently and eloquently in a wide array of dialects, especially non-standard dialects that are too rarely seen in publication. My sincere hope is that we can draw new students into the discipline by making writing's foundational structure explicit and apparent, providing a clear path to its mastery. By succeeding at every learning objective in the initial classes, students may be encouraged to keep exploring the field. Those new students may become writers, but they may also become educators who know the power of their dialects and can help others to see it, too. Inoue cites a report on "Increasing Teacher Diversity" that says that "Racial minority students make up 40% of students in all schools in the U.S., but only 14.6% of all teachers are Black or Latino/a, and in 40% of public schools there is no teacher of color, not one" (30).

Setting aside my white guilt for a moment, I offer that the easiest way for a FYC instructor to fight a racially biased system that uses racially biased tests like the SAT is to teach students (who may teach others) to master what it tests, which is predominantly focused on editing to the conventions of SEAE. FYC cannot change the SAT or a student's score on it, but it can immediately try to fill in the skill gaps that the test makes apparent. In line with composition studies' threshold concepts, I do not argue that

students must choose words that model my (or any other teacher-prescribed) dialect. Because the punctuation system is transdialectical, it can support any dialect and make it easier for non-native speakers to understand diverse dialects. At its base, a language is its patterns, and punctuation can make those patterns apparent. In an optimistic light, if the structural elements all work in the same ways, then a reader may be more inclined to accept a different vocabulary or grammatical structure.

Part of my argument is that students often write sentences that are not considered grammatical in even their own spoken dialect, but they lack the editing skills to make that determination, especially as their ideas become more complex.

Supporting or Detracting from the Dialect

My argument is best made by looking at a writing sample that is taken from Student D's first graded essay of my Fall 2017 English 1101 course. Student D submitted the required rough draft, participated in peer review process, and made changes between the rough draft and the final draft. It is reasonable to

I have been an employee at this company for a year now, because of this, and other reasons concerning my work ethic; it's my personal opinion that I should get a $1.25 raise. I am a hardworking person who is on time, and doesn't ask for time off unless absolutely necessary. Sometimes I wonder if working 4-6 hours a day is worth it because I don't feel like I make a reasonable amount of money, but I love this Company and the type of work that I do. By getting a raise I'd feel more appreciated and recognized for my hard work. Not only that but I'd also be willing to work more hours. To add it'd also show that you care and listen about employee's. This is would benefit you and and the company as a whole because you would get a good reputation.

Fig. 14 Student D's First Paragraph, Essay #1, Fall 2017

assume that this student edited her words to the best of her current ability. In her first paragraph alone, Student D made 13 distinct and unique grammar errors, and this pervasive pattern of errors makes her text more difficult to read than it should be (see Fig. 14).

In a homework assignment, I asked this student to perform a simple reading task on her writing. I took her draft and simply hit enter after every punctuation mark. Then, I asked her to look at each word group to determine if it sounded grammatical to her. By breaking the text into more manageable pieces, the student could find and repair her simple problems, like the doubled *and* and doubled last period in her final sentence. She could not see how the larger pieces of text work together, though. It seemed grammatical to her to break some clauses into multiple phrases, and it seemed equally grammatical to leave some sets of clauses combined, where convention breaks them apart.

Using Existing Punctuation Resources

It is possible to refer this student to a writing guide's grammar rules for guidance. For simplicity, I'll just use her second sentence as an example: **I am a hardworking person who is on time, and doesn't ask for time off unless absolutely necessary.* This sentence has two grammatical problems that are covered by grammar rules, which will be taken from the popular writing guide, *A Writer's Resource*. It has the most comprehensive set of grammar rules in the writing guides that I surveyed, offering 99 pages of rules, principles, exceptions, and examples. Because Student D's sentence has compound verbs (*am* and *doesn't ask,*) she should use Principle 57m: "Do not use commas to separate compound word groups unless they are independent clauses," which contains an example that has the same form as the student's example (546). Because those compound verbs are in a relationship with the same subject, the second verb is problematic; it doesn't agree with the subject. The student could rely on Principle 53b: "Do not lose sight of the subject when a word group separates it from the verb," but I couldn't locate a rule that expressed that if a sentence had two verbs working with the

same subject, both verbs should agree with the subject (499). Student D, like many students, could not identify the subject or multiple verbs of her sentences. Even if I made the rules apparent to her, she had no way to actually apply that information.

Seeing the System Instead of Reading the System

Our field's love of words has us constantly use words to describe language. Essentially, the grammar rules can be considered a logical linguistic puzzle. *Do not lose sight of the subject (X) when a word group (Y) separates it from the verb (Z). Treat most M as N, but treat most K as R, unless A doesn't agree with J, and then use B.* But humans are not naturally inclined to logic. In fact, as futurist Ray Kurzweil explains, "Human beings have only a weak ability to process logic, but a deep core capability of recognizing patterns" (38). Further, he argues that the brain's neocortex has "no process that eliminates or even reviews contradictory ideas, which accounts for why human thinking is often massively inconsistent. We have a weak mechanism to address this called critical thinking, but this skill is not practiced nearly as often as it should be" (197). A FYC student has little reason to investigate the inconsistent or contradictory tactic beliefs that they hold about the punctuation system, and the disorganized grammar rules do little to help struggling students to challenge their beliefs in anything besides the knowledge that they are bad writers.

When students can see their grammatical constructions, they can fix many problems themselves. To revisit the earlier example, I asked Student D to look at her second sentence, which stated, "I am a hardworking person who is on time, and doesn't ask for time off unless absolutely necessary." Student D agreed that it was confusing, though she couldn't give any reason why. Most likely, she knew that if an English

teacher points it out, it has problems. It does. It has compound verbs that are broken by a comma, and only the first verb (am) agrees with the subject (I) (see Fig. 15).

Clause	**Conjunction Group**	**Subject Group**	**Verbal Process Group**	**Objects and Circumstances Group**	**M or E**	**Mark**
1		I	am	a hardworking person who is on time	E	✗
2	and	(I)	doesn't ask	for time off unless absolutely necessary	M	.

Fig. 15 Mapping Student D's sentence

When we looked at the map, she could see the grammatical problem with her compound verbs. She didn't need my help to notice that *doesn't ask* was missing a subject. When she tried to insert her intended and the most logical subject (*I*), she saw that *I doesn't ask* is not grammatical and offered a grammatical repair. The map alone couldn't help her to remove the extra punctuation because she didn't understand the comma's purpose (yet), which has no reflection in her oral dialect, but we could use the map and the punctuation resource to discuss why the comma is absent with a compound verb and present if she added in another subject.

It is quite possible that the map itself is not as helpful as simply getting the students to slow down and relook at every word that they write. By writing the words again, particularly in a strange structure like the map, the students pay close attention to what they actually wrote, rather than what they just what they thought they wrote or intended to write. As one, usually confident student said, "I write some pretty weird

sentences sometimes." Students also write lots of successful sentences, which the maps make apparent, too.

I included this discussion in the Exigence chapter because it shows that many students like Student D will face discrimination throughout her university coursework because her writing is so hard to read. What is most unfortunate is that she actually possesses most of the grammatical knowledge to fix it. In line with the *Framework* and *Outcomes*, she needs help to understand her linguistic features in order to edit more effectively. Certainly, she also needs to expand her current knowledge of punctuation, but it depends largely on her ability to explicitly identify her grammatical structures. In contrast to the challenges of learning the actual grammar of a language, learning punctuation's symbol system is actually quite easy.

Why It is Worth Investing in Grammar Education

To be clear, I am not placing the entire success or failure of a college system upon an introductory writing course nor am I arguing that teaching mechanical conventions will resolve all the inequities in an unfair system. I am arguing that experimenting with different and more direct teaching methods that target known student weaknesses could show substantial long-term gains for individual students and for educational institutions. From a personal, financial, disciplinary, and ethical perspective, the experiments are well worth the investment.

CHAPTER 5: THE MULTIDISCIPLINARY FOUNDATION

Asking All the Wrong Questions to Eventually Find the Right Answer

My initial research question seemed simple: How can the punctuation be logically and comprehensively taught? I looked at the grammar rules and saw that they were organized by mark, but they had little discernable organization past there. The grammar rules were often negative (don't put a mark there;) their vocabulary was complex, inconsistent, and obscure; and there was rarely included any kind of rhetorical explanation. A writer was supposed to master these concepts because the book told them to, rather than because such mastery had rhetorical value of its own. My initial goal was to organize the rules into a positive structure with a simplified vocabulary that would be more accessible to students.

In the beginning, my biggest concern was that this task would be so easy that the resulting documentation would not qualify as academic work rigorous enough for doctoral study. Within a year of trying to find a solution, my concern shifted to considering that I may have to write a dissertation that had only tested and discarded theories. I had tried in every way that I could think of to organize the existing grammar material. I had created spreadsheets with the marks' common rules. When the rules failed to coalesce into an organized structure, I tried to organize the grammar rules by common purpose. I studied the impact of a properly applied grammar rule, but that wasn't very productive. So, instead, I examined and charted every use of punctuation on random pages of thirty different texts in various genres and tried to describe how the marks were functioning. That was better, but it failed, too. I couldn't simplify the vocabulary enough to make it accessible to a student, and the usages seemed so varied that I ended up with

lists as long as the grammar rules themselves.

Seeing Instead of Describing or Prescribing

I began to create visual resources to show what punctuation was doing within the structure of the sentence. My students liked them as a concept, and we could intelligently discuss them in class, but studying their essays showed that students couldn't apply their concepts with any better facility than the rules. In other words, their essays still showed the same mistakes at a similar frequency to their writing before instruction. The resources certainly needed refinement. For years, I would study each batch of student essays, comparing the errors that students made against my resources to see if they contained the necessary information, even if it hadn't been appropriately applied. When students gave me new uses/absences of marks, I would first go to the grammar guides. If that situation weren't covered by several guides, I would go to the Corpus of Contemporary American English and look for examples to see if other published writers used the same concepts in the same ways. I continually expanded and added clarification to the resources. In all, I have spent about five years creating, refining, and teaching punctuation resources, which will have more explanation in the pedagogy section.

I gradually realized several key things. First, I greatly underestimated how many complex steps are involved in placing punctuation effectively. My participation in the iPad Pilot Program gave me some unique tools, like Socrative, to see my students apply grammar lessons in real time. Even with straightforward (to me) tasks with simple model sentences, I could see my students struggled with a series of cognitive tasks that I never had to give the slightest conscious attention to perform. This is an example of Steven Pinker's Curse of Knowledge: It is difficult to imagine "what it is like for someone else

not to know what you know" (59). The Curse strikes hardest when someone tries to estimate another person's skills and knowledge because humans tend to believe that if something is easy for us, it is easy for others, too (60). Further, "the better you know something, the less you remember about how hard it was to learn" (61).

The Learning Problems Were/Are Mine, Rather than My Students

Many good writers, including writing instructors, tend to assume that their writing skills were naturally gained through genetic predisposition and/or passive exposure to vast amounts of texts, an idea already challenged in the exigence chapter. As this chapter will explore deeper, each writing skill—mine and my students—is specifically learned, even if it isn't consciously acquired. Each current writing decision has neurological ties to writing decisions that each of us made in the past. To challenge those decisions, a writer must become aware of them and practice replacing them with more effective choices. To borrow an adage from Buddhist monk Matthiew Ricard and neuroscientist Wolf Singer, "there is no task so difficult that it cannot be broken down into a series of small, easy tasks" (17). But the Curse of Knowledge may obscure how many small, easy tasks need to be taught/learned in order to perform them adequately.

Second, the more I watched my students try to use resources, the more apparent it became that better resources were not the key to positive transfer of writing skills. The revised and visual resources were definitely useful and an improvement over the verbal resources. Because the sentence is a visual structure, it is easier to see how they function than to describe how they function. But reference materials are not sufficient teaching resources on their own.

Third, I realized that most student punctuation problems are not caused by an

incomplete understanding of the marks, though that complicates the process. Student punctuation problems are caused by an incomplete understanding of the sentence structure. For example, I assumed that it would be easy for students to find the clausal boundaries, where most punctuation marks are placed. English speakers naturally speak in clauses, and a highly literate reader, like me and nearly every college instructor, can usually intuit those boundaries with almost no effort at all. Further, because it is easy for me to see which clauses are grammatically independent or dependent, I also assumed my students could easily perceive that distinction, too. As with most assumptions, I was wrong on both counts. Some students could consistently find clausal boundaries and others can't. Far fewer could tell which were grammatically independent or not, especially as the clauses got more complex.

Ultimately, I realized that the real problem was my inability to describe the linguistic structure so that they could see and replicate the same concepts in their own writing. This became apparent as I frequently used instructions like: "Just read the sentence and feel where the break should go," "Trust your intuition," and "Imagine that you are speaking this…" Students would ask me questions, and I would just have to rely on "It just feels right to put it there." Unfortunately, my students felt equally right about placing an unconventional mark or putting in an unconventional place.

It was clear that there was a huge disconnect between what I could do (write conventional, consistently effective sentences) and what I could teach, so I began to asking questions of the learning process itself. I read scholarship in cognitive science, the scholarship of teaching and learning, second language acquisition, literacy studies, visual literacy, graphic design, and others to see how I could transfer my knowledge to my

students, so that they could then transfer that knowledge across the writing system. I also pursued courses in linguistics to try to understand the language I wanted to describe, always looking to apply this knowledge to my evolving research question.

Defining the Metacognitive Picture

In terms of punctuation and sentence-level structure, composition instructors often struggle provide an effective learning environment that enables positive transfer of writing skills. Composition instructors have a vast amount of highly effective writing habits, but those habits are difficult to translate for and transfer to a student, particularly one who has a significantly different literacy background. So, for example, a composition instructor may easily find the boundaries between clauses and choose a conventional mark to mark that boundary, but they may have great difficulty in describing why they chose that exact spot for the mark. It is even more difficult to explain how to find that same kind of boundary in other sentences that seem to have radically different structure and word choice. This inability is hardly surprising. As the previous chapters have shown, most composition instructors have been educated throughout a time when formal grammar instruction of all kinds was abolished but with little sentence-level pedagogy to take its place.

This dissertation argues that such translation and transfer problems are really problems of metacognition, which the Oxford English Dictionary defines as "Awareness and understanding of one's own thought processes, esp. regarded as having a role in directing those processes." According to Gregory Schraw and David Moshman, metacognition can be divided into three basic categories: declarative (knowing about something), procedural (being able to do something), and conditional knowledge (being

able to explain why and when knowledge can and should be applied) (352). The level of metacognition, Schraw and Moshman continue, has a direct impact on a person's ability to plan (choosing the best resources and strategies to get the intended result), monitor (observe our own performance and make useful judgments to improve it), and evaluate (surveying the process to see how it met/failed to meet the intended outcomes) (354-5).

So, for example, composition instructors have a great deal of declarative knowledge about punctuation; they can easily give the names for each mark and offer lots of examples. They also have a great deal of procedural knowledge. When they write, nearly all of their punctuation decisions are both conventional and largely unconscious. While they debate rhetorical choices, they rarely spend much conscious effort deciding what rule would apply or whether they are trying to punctuate the right clausal boundaries. Based on dozens of informal peer interviews at conferences across the country, many composition instructors feel that they considerably less conditional knowledge of punctuation. Most composition instructors can easily tell when to apply a rule, but they have much more difficulty expressing why the rule exists, how it fits into the larger punctuation scheme, or what it can accomplish from a rhetorical point of view. It is clear to everyone that there is a system in place, but the system's overarching structure is opaque.

Tacit Instead of Transferable

Transfer requires the ability to leverage prior knowledge, as cognitive science and the scholarship of teaching and learning make clear. Ambrose et al. explains that true learning activates and expands on prior knowledge, rather than creating some brand-new learning storage somewhere. In order to facilitate the most effective learning, educators

need to contextualize and elaborate information so that students can gradually organize that information into an integrated system (44-45).

Schraw and Moshman offer three metacognitive theories to describe an individual's ability to "(a) integrate a wide range of metacognitive knowledge and experiences, and (b) permit explanation and prediction of cognitive behavior" (357). In other words, learners can be classified into three basic categories: tacit, explicit but informal, and explicit and formal. By using these categories, it is possible to evaluate and predict how a user will interact with a system.

A tacit metacognition is a theory that is held without explicit awareness. In simpler terms, someone has gradually learned how to do something but was unaware of or forgot the learning process that guides their current decisions. When asked, a person cannot consistently explain the reasoning behind their choices (Schraw and Moshman 358-9). For example, many of our students have a tacit metacognition about placing a comma in between two clauses within a sentence. When asked to describe why they chose that exact place, they often say something like "It just felt like it should go there." Essentially, they relied upon their intuition rather than some explicit theory.

Schraw and Moshman posit that tacit metacognition's greatest problem is that it is difficult to challenge. If a student does not know what prompted their choices or what strategy lead them to it, it is difficult to apply new knowledge because they are unaware "either the theory itself or evidence that supports or refutes it" (359). For instance, if a student has no explicit knowledge of their own comma splicing strategies, then a comma-splicing lesson will have little appreciable impact, much like coaching someone on throwing a free throw when they don't play basketball. It isn't that the students doubt that

information is correct; they just have difficulty seeing any place to practice or apply this information. Even more damaging, tacit theories allow the learner to embrace irrelevant information or ignore conflicting theories (360). This is certainly part of the reason that, as Ambrose et al. explain, students will hold onto deeply held misconceptions even with direct instruction (25).

Moving into Informality

In contrast, an informal metacognition means that someone can explain individual choices but cannot explain the whole system. It would be possible to replicate the same scenario, but the logic can't be transferred to different situation (Schraw and Moshman 359). Applying this idea to writing, most students have some informal metacognition about commas. They know that a comma goes between the items in a series, for example, but that knowledge doesn't help them to know if a comma should go somewhere outside of a series. Still, this is a large learning improvement. As Schraw and Moshman argue, an informal metacognition allows purposeful delineation of theories and the beginning ability to challenge those theories (359). If a learner spots a fault in their thinking, they can purposefully modify future behavior to at least experiment with other options (360).

The Whole Formal Framework

In the final metacognitive category, formal metacognition means that a user can explain individual choices and offer contrasts to show how those choices fit into the whole system. Further, a formal metacognition allows the user to test the system to see if their theories are correct. By experiential testing, a user can apply the logic in one situation to another, trusting that both choices will provide a predictable result (361). In writing, college students generally show a formal metacognition of the alphabetic writing

system, but they have a range of tacit and informal metacognitive theories of the punctuation system.

The goal of this dissertation is to provide instructors with an explicit metacognition that allows them to explain alphabetic and punctuation symbols as a unified system and show how those symbols fit into the overall linguistic structure. It gives terms, definitions, and teaching tools how help transfer an instructor's writing knowledge to their students.

Ultimately, as the section on the brain will show, the goal is not to make every writing decision conscious, though. As Eagleman explains, "Consciousness developed because it was advantageous, *but advantageous only in limited amounts*" (emphasis in original, 6). Conscious thought is far too slow and often mistaken. Instead, the goal is to bring the students' writing decisions into consciousness where they can be examined, challenged, and expanded through explicit instruction. Explicit instruction is not enough, though. Like Casey Boyle recommends, the learning environment should provide enough "embodied, materially mediated array of activity" to truly learn the material, rewiring the circuits of the brain to find the most useful information automatically. Eventually, for example, a student can be taught to see the same clausal boundaries that their instructors find intuitively. With enough carefully designed practice, students should be able to write conventional texts with the same intuitive sense of structure that their instructors possess. In other words, the teaching goal is to make it possible to explain each writing decision, and to make the writing process so conventional and automatic that such explanations are rarely needed.

The Disciplinary Foundation

In addition to the substantial foundation offered by composition studies, this dissertation relies on second language acquisition (SLA), cognitive learning theory (CLT), and linguistics, particularly Halliday's functional grammar (FG). Before my doctoral study, I knew very little about any of these fields. I thought that SLA would give second language instructors a highly prescribed pathway to instruct English language learners on English's formal structures. I assumed CLT would study a lot of brain anatomy, which was intimidating because my knowledge of the brain was only slightly more advanced than I knew that all humans had one and that learning happened within it...somehow. I expected/dreaded that linguistics would focus largely on formal grammar instruction, labeling every word while diagramming every sentence into increasingly complex and abstract models. Essentially, I assumed that each of these fields practiced a form of reductionism, breaking a whole object—second language learning, the brain, a native language— into increasingly smaller and more nuanced parts. The content of each seemed so different that I assumed the fields would be radically different from one another, too. I was wrong in many profound ways. Again.

It's All About the Learner

Certainly, the content of each field is quite different. To give a few examples, SLA looks at the developmental phases of language acquisition; CLT explains how the brain stores information in elaborate neuronal interconnections; and FG breaks the language into component ranks like the clause. While I learned a great deal of material information from studying each of these disciplines, it was their mutual focus that was revelatory. All three disciplines focus at least as much on the learner and the learner's

lifelong embodied experience as they do on the content knowledge that a student should gain. The factual information provides a specific lens to study the learner with the goal of seeing what strengths the learner can leverage and what impediments they might face in the learning process.

Rod Ellis explains that SLA scholars seek to describe the process of second language (L2) acquisition, of course, but they are equally interested in explaining "the internal and external factors that account for why learners acquire an L2 in the way that they do" (4). By considering these factors, the instructor can shape the social conditions of the learning environment in ways that account for students' prior experiences, attitudes, and beliefs (5). CLT, as James Zull explains, believes the same thing. Because learning is a physical and biochemical process, "teaching is the art of changing the brain" (5).

The goal of all teaching is to not to provide information but to promote specific learning, which Ambrose et al. define as a process that creates a lasting change in knowledge and performance within the learner (3). It is easy to get someone to learn; their brain is naturally designed to learn from its experience. Zull explains that the art of teaching is to get students to change their brain to develop the knowledge and skills that accomplish the course's learning objectives, rather that learning that the material is boring or that the teacher dislikes students, for example (20). Learning changes cannot be controlled or forced, but teachers can "creat[e] conditions that lead to [desirable] change in a learner's brain" (5).

In fact, all of these fields continually show how to integrate a concrete body of knowledge and the human beings that must interact with it. Rather than trying to

prescribe some learning pathway to some concrete learning goal, all three fields embrace that the fact that every learner arrives via a different experiential pathway. As Ambrose et al. explain, each student's unique prior learning experiences will greatly impact any current learning experience (13). It is a neurobiological requirement that effective teaching must leverage the learner's prior knowledge in order to achieve *positive transfer*, which Butterfield and Nelson define as "the ability to effectively use existing knowledge in novel environments" (5). Ambrose et al. explain that effective teaching must activate sufficient, appropriate and accurate prior knowledge, expand it, and integrate new information as necessary (14-19) It isn't enough to simply know something; the key to transfer is knowing how and when knowledge can be usefully applied (19).

FYC at the Multidisciplinary Intersection

SLA, CLT, and FG are highly useful in a writing classroom. Writing is always a second language acquisition, even in one's native language. The challenges of learning SEAE share many similarities to the challenges of learning an entirely different language system, and FYC instructors can benefit from this field's long experience. CLT shows how the learning process is embodied, and it can be studied to show how to most effectively use the brain's natural learning pathways. The brain is patterned and is designed to seek patterns in everything, including language. Elements from FG can help make the linguistic patterns apparent, which allows a teacher to help a student expand on their previous writing knowledge and transfer that knowledge to new writing environments.

As I considered the intersections of all of these fields, my research question

refined into this one: How can the sentence structure be systematically and effectively taught so that students can consistently build and test conventional sentences? To do that, instructors can benefit by knowing a little multidisciplinary research. The following chapter will be broken into these essential sections:

1. Punctuation cannot be surface-level because writing has no surface-level. As multimodality asserts, the meaning is created through the symbols, not contained underneath them. Every written symbol in a visual system is rhetorical. Using concepts from Halliday's functional grammar (which inspired multimodality), this section will look at how the symbol system functions, directly challenging the view that punctuation and spelling are surface-level traits of the writing system.

2. Literacy is an embodied process. Writing conventions are not just socially agreed upon by the writers and readers of a grapholect; they are also embodied in the participant's neurological structures. The brain uses punctuation to get a more consistent meaning with greater speed and accuracy.

3. Writing is always a second language acquisition, and FYC students face many of the same challenges that an oral/aural second language learner does. SLA gives a valuable perspective on how to shape the FYC course in order to best suit the learner and encourage transfer.

Section 1: Punctuation Isn't Surface-Level Because There is No Surface-Level

This section owes a deep debt to M.A.K. Halliday and his systemic functional theory of grammar (FG). FG gave me a framework for looking at how a whole system functioned, rather than simply labeling the pieces of it. It helped me to question what punctuation was doing for readers and writers alike, rather than just looking for where punctuation could be found. Halliday focused on oral language, and most of this section concerns the functional affordances of the written language. This means that it is often difficult to cite his ideas directly, but his theoretical approach and practical application are absolutely integral to the information presented here.

Punctuation is commonly referred to as a "surface feature of a text," along with other mechanical features like spelling, attribution of sources, "content, tone, style, organization, and evidence" according to the *Framework for Success in Postsecondary Writing*'s description (9). Punctuation is considered a convention, or part of the "formal rules and informal guidelines that define what is considered to be correct (or appropriate) and incorrect (or inappropriate) in a piece of writing" (9). The *WPA Outcomes Statement* says much the same thing. Both recommend that students develop a knowledge of these conventions through practice, building the habits of an effective writer.

The surface-level descriptor is common, but it deserves to be challenged. Punctuation and spelling cannot be not a surface-level feature of writing because writing has no surface level. The writing's meaning is not contained *under* the letters and punctuation. Scraping off the letters and punctuation (which necessarily scrapes off the content, evidence, etc., that those symbols represent) would leave just a blank page. Rather, meaning is expressed *through* those written signs. It is the act of a writer sharing

a societally determined, symbol-filled text with a reader that allows meaningful

exchange. In other words, the punctuated letters create the meaning of a text, rather than

sitting upon its surface. The reader considers every mode of communication—including

and especially every visual symbol—instantaneously. It is a cognitive requirement.

Extending the Common Understanding of Conventions

It isn't that the *Framework* and *Outcome*'s description of these features is

incorrect; instead, it is just incomplete. Granted, punctuation and other writing traits are

certainly conventional. In line with Saussure's argument, *Outcomes* explains that the

writing conventions arose from a history of shared use and they allow reading by

"invoking common expectations between writers and readers" (5). Even in extensive

academic writing, conventions are never absolute. Genre, discipline, and occasion may

all require different conventions, even if courses at the same university use the same

English language to express them all (5). As discussed earlier, there is no inherent

meaning in each written symbol, either. It is the social agreement that allows a symbol to

express its meaning.

Like Gunther Kress argues, each punctuated word (like each punctuated clause,

sentence, paragraph, etc.) is a semiotic resource that is socially made. They "carry the

discernible regularity of social occasions, events, and hence a certain stability; they are

never fixed, let alone rigidly fixed" (*Multimodality* 8). So, convention may recommend

that I use an apostrophe in a certain word or capitalize another, but as a willful author, I

may always choose something else. Kress accepts my rhetorical choices, but he makes it

clear that "communication is joint and reciprocal work" (44). The success of my text is

not judged in my flawless construction of it according to some English teacher's

prescriptivist rules, but in the reader's reaction to my punctuated words.

As in all things, writing conventions are a display of social power structures. Kress explains that we exist in a constant state of tension between arbitrariness and convention. He says, "Arbitrariness [is] an indication of a social power which is sufficiently strong to tie any form to meaning; and convention—the effect of social power over time—as a social force which acts to keep signs stable, a stabilizing force for the community that subscribes to it" (63). Punctuation choices, like all social conventions, show that the writer either embraces or flouts the community's norms. Either choice might be willful or unintentional, but they are always a proclamation of the writer's assumed power within the system that they are trying to influence. For example, as the teacher of a class, I can arbitrarily decide to display my inherent power by using the unconventional spelling of *argoo'ment*. My arbitrary choices are likely to be noticed, accepted, and modeled, at least in class, because I have more power than my students. (They are also likely to make me the subject of a few mocking social media posts.) If I make the same choices as a job candidate, I am likely to be disregarded and discarded altogether.

Like both *Framework* and *Outcomes* suggest, experienced writers study the ongoing conversation's conventions to be sure that their readers will share their conventional spellings. This isn't simply polite or habitual. It shows that the author considers the reader to be at least their equal, if not their superior. As Steven Pinker explains, good writing makes the reader feel as smart as the writer (36). It uses the symbols in the same ways so that the reader is never left wondering where they went wrong or why the writer abandoned the societal expectations.

Punctuation is Mechanical, Too

It is also easy to see why punctuation has been labeled a mechanical feature. As discussed in the previous section, punctuation performs vital cognitive functions throughout the reading process. It certainly does what Shaughnessy argues: Punctuation delineates the boundaries of a sentence, and it shows the relationships of specific words, phrases, and clauses within the sentence (24). As Nancy Mann explains, punctuation separates things, creating a norm-based system for reader interpretation (363). Martha Kolln agrees. Drawing on Charles Meyer, Kolln instructs that punctuation is syntactic, highlighting the sentence structure, rather than reinforcing rhythm or creating meaning (217). I agree with most of those ideas, with the exception of Kolln's proposition that punctuation doesn't create meaning. Punctuation is an essential part of the meaning-making process, too.

Separate but Not Equal

It is understandable that most people believe that punctuation is a surface-level trait of the written language and that it is somehow less meaningful than the symbols that directly represent the spoken language. The current educational system artificially separates the linguistic signifiers and punctuation, making one cohesive visual system seem like two completely different entities that require very different educational tactics. The current literacy system places most of its resources into teaching the letters in a structured, interconnected, metacognitively rich process that contrasts each letter with the others and shows how each letter fits into the greater whole. Most importantly, the process of gaining letter literacy is embedded in the communicative process. Students are constantly reinforced that the written language has important functions and will aid them

as they interact with the greater world.

Punctuation, on the other hand, is taught quite differently and almost always separately. Punctuation pedagogy is still rule-based, relying on prescriptivist philosophy and antiquated support materials that still contain the relics of teaching Latin grammar. The marks aren't contrasted by their rhetorical features, but they are placed by a geography that is opaque to most FYC students. It seems like punctuation is something to get correct or face correction. But as Halliday argues and this dissertation greatly expands, every rank of language is spelled with a combination of letters and punctuation (7). It is easy to see that specific arrangements of letters create a shared meaning between the writer and the reader. It may be harder to see that punctuation equally creates meaning since has no representation in oral language. Further, punctuation is such a consistent part of the reading process (at least among proficient writers) that the reading brain rarely needs to make any conscious note of it at all. The writing brain often needs to consciously choose punctuation, though. It's time to make punctuation's rhetorical features conscious again.

They Seem So Different

While the LWT and punctuation systems have been historically considered to be and taught to be different from one another, they are actually nearly identical in function (see Fig. 16.). By seeing their common functions, students can be taught to see how LWT and punctuation work together to create the meaning of every text. Like Halliday describes, language is always a social process that allows humans to make sense of their own experience and act out their social relationships (30). It is easier to understand the writing system when the writer can see how its specific pieces help them to create

stronger relationships with other people, rather than trying to master a grammar rule.

		LWT	Punctuation
1	Written symbol	✓	✓
2	Has no meaning by itself	✓	✓
3	Is defined by its function	✓	✓
4	Allow each other to function	✓	✓
5	Must be understood in context	✓	✓
6	Has no direct tie to the oral language	✓	✓
7	Pronounced when read out loud	Usually	Rarely
8	Consistent pronunciation	✗	✗
9	Hard for the writer to learn	✓	✓
10	(Relatively) easy for the reader to recognize	✓	✓

Fig. 16 A functional comparison

There are No Unpunctuated Letters

Punctuation and letters are both written symbols that must be used together. In fact, it is impossible for an English writer to write an unpunctuated letter. At very least, the writer must pick whether those letters are in upper- or lowercase and in roman or italic font. If whole words are considered, there are six commonly used font/case combinations, and each can express different meanings (see Fig. 17.) Punctuation cannot

be written without
letters, either, since
its function is to
puncture text. A
writer could throw an
exclamation point on
a t-shirt, for example,
but then that symbol

Possible Fonts

lowercase roman font	lowercase italic font
Mixed Case Roman Font	Mixed Case Italic Font
UPPERCASE ROMAN FONT	UPPERCASE ITALIC FONT

Fig. 17 The possible English font combinations

serves a different function than it would at the end of this (undeserving) sentence!

Letters and punctuation have no consistent meaning in isolation, and it is only the
context that determines function and meaning. For example, the letter *Q* doesn't mean
something; it has no standard dictionary definition. A letter is a functional object, not a
meaningful one. A letter can visually represent a sound, the name of the symbol, or be
used with other letters and/or punctuation to represent an entire word, like *quick*.
Punctuated like Q, it can represent James Bond's research and development colleague.
The reader has to see the letter in context to know its current function.

Punctuation Is Always Rhetorical

Punctuation doesn't mean something by itself; punctuation is functional, too. Like
letters, punctuation can only be consistently understood and consistently pronounced
when it is placed in a larger context. Each symbol is essential to the meaning of the
whole. Obviously, the words *dogs* and *digs* are different words, not the same word
spelled differently. By changing one of the symbols, I change the entire semiotic
potential of the group. Equally important but not as obviously, the word *dogs* and *dog's*

are different words, not the same word spelled differently.

It's easiest to see this principle in action. Let's look at this set of letters (d,o,g, s) as an example. By changing the punctuation, the same set of letters can represent different meaning, grammatical function, and pronunciation. The punctuation can also make the same series of letters meaningless.

1. I love dogs. (I love the furry canines.)

2. I love *d, o, g, s,* and *m.* (I love the alphabetic letters.)

3. I love DOGS. (I love the acronym for the Department of Governmental Services. Said no one. Ever.)

4. I love D.O.G.S. (I love the acronym for the Department of Governmental Services, which you probably won't love any better even if you say each letter individually.)

5. I love Dogs. (I love a person with an unusual name.)

6. I love dog's toys. (I love a single canine's toys.)

7. I love dogs' toys. (I love multiple canines' toys.)

8. I love *Dogs*. (I love a book with that title.)

9. I love "Dogs." (I love a song with that title.)

10.   I said, "Dogs." (I quoted the word.)

11.   I love DoGs. (No conventional meaning.)

12.   I love do:gs. (No conventional meaning.)

13.   I love the word *dogs*. (You get the point. You probably caught it a while ago.)

Certainly, seeing the largely homophonous words in the context of the sentence

helps to set their meaning, but the punctuation conventions alone would have told a fluent reader what meanings were possible. If asked to write *dog's* and *dogs* into a sentence, an average writer would likely choose the same grammatical function for them because they have lifelong associations with those two different words.

Unconventionally punctuated texts (e.g. *I love my dogs toys)* slow cognitive processing down, at least a little, as the brain resolves the dissonance between what past experience says the word should mean and how it is being used in that particular context (49). This is cognitively stressful. If the brain perceives an unusual pattern, it must slow down and resolve it, often with conscious attention. If the writer wanted the reader to linger on an unconventional phrase, then it is likely to be an effective use. If that change was made accidentally, the reader is just likely to be annoyed that the writer forced them to slow down without any extra gain in meaning.

A mistaken word may only take the reader an extra second or two to process, but the brain is reading at 400-500 wpm (Dehaene 17). An extra second is a long time, comparatively. That is like driving 60 mph and randomly slowing down to 5 mph. One or two mistakes may not make much of a difference, but many mistakes add up quickly. The reader may not even be able to enunciate why the reading is so painful, but they will certainly notice that it takes far longer to read some writing than others.

Following the Crowd

In most extensive writing, the writers usually design their visual texts to present as few conscious reading challenges as possible, so that the reader stays focused on the argument. Equally importantly, it allows the reader to read as little as possible while getting the most information. Lupton explains that "one of [textual] design's most

humane functions is, in actuality, to help readers avoid reading" (italics in original 87). Good writers "provide ways into—and out of—the flood of words by breaking up text into pieces and offering shortcuts and alternatives routes through the masses of information" (87). Inserting a space between words and indenting a paragraph are the most obvious visual pathways in a text, but the other punctuation marks and specialized fonts offer shortcuts and alternative routes, too.

If a writer italicizes a piece of text or Places All Of It In Capitals, it becomes visually clear that those words are functioning differently than the text around them and that all of those words must be considered together. It isn't useful to just create groups, though. Punctuation does more than that, though. It is worth considering how much information such spelling combinations can provide. Look at the following sentence: Toni Morrison's *Beloved* is a beloved book about Beloved. Without punctuation, the writer would have to explain which words represent people/literary characters, the book, etc. Punctuation can give all the same information with far fewer words and more accuracy.

Writing Is Not Speech Written Down

It is natural to think that writing is a recording of speech, but, as Halliday says, even in its more primitive forms, writing has never just been "speech written down" (7). Writing is a powerful communication system all its own. Granted, writing and speech are certainly complementary, and writing is always parasitic on speech, particularly in its origins. But as the writing systems develop, "they take on a life of their own, reaching directly into the wording of the language rather than accessing the wording via sound" (7). In other (written) words, readers do not access all the meaningful parts of this text

because they sound them out and listen to the output. Instead, they see the variations and can process features that have no representation in speech at all.

Ellen Lupton agrees. Drawing on Derrida's *Of Grammatology*, Lupton explains, "Although the alphabet represents sound, it cannot function without the silent marks and spaces…. The Latin alphabet, rather than evolve into a transparent code for recording speech, developed its own visual resources, becoming a more powerful technology as it left behind its connections to the spoken word" (91). This paragraph exemplifies her point. No reader is likely to speak the capital letters that mark Lupton and Derrida's names or the mixed case italics that marks *Of Grammatology*, but the reader can use that change of case to infer the desired rhetorical impact anyway. By using different symbol systems, the writer can create entirely different meanings for any reader who shares the same communicative system.

Punctuation does not attempt to mimic speech's characteristics. It provides an entirely different set of tools that a writer can use to transmit a vast quantity of information very efficiently. It is so efficient because most of the work of reading isn't conscious at all. For example, it has been many years since most readers have thought about having to direct their eyes from one word to the next or decided to drop down to the next line of text when they reach the end of one, even though they had to explicitly learn both skills. They don't consciously ponder on the meaning of known words or puzzle through how the words are connected to one another. As Eagleman explains, the brain does all that work without conscious input, and it only brings things to conscious attention when the observed pattern doesn't meet with the expectation, like when a reader stumbles onto an unfamiliar word or ambiguous syntax that must be decoded (49).

Kress asserts that writing is modally distinct from oral speech, but their relationship is constantly present, active, and activated to achieve the author's rhetorical purposes (126). Writers can use punctuation to strengthen the relationship between speech and writing or to create a vivid distance between the two. Halliday explains that oral speech is naturally organized into discrete clausal units. Unlike writing, oral speech has no automatic pauses. While a speaker must occasionally stop to breathe, oral speech has no "clearly identifiable boundaries, some definite point in time where it begins and ends" (5). A speaker may easily string many clauses together in a flow with no discernable pauses or pause in eccentric places for reasons that have nothing to do with the grammatical structure, like pausing to remember a word. Biber and Vásquez explain that writing allows the reader to do things that the listener cannot do, like read at different speeds, reread at will, and read the text in any order they wish (538).

Punctuation is a powerful rhetorical tool that allows the writer to change the reading experience, and it shapes every text. In some cases, like in extensive writing, conventional punctuation speeds the reading process up. It makes different linguistic patterns apparent, like pointing out the boundaries between words or clause, which allows the reader to recognize those patterns faster. In other cases, punctuation slows the reading down, allowing the writer to emphasize different rhetorical features that the reader may otherwise not notice. For example, punctuation makes the syllabic meter of a Shakespearean sonnet apparent to the reader, a trait that many readers may not notice without such help.

Pronunciation Optional and Inconsistent

The distinguishing feature seems to be that LWT are pronounced and punctuation

is not, but this is not completely consistent. Letters are often pronounced out loud but not always. English is cluttered with silent letters like the *G* in *gnat* or the *E* in *hate.* Doubled consonants (like the *T*s in *little)* are often pronounced just once (and even then, the *T*s sound like the two *D*s in *middle* rather than either *T* in *taste.*) Readers reading aloud will often skip over text, like the author's names that are tucked into the parentheticals with the page numbers.

In fact, letters don't have consistent pronunciation. As Norbert Schmitt explains, English has 44 sounds that can be represented by 251 letter combinations, which makes spelling very difficult to predict based on sound alone and vice versa (48). For example, the homophones *through* and *threw* sound the same, even though they use different letters to represent the same sounds. To further complicate things, words that have a relatively similar spelling can have different pronunciations like *finite, infinite; Christ, Christmas;* and *crime, criminal* (Schmitt 48.)

Punctuation isn't generally pronounced, but certainly can be. For example, the symbol . is usually unpronounced at the end of a sentence, but my placement in the middle of the sentence forces a reader to find some pronounced descriptor for it. It isn't that readers don't see the punctuation or that they can't pronounce it. Instead, readers are trained to assume a conventional and unvoiced function for punctuation. The period's relationship to the rest of the words in a sentence is so conventional and consistent that readers almost never give it any conscious notice at all.

While a novelist or playwright may actively try to mimic speech, a modern academic writer rarely does. An extensive written text is not structured like a long discussion with oneself nor is it a recording of thought as it occurs. Dehaene says, "A

written text is not a high-fidelity recording. Its goal is not to reproduce speech as we pronounce it, but rather to code it at a level abstract enough to allow the reader to quickly retrieve its meaning" (33). So, a book title, for example, is coded with mixed case italics because it makes it easier to visually recognize, not because the italics remind the reader of how something is pronounced.

Biber and Vásquez explain that a writer can help a reader to retrieve the meaning easier by exploiting "the production opportunities for planning and revision, in order to produce carefully integrated, informational prose" (538). This isn't simply planning and revising the words, but adding all the non-linguistic features to help the reader flow through them. Writers can punctuate the visual text with linguistic features that are navigational, like chapter titles in each header or a table of contents, features that are certainly read even if they are almost never pronounced (538). It is the entire composition, not just the words, that aid or inhibit the transmission of meaning.

Since punctuation is usually unvoiced, it should be easy to see that it does not represent the acoustic sounds of the oral language, but students often believe that punctuation is related to breathing or pauses. Parkes explains that even in ancient writing which was designed to be read aloud, punctuation did not indicate pauses just for breathing. Instead, the marks served to help the reader to phrase the text in order to bring out its meaning (18). In class discussions, students often state they should place punctuation wherever *they* paused in the writing process, rather than place it where the *reader* should pause (and even that isn't helpful.) Since humans can read at 400-500 wpm, there are no discernable pauses in a typical silent reading experience (Dehaene 17). For many developing writers, this strategy creates many strange written constructions

since the writing brain can find many reasons to pause that have nothing to do with the grammatical construction of the sentence.

Harder for the Writer, but Easier for the Reader

The writing system did not evolve to be easiest on the writer; it evolved to be the most meaningful to the reader. As Dehaene says, "a written text is not a high-fidelity recording. Its goal is not to reproduce speech as we pronounce it, but rather to code it at a level abstract enough to allow the reader to quickly retrieve its meaning" (33). So, while the many eccentric spellings in English torture the learning writer, varied spellings of homophonous words are useful to the reader. The reader can access a word's meaning more quickly if it is represented by a different combination of letters than other similar words.

For example, a writer could spell the homophonous *too, two,* and *to* exactly alike, but then the reader would have to see the words in context to get any consistent meaning. This is the same with words that incorporate punctuation marks, like *can't* and *cant.* Having a different symbol system to represent each meaning allows the reader to get the right meaning much faster, even if it makes the writer work quite a bit harder (Dehaene 35).

In contrast, homographs are words that are spelled exactly the same but pronounced differently and have different meanings, like the following examples:

- The **wind** was icy cold.

- Please **wind** the thread carefully.

Because these two different words are visually identical, the reader must read the entire context to be sure which meaning and pronunciation was intended. In other words, the

identical spelling is easy on the writer who only had to learn one spelling, but harder on the reader who must use identical symbols to get different meanings.

It's All an Abstraction

Neither LWT or punctuation has any direct tie to oral language. As discussed earlier, Saussure explains that the "'linguistic sign is arbitrary', in the sense that there is no interior link between the
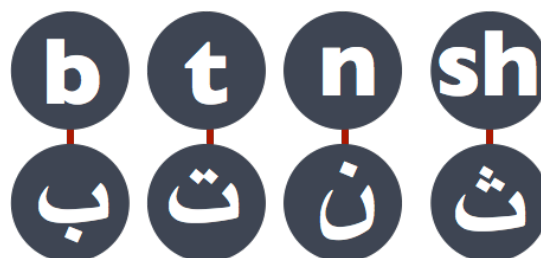
Fig. 18 English letters with their acoustic Arabic counterparts

concept and the acoustic image" (qtd. in Joseph, 60). A letter is an abstract signifier that is conventionally used to tie a reader's memory of sound to a visual sign. English readers all agree that the symbol *b* or *B* (or either in a roman font) can function as the first sound in *boy*, and an Arabic reader would think that the letter ب represents the same sound (see Fig. 18). Neither the English or Arabic symbol means something by itself, which is most readily apparent one the speaker of one language tries to learn the other. The sound at the beginning of the word *boy* doesn't sound like a straight line combined with a curve any more than it sounds like a curve with a dot below it. Every English and Arabic reader had to be taught to tie each symbol to the corresponding sound in their own language, and both are equally good ways to signal the reader to remember that sound.

In the same way, a semicolon doesn't inherently mean a mark placed between two grammatically independent clauses or in a series that has punctuation of its own. That connect is as abstract as the relation of sound to letter. Further, punctuation generally has a consistent meaning and shows consistent relationships because writers and readers agree to use these symbols in the same way, especially in published academic texts.

Further, an experienced reader can access the meaning of those marks and relationships even if they cannot enunciate either. In other words, it is perfectly easy to read a well-placed semicolon in a text, even if the reader cannot name the mark or explain why one is placed there. The brain is capable of recognizing patterns that the conscious mind cannot describe. In fact, such consciousness would be paralyzing. If a reader had to ponder the meaning and relationship of every symbol in a text, they could spend a lifetime on a single text.

The Symbols Compel Performance

Gunther Kress is intrigued by punctuation, too. He asks, "How does punctuation fit into a multimodal theory of literacy?" (*Literacy* 123). His answer is that "punctuation [is] one among many devices for making meanings in the contradictory world of social and cultural matters" (123). By using this device, a writer "fixes and frames elements," and that framing allows the entire structure to exist (122). Further, Kress asserts that punctuation is an essential social contract between the writer and the reader, who each tentatively agree to the punctuation's framing constraints. Punctuation is "the overt, deliberate, appearance of 'directive markings' of this structuring, a guide and instruction to the viewer, reader or hearer towards recognition, perception and, if things go well, an acceptance by the reader of this disposition of material and this order" (125). In other words, punctuation is a tacit and tentative contract wherein the reader agrees to submit to the writer's structure of the text, which entails how the reader will be able to interpret its structure. Think of a writer building a text like an architect that builds a subway station: It is purposefully designed with only one logical path through it. By building my text in this conventional and linear fashion, I can be reasonably sure that you will read the words,

sentences, and paragraphs in the order that I set them, even though you could easily choose your own reading path. Such structural conventions don't guarantee that a reader will agree with any of the ideas within a text, but since structure is an essential component of meaning, the writer has a much greater chance of achieving the desired rhetorical aims.

Halliday says that the sentence has evolved as one of the essential units of the written language (436). It allows the writer to organize the clausal units into an understandable and related structure, which is why Halliday refers to a sentence as a visual complex of clauses or a *clause complex* (436). To return to Kress's argument, writers can choose writing that closely mimics speech (like the fragmentary and relatively unpunctuated nature of text messages) or create linguistic structures that are so complex that no speaker is ever likely to say them in a conversation with another human being (like the sentences in some academic prose). The punctuation system allows and encourages the entire range of rhetorical choices.

The writer has more choices than the reader. The punctuation of a text demands how the reader will read it. As Kress explains, "[punctuation] draws the reader willy-nilly into the act of performing someone else's text in their own preferred or habituated speech-form...It is a highly effective rhetorical device, a highly coercive strategy." Kress notes that this strategy becomes less and less effective as a writer moves farther away from speech-like prose because a reader has little habituated practice with such complex linguistic forms. He anticipates that "demagogues...write in a more speech-like form" (133). In other words, if a writer chooses simple clause structures, the reader will more willingly accept the message regardless of its content, simply because the reader is so

familiar with that speech-like structure. Those who seek power, and especially those who seek to abuse power, would do best to keep their writings short and more speech-like in order to gain the greatest audience.

It was intriguing to watch Kress's argument play out in the 2016 American presidential election. Many commentators discussed President Trump's short, unpolished, fragmentary speech-like tweets and public speeches, which were better received (at least according to the (contested) election result) more than the more metered and elaborate speech of his competitors. According to Kress's contention, it was easier for people to understand and feel comfortable with Trump's short speech-like bursts, even if they didn't necessarily agree with the words that he was speaking. The ideas may or may not have been disturbing, but the format was familiar enough to resonate.

To be clear, the argument isn't that speech-like and non-speech-like writing cannot both be effective; it is just that the audience will be increasingly limited as the complexity increases. Following Kress's logic, a writer might look at the amount of necessary punctuation as inversely proportional to the audience that the text will likely receive. A tweet or a headline might get millions of views nearly instantaneously, while a book may take centuries to get that much reader attention. Less obviously, a sentence with multiple embedded clauses and layers of complex interconnection will resonate with far less readers than a simpler sentence.

The Brain Keeps Track of It All

In summary, every signifier expressed in the written text impacts the meaning of the whole. There is no inherent difference between the linguistic and non-linguistic symbols, even though the educational system tends to artificially separate them. They are

used together and make meaning together every time, so it is best to study them together, too. The reader's lifelong experience with every symbol will shape their reception of every text.

To see why punctuation choices are not simply conventional, the next section will explore how the brain perceives, stores, and retrieves that lifelong experience.

Section 2: Literacy is an Embodied Process

To understand how the brain gains knowledge, let's start with an experiment: Change the password on a device that you use frequently and then keep track of how many times you attempt to put in your old password before the new one becomes automatic.

Almost certainly, you will refuse to participate in this experiment because you have already performed this experiment many times with the same frustrating results. It should be so easy to learn a new password; it is an objective and indisputable fact that we set ourselves. We can test its validity and receive instantaneous results of our success or failure when we change it, and every single time we enter it again. All we have to do is to remove one tiny piece of (now) errant information and replace it with a far more effective fact. Despite this, it often takes days to rewire our brains to use the new password with the same ease that we used the old one because our prior knowledge interferes with gaining new knowledge. This is because the brain doesn't store individual pieces of information like neat little books that can be pulled and replaced from cerebral shelves; it stores patterns of neurologically encoded information that the brain builds through its experience and replaces only with significant incentive and practice (Eagleman 3, 41).

Predicting Where We Will Go Next

To be clear, it is difficult to learn and even more difficult to relearn things (like passwords) because it is an evolutionary advantage. Kurzweil says that the brain evolved as a pattern-recognizer in order to allow humans to successfully predict what would happen next (250). The neocortex—that wrinkly, folded matter that covers the human brain—has about 30 billion neurons that are constantly seeking patterns in the world, and the "apparent lushness of human experience is a result of the fact that all of the hundreds of millions of pattern recognizers in our neocortex are considering their inputs simultaneously" (230, 58). In other words, the human brain is constantly seeking stimuli from the outside world by directing the body to see, smell, taste, listen, and feel. The body encodes that stimuli into electrical signals and passes them onto the brain. The brain uses its neural networks, including those in the neocortex, to compare this new situation to previous experiences in order to guess what is happening now and what will happen next. As Bor reports, the brain is constantly seeking to detect patterns that will help humans to gain control of their environment and themselves (73).

Linguist George Lakoff and philosopher Mark Johnson argue that memory is completely embodied, physically etched into the brain, and the current experience is always compared and connected to some previous experience (17). One contrary experience or one random lesson should not (and does not) change a series of successful predictions. To use the password example again, your brain has many more successful experiences with your old password than with your new one. While your logic may tell you that the old password will not work and the new one will, your vast life experience says that the old pattern is more likely to be successful because it always has been. From

an evolutionary point of view, it is far more useful to automatically do something that has almost always worked (your old password) than to try something that has only worked a handful of times (your new one).

From a neurologic and evolutionary perspective, the brain should not and does not allow an isolated grammar lesson to permanently change a student's long-term behavior, either. This makes perfect sense. One isolated example shouldn't overwhelm hundreds of successful practices, and students have likely made comma errors hundreds of times before they arrived in the FYC classroom. The brain has no incentive to change a writing habit that has been effective in the past because it is quite predictable that the same writing habits will be effective in the future. From a neurological point of view, those grammatical errors were successful, even if they didn't follow grammar rules. The writing choices—error-filled or not—resulted in enough acceptable papers that the students were able to progress to reach a college level writing course.

The Brain is Not Netflix

Contrary to popular belief, Kurzweil says that there are no static memories in the brain (29). There are no video-like clips that can be recalled and replayed over and over. Instead, the brain builds and accesses neurological patterns that shift and reshape each time they are accessed. Henry Markram explains that

> Acquiring memories is very similar to building with Lego. Each assembly is
> equivalent to a Lego block holding some piece of elementary innate knowledge
> about how to process, perceive, and respond to the world....When different blocks
> come together, they therefore form a unique combination of these innate percepts

that represents an individual's specific knowledge and experience. (qtd. in

Kurzweil 81)

In other words, each neuron holds some small piece of a very large puzzle, and learning

is forming new connections between the neurons and bundles of neurons to make new

patterns of information.

The neuronal connections are incredibly complex. As Eagleman explains, a

typical human brain weighs about three pounds and has hundreds of billions of neurons

and glia that can be combined into a web of almost unfathomable complexity. A typical

neuron may easily have 10,000 synaptic connections to neighboring neurons, which

"means that there are as many connections in a single cubic centimeter of brain tissue as

there are stars in the Milky Way galaxy" (1-2). But the brain doesn't just keep a memory

in a single place.

Medina explains that information is stored all over the brain, organized by the

sensory pathway through which that first experienced them. So, the brain stores the

smells, tastes, sights, words, etc., associated with an experience in the parts of the brain

that process those senses. For example, the visual image of a flower and the visual image

of an elephant would be stored in nearby neurons because they were experienced both

through the same sense organs that allow sight, and those images will be neurologically

categorized as similar experiences. In contrast, the words that signify those experiences—

flower and *elephant*—will be encoded on neurons that are stored in the language center of

the brain. The texture of both things will be gathered together in a different part of the

brain than either smell or language, and so on (52-67). When someone reads the word

elephant, their brain automatically links every sensory experience they have with an

elephant together, so that the brain can detect what meaning should be attributed to an elephant right now.

For an English-major-friendly and vastly oversimplified version of neurology, think of it this way: Each neuron is like a letter and a bundle of neurons is like a word. Zull explains that a neuron connects to other neurons by extending dendrites—long filaments that wind through the brain and connect to other neurons at gaps called *synapses*. These dendritic connections allow neurons to be fired in pathways, much like toppling dominoes. If one neuron in the chain fires with enough intensity, the electrical charge will fire all the neurons connected to that originating neuron (91-98). In the same way that a letter only has meaning when it is related to other letters in words, it is the relationship between neurons that makes meaning, not the individual neurons themselves.

The brain doesn't repetitively access precisely the same information; instead, the neocortex can access hundreds of subtly different variations of the same information (Kurzweil 65). We have all experienced this when we repeatedly tell a story. While the basic story arc tends to stay the same, we often find ourselves editing as we recall different details or resolve logical inconsistencies. This is because our memories aren't static pieces of information; they are fluid, active networks with different neurons added and subtracted from the pattern every time it is accessed. As Boyd argues, human memory is fluid because it needs to be. People will never be placed into the exact same situation again, so they don't need an exact replica of any situation in their memory (156-7). They do need to be able to recall what they learned from it, and a loose, broad system of associations allows lots of different triggers to access the same information.

To compare it to writing again, a reader doesn't need (or have) a static collection of sentences in their heads. It is rare to read the same sentence over and over again, so the ability to automatically recognize an exact replica isn't generally useful. It isn't that someone can't memorize whole sentences/sonnets/speeches, etc.; it's more than they just don't want or need to do that often. Instead, the brain needs to have fluid access to each of the individual parts of a sentence and the ability to combine and recombine them into infinite sentences. Instead, like Daniels explains, they store patterns that contain the language's "sound system, vocabulary, and sense of grammar," which can all be infinitely combined to make meaning (6).

The fluid memory system has important implications for mechanical writing instruction. The more limited the instruction or the rule is, the harder it is to transfer that learning to a student's writing. It is much like individual cell phone numbers. If you have someone's exact phone number, then a cell phone is great for accessing a single person, but you can't generalize or transfer that knowledge to help you reach their sibling instead. If you are missing even a single digit, the whole communicative process won't work at all. Similarly, a lesson on how to diagnose a comma splice, for example, gives students one narrow access point of punctuation information. Students are expected to search through their sea of sentences for a very specific grammatical pattern that requires a fairly sophisticated diagnosis. If they are missing even one piece of the puzzle (like how to diagnose clauses,) then the whole process will likely end in failure.

When they finish looking for comma splices, they are supposed to go back through the same paper again and again, looking for other highly specific problems. It is unsurprising that struggling students either don't attempt the editing lists or fail to apply

them correctly. It is better to teach them the broader patterns of sentence construction because it gives them a more flexible tool with wider application.

The Difficulties of Correction

Pattern recognition certainly makes good evolutionary sense. Patterns help humans to predict what will happen far more quickly and accurately than reasoning. Repetition doesn't mean that the connections are "right;" superstitions like refusing to wash a pair of lucky socks, for example, are based on a repetitive pattern of occurrence. Pattern recognition only means that this particular situation is likely to have a predictable result, not necessarily a logical result. Kurzweil explains that a primary limitation of the neocortex is that "there is no process that eliminates or even reviews contradictory ideas, which accounts for why human thinking is often massively inconsistent. Humans have a weak mechanism to address this called critical thinking, but this skill isn't practiced nearly as often as it should be" (197). In grammar terms, students may not debate each comma or semicolon placement; they often rely upon the neurological patterns that have successfully gotten them through their past writing problems. Accessing patterns is biologically required; accessing critical thinking is, as we have all experienced, completely optional and demands far more work.

The brain is structured to make most learning unconscious and innate, too, but it is also structured so that corrections are difficult. It often requires a conscious and laborious process to change a previously held belief (Bor 92). To go back to the initial password experiment, we certainly believe that our old password is now obsolete just as certainly as we wish to replace it with the new one; replacing prior knowledge with more

effective knowledge is not a problem of fact or desire. The problem is that the password isn't a simple, isolated fact that can be removed from the brain at will.

The password experiment is worth considering deeper. When we change a password, we have every learning advantage: We have indisputable proof that the facts have changed and perfectly understand where the new password fits into the logical framework of our digital existence. It takes no skill to know where to place the password since the device specifically asks for the password in an obvious box and often lets us provide ourselves hints to remember it. Despite this, we still make frustrating mistakes as we change the patterns of our brain to match our current knowledge.

In contrast, students are heavily disadvantaged when asked to change their writing habits, which are likely decades older than your password. They did not choose the writing system, and they often cannot see its design. Since every single sentence is (or at least should be) unique, they can't simply learn the sentences. The words offer no consistent prompts as to what punctuation should fit before or after them, though students often create faulty patterns to help them. Students often have no way to test if their choice is valid or invalid other than turning an essay in and waiting weeks to find an answer. Particularly with repetitive writing errors, it is clear to see that students' writing choices exhibit a consistent logic, but the students are often unable to express that logic. If they cannot express it, they cannot effectively challenge it or find resources to help decode it, either. Altogether, it is ludicrous to think that students could instantly overcome their decades of writing experience with a single lesson or list when even changing a password presents such an intellectual challenge.

Bor says that the human brain evolved "to move the body around in the most useful ways" (69). Humans need to find food, mates, and shelter while avoiding predators, injury, and pain. The neocortex has no natural incentive and no instinctive processes to root out a mechanical writing error. The human brain is designed to recognize danger and respond accordingly; writing errors present no (immediate) danger. Unless instructors specifically intervene in the writing process, writing errors have no negative consequences at all while they are being acquired or executed. Students often have no idea that they committed any writing error until weeks after they have submitted essays. Unless they consciously and laboriously try to connect their previous knowledge to the scrawled marks on their essay, they cannot possibly learn to improve their writing mechanics simply by writing. They are neurologically bound to make the same writing decisions until something intervenes to overcome a decade of prior learning. It is an educator's job to find ways to introduce the weak skill of critical thinking into a very established process.

Reading is an Embodied Process

As Lakoff and Johnson argue, learning is not a metaphysical process; it is absolutely embodied. Cognitive science has proven that thought and reason are not "transcendent feature[s] of the universe…[but are] shaped crucially the peculiarities of human bodies, by the remarkable neural structure of our brains, and by the specifics of our everyday functioning in the world" (4). Human beings experience the world through a physical body engaged in physical acts, and the brain uses that experience to build knowledge, rather than somehow gathering capital-K Knowledge that is independent of experience (Gunay and Yucel-Toy). While neuroscientists like David Eagleman have at

least allowed for the possibility of transcendental and divine experience, they all agree that our minds have a physical architecture that can be studied, traced, and ultimately leveraged for our learning benefit.

This is a critical idea for this dissertation that will surface again and again: Literacy is an embodied process. By understanding how the brain perceives, stores, and retrieves information, the writer can understand why the writing system uses the same marks in the same conventional ways in order to transmit meaning. It can also teach composition instructors why long-held beliefs about punctuation and other writing concepts are impossible to unlearn and difficult to relearn, especially with a set of difficult grammar rules presented in random fashion in singular lessons.

The Brain Did Not Evolve to Read; Writing Evolved to Take Advantage of the Brain

To be clear, literacy is not an evolutionary trait, like the genetically determined ability to speak and hear language. Scholars like Wolf and Dehaene agree that reading and writing have not been prevalent in society long enough to have made significant genetic changes to the human brain structure. Instead, the reading/writing process have to leverage the benefits and constraints of the existing brain architecture. Wolf argues that literacy and numeracy depend upon three basic cognitive capabilities: "the capacity to make new connections among older structures; the capacity to form areas of exquisitely precise specialization for recognizing patterns in information; and the ability to learn to recruit and connect information from these areas automatically" (12). Literacy is a highly specific pattern-recognition system that take advantage of the same pattern-recognition systems that allow us to survive at all. The human brain is essentially a pattern-recognizer. As experience teaches us all, "Human beings have only a weak ability to

process logic," according to Ray Kurzweil (and life experience,) "but a very deep core capability of recognizing patterns" (38).

The technological developments in writing are all about making that pattern recognition faster and more accurate. Of course, the ancient writers were not aware of the neurological structure of the brain while they created different writing symbols in different writing systems. Instead, as Parkes' *Pause and Effect* describes, authors tried different symbols and found that some worked well; others didn't. For example, around the fifth century, authors began to consistently mark pauses in texts, which worked well enough for others to start preferring texts with that punctuation (13). If the symbols worked well and enough writers were mimicked the innovation, other people started using them, too. If the symbols didn't improve the function or weren't distributed widely enough, the symbols slipped back out of usage or took on new meanings (14).

The Biological Reading Path

It is tempting to think that punctuation was and is simply conventional; writers use it out of a sense of habit or disciplinary requirement. But punctuation has deeper, more cognitive roots. As Eagleman explains, humans do not read with their eyes or write with their fingers; the brain directs both (41). Writers don't just use punctuation because it is a conventional habit; they use it because it allows the brain to perceive the linguistic patterns far easier. By understanding a little of biological process of reading, punctuation's value in writing's visual system becomes clear.

Dehaene explains the biology of reading, starting with the anatomy of the eye. In order to read a visual text, the eye has to receive photons reflected off the text's surface and onto the eye's retina, which lines the back of eye with millions of photoreceptors. In

simpler terms, the eye is the brain's camera. It is always taking pictures of the world and

sending those pictures to the brain in order to understand what is happening in the world.

Like a camera, the eye isn't smart; it can't decode the images that it captures. Instead, it

just captures the light and sends the translated digital signals to the brain to be decoded.

Like any good camera, the eye can take pictures with a huge range of resolution

depending on where the eye is focused, which changes the angle of the light from the

image that strikes the back of the
eyes. Only one, very specific part of
the retina—the fovea—is capable of
seeing the fine distinctions between
letters (see Fig. 19) (13). The fovea
can capture very high definition
images but can only capture a very
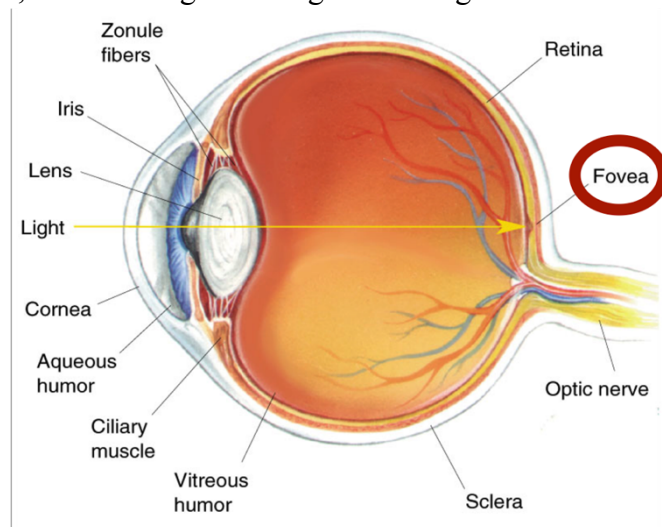
small piece of the world at once; as light moves away from the fovea and across the rest

of the retina, the eye's camera becomes increasingly low resolution but sees a much

bigger span.

Dehaene explains that the brain (with the fovea's focus) can completely process a

word in about 50 milliseconds, which means that most good readers can process about

400-500 words per minute (17). To be clear, the brain does not just see that fast; it

comprehends all those words that fast and creates a collective meaning for them, despite

the fact that each sentence contains unique combinations of words that the reader has

likely never seen before and will likely never see again. Dehaene says that "the entire

visual recognition process, from

Fig. 19 The fovea is the only part of the eye capable of fine distinctions like letters

retinal processing to the highest level of abstraction and invariance, thus unfolds automatically, in less than one-fifth of a second, without any conscious examination" (93).

The brain does not keep an entirely different neurological path for oral and written communication. The brain is a conservative organ that can fashion the neural circuitry to match the current task, using all its available resources, as Eagleman discusses (71). Obviously, a written word is seen first, thus processed by the part of the brain that processes every other kind of visual image, while a spoken word is first processed by the auditory pathway. But, Dehaene explains, after about 250 milliseconds, the brain activates the same areas for both written and spoken words. The brain uses the same language networks for every other processing past the initial perception of the sign (104). In other words, the brain has simultaneous access to the learner's lifelong history with any word, regardless of whether that history was heard or seen.

Seeing the Whole Field

In primarily alphanumeric texts, it's tempting to think that the words are the only form of communication between the writer and the reader. Dehaene explains that the reading brain is trained to focus on the words. Every alphanumeric word has multiple modes of communication, though. Human brains are trained to consciously ignore modes like **font**, color, and size so that readers can focus on the essential visual features of each word and gain a consistent meaning (18). It is only when the author unconventionally varies those features that they are brought to conscious attention.

In a conventional text, it's easy to overlook a text's punctuation—the marks, specialized fonts, and spaces. In fact, punctuation is designed to be as overlooked as it is

unvoiced, but it is as essential to the creation of meaning as the letters. It would be impossible to read without punctuation. For example, the positive visual elements, like the letters and words, can only be seen when they have negative elements (like the white space around and behind them) to provide the contrast (Dondis 35-36). In extension of Halliday's functional grammar, Gunther Kress's multimodal social-semiotic theory argues that every visual element (e.g., color choices, letter spacing, orientation) creates meaning (79). The meaning-making process is, as Charles Bazerman explains, always a dynamic relationship between the writer, the reader, and text (23). A conventionally-presented word—balanced on its horizontal axis, presented in the same font and color as its peers, set against a stark background, set into a sentence, etc.—invites the reader to consider its typical meaning. Change any of the design features and the reader will be forced to ponder why the writer is drawing such attention to that word (see Fig. 20.)
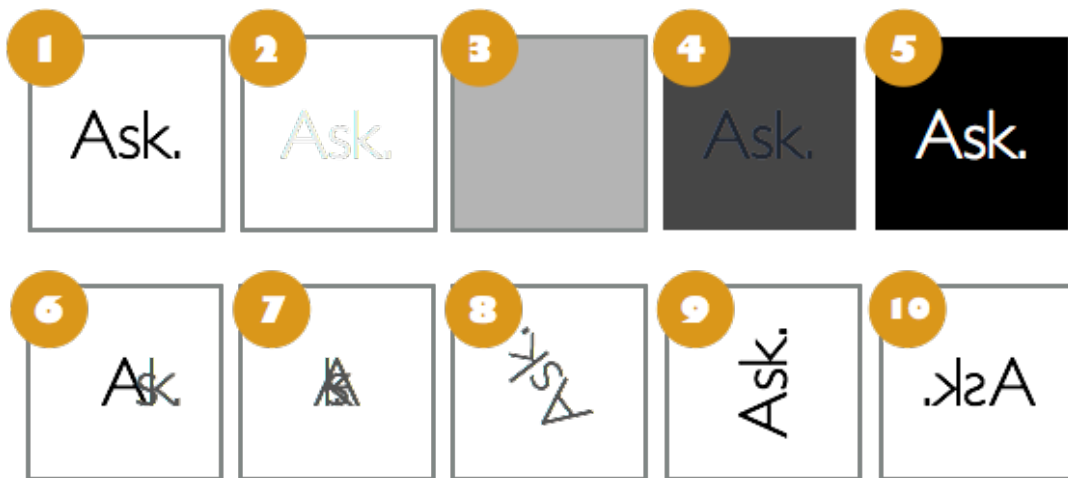
Fig. 20 Different ways to present a word

The more random the form, the more unstable and reader-determined the meaning becomes. In other words, the writer grants the reader gains more control of the text with each unusual design choice. For example, in experimental poetry, a contorted syntax or unpredictable letter presentation can give the reader a desirable level of autonomy. In

advertisement, an unconventional spelling or sentence fragment can be highly effective as it forces the reader to slow down and interpret the text.

Targeting the Meaning

Visual recognition can be greatly aided by punctuation. The punctuation of space can be seen as a cognitive-targeting device. For example, the spaces around words allow the eye to target each word precisely. This has important implications for reading: It is impossible read an entire page or even an entire line at once because we can only read a very small visual range that is centered directly in front of the fovea. According to George W. McConkie and Keith Rayner, a reader will focus on very small ranges of text at a time, seeing only about 10-12 letters at once (qtd. in Dehaene

Fig. 21 The spaces help the brain to center the fovea on the best vantage point during each saccade in order to best interpret the word

16). Rather than read in one continuous slide across a set of letters, the eye bounces its gaze to different words about 4 or 5 times per second (13). Those bounces are called *saccades*, and they can be observed just by watching another person read. The brain can use the frame of negative space to target the eyes to get the best possible vantage point for decoding the next word, which, for English readers, is just to the left of center [see Fig. 21] (Dehaene 16, 19). Because the brain can use spaces to target the eye so precisely, reading is far faster.

The amount of space between letters matters, too. Certainly, letters cannot be written in the same exact space. But the letters cannot be spaced too far apart either. Graphic designers spend a lot of time getting the spacing between the letters to the ideal

reading distance (which word processing programs then set automatically.) If the letters are too crowded or stretched too far apart, reading slows down as the brain works harder to see the patterns (see Fig. 22).
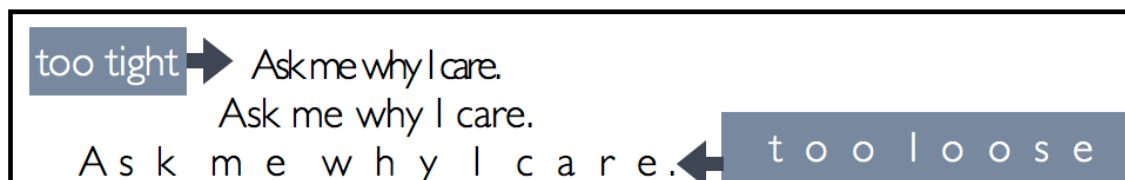
Fig. 22 The ideal letter spacing for easiest comprehension

Every form of punctuation gives the brain a different set of patterns to recognize. For example, the upper- and lower-case alphabets make reading faster by giving the writer more distinctive patterns to use to make meaning, which gives the reader more distinctive patterns to recognize. It is important to note that the upper- and lowercase letters are completely different written alphabets, not just different forms of the same letters. While the letters often resemble one another, they are not just a larger and smaller version of the same symbol. An uppercase K has a subtly different arrangement of lines than a lowercase k, while an uppercase Q has almost no similarity to the lowercase q. They are both completely abstract shapes and the reader has to learn to associate both symbols with the same basic meaning.

Fonts like capitals and italics perform the same meaning making function as space and marks. After looking at many writing samples, I found that 99% of letters in extensive writing are in lowercase roman font. Most of the time, the first letter of a sentence is the only one written with a capital letter. Italics are even more rare. Graphic designers James Craig and Irene Koroal Scala discuss that such consistency allows for much faster reading because the reader has so many experiences with the same patterns

(62). Small variations, like the addition of a capital letter mid-sentence, will get a lot of cognitive attention simply because the rest of the font choices are so consistent. This is why all uppercase writing seems like yelling, even though no sound is involved. It is so rare to see that kind of writing that it causes stress within the reader.

Dondis explains that stress is the "introduction of lack of balance or regularity" (25). Despite its poor reputation, stress is not a negative trait; it is a rhetorical feature (26). A writer can use stress—like writing in all caps instead of the regular lowercase—to "reinforce meaning, purpose, intention, and … as a basis for interpretation and understanding" (26). By understanding conventional punctuation, the writer can introduce unconventional punctuation to focus the reader's attention and create effective meaning. If a writer misunderstands the conventions and applies them in eccentric ways, they can cause stress in the reader, too, but it will likely be distracting rather than functional stress.

How Much Does One Symbol Matter, Really?

Students often wonder at why small punctuation decisions, like unconventional use of an apostrophe, can make such a large difference. They often attribute it to overly critical readers, and English teachers tend to be seen as the most curmudgeonly and overly critical readers of all.

It's worth teaching them the following: As Wolf explains, as a reader learns to recognize discrete patterns, like the differences between words, "working groups of neurons gradually become more and more specialized and require less and less area" (91). Because readers have seen the words *dogs, dog's,* and *dogs'* many times, their brains will have a hardwired grammatical expectation for each word and can find all the

necessary information about each word automatically. That hardwiring is a literal connection of neurons within the brain. Dehaene argues that each word has "a single mental address, an abstract code capable of orienting the rest of the brain toward the pronunciation and meaning of the word" (22). So, the word *word* has a single mental address that is comprised of many neurons chemically wired together so tightly that they will all fire together when they perceive that pattern, and it will trigger all the necessary related information to fire, too.

Alexander G. Huth et al. explain that each use of each word has a different mental address, too. So the word *top*, for instance, will be stored in various places within the brain. The same spoken or read word will trigger different recognitions that are stored by general category, like *top* as a clothing item, *top* as a spatial description, and *top* as a toy. These different categories are stored throughout the brain, rather than in one location.

Neurologically Chunking the Language

Fluent readers do not sound out each letter of each word, like they did when they began to read. Instead, as Dehaene explains, "our visual system has learned to treat these groups of letters as bona fide units, to the point where we no longer pay attention to their actual letter composition" (23). Readers recognize the entire letter pattern in each word, rather than recognizing each letter individually. Tihs exlpians why tihs setnecne is sitll raedalbe, even though the letters are scrambled. The pattern is not exactly right, but it has enough pieces in the right order to be recognizable.

The brain is trained to seek out novel information, and each sentence will have a novel combination of words. The reader cannot effectively predict which word will be in any particular position, so the reading brain will dedicate most of its effort to

distinguishing the meaning of the entire combination of words. In contrast, the punctuation in extensive writing is nearly completely predictable, at least when it is placed by/read by experienced writers in the genre. The reading brain can attribute meaning to conventional punctuation without almost any conscious thought. To be clear, that isn't because the punctuation choices aren't meaningful; in conventional writing, they are just highly predictable, and it rarely takes conscious effort to discern their function. When reading a conventionally punctuated text, the mind can unconsciously access those mental addresses and do all the reading work automatically (finding the meanings of each word and adding them together to create a unique combined meaning).

Size Doesn't Matter

The writer cannot simply use two differently sized letters to express a different meaning because human beings already use size differences to determine distance and perspective. To give a well-known example, a car that is close will appear larger, and one that is far off will appear smaller, but the brain recognizes that both are a full-sized car. The size differential just helps us to gauge how far away the cars are likely to be and how big the cars are likely to be in comparison to that distance. Because of this characteristic, a reader can understand the same word whether it is read in a text message or on a billboard, even though the scale is radically different. To transmit a different meaning, the author must use a different symbol, like Q or q, instead of just changing the size.

As Dehaene explains, readers actually learn to read the same basic shapes of both alphabets in an almost infinite variety. A reader can recognize the same word in different fonts or colors: school, school, **school**, **school**, school, and *school*. The brain automatically sorts out the differences and focuses on the invariant features of each word

to gather meaning. In some cases, the brain has to magnify the tiny differences, like

seeing the difference between "eight" and "sight." As Dehaene continues, these words

have only a few different pixels, but the brain can automatically discern the key

differences between them (20-21).

Kurzweil shows that each letter is a pattern, just like every word, sentence, and

paragraph is a pattern. The brain looks at all the pieces together to determine what the

pattern of lines represents (66). The patterns of English letters, like all other alphabetic

systems, is not accidental or simply conventional (i.e., because some smart person started

using a K, other people used a K, too.) Dehaene explains that each letter shape is actually

based in the brain's neurological recognition process, which finds some shapes and

angles easier to recognize than others. Because of this, the same shapes and angles are

recomposed into different characters in many different languages (137).

To be clear, each language uses different symbols to represent their respective

sounds, but the symbols themselves are composed of a small range of contrasting lines,

dots, and curves, small at least compared to the entire field of possibilities. Dehaene

asserts, "The most likely hypothesis is that these shapes were selected, either in the

course of evolution or throughout the course of a lifetime of visual learning, precisely

because they constituted a generic 'alphabet' of shapes that are essential to the parsing of

a visual scene" (137). In other words, the letters are made from the shapes and angles that

the brain is most adept at recognizing as distinct from one another, which makes it far

easier to determine the meaning of the whole.

These non-accidental properties of the letter make it easier for the brain to

perceive text altogether and the precise angles makes it easier for the brain to screen out

non-meaningful variations like "size, angle of vision, and light" (Dehaene138). Like

philosopher and deconstructionist Jacques Derrida argues, the brain is looking for the

meaningful differences between one word and another. Human thought is possible

because the brain is capable of differential signification that lies outside of conscious

control (301). The brain doesn't store exact replicas of any image; it "merely extracts a

sketch of their non-accidental properties as well as their organization and spatial

relations" (Dehaene 138). Whether the brain is looking for patterns in letters or a loved

one's face, the brain isn't comparing either to some encoded picture. Instead, it is always

comparing scale and elemental composition. A person can recognize their friend by their

unique variations from the rest of humanity, like the exact shape of his nose or her shade

of blue eyes. Each person is a collection of subtle and profound differences, and the brain

has been genetically wired to perceive and give meaning to those subtle differences.

Utilizing the same basic cognitive pattern-recognition system, a reader recognizes

letters by the scale and angular organization of the lines. Dehaene concludes that humans

invented the letters, but didn't invent the letter shapes. Those shapes have been part of the

brain's architecture "for millions of years, and were merely rediscovered when our

species invented writing and the alphabet" (139). To borrow Elizabeth Wardle's term, the

alphabet simply *repurposes* the shapes that the brain is already genetically designed to

perceive.

Lastly, Tanaka observes that "some neurons code for a black dot on a white

background—an eye detector, clearly an essential device in a social species like ours"

(qtd. in Dehaene 139). It is interesting to note that ten of the sixteen, conventionally-used

punctuation marks use a typically black dot or a variation of it. That observation certainly

doesn't argue that early writers developed such marks with neurology in mind; instead, it just implies that such marks might have had centuries-long success because they are already favored by human anatomy. (It certainly doesn't hurt that they were easy to carve and write either.)

Literacy is always an embodied process. It repurposes the existing architecture of the human brain, adapting it for this specific purpose. While the written symbols—linguistic and non-linguistic alike—are used conventionally, they are not simply conventional. They have deep cognitive roots that explain their evolution and their propagation over long periods of time. In summary, the written symbols have evolved to be the easiest for the reading brain to perceive and understand.

Redundancy Grants Invisibility

Many instructors, following the lead of nearly every FYC textbook, argue that ample exposure to good writing examples will allow a student to simply absorb sentence-level writing mechanics. This strategy has neurological problems, though. Kurzweil explains that the human brain does not store infinite amounts of patterns of the same information. It would rapidly fill up with millions of pieces of information that just helped someone to recognize the living room couch, for example. Instead, the brain reaches an optimal level of redundancy where the brain continues to recognize the pattern, but it doesn't make any new memories of a routine experience (65). All of us have experienced this. When we drive to a new house, we are hypervigilant and notice tons of details. But after months of driving the same course, we can leave work and arrive at home with no memory of driving on the roads in between. In terms of punctuation,

students likely stopped making any new memories of punctuation marks years ago since they have seen hundreds or thousands or millions of examples of them already.

To give a writing specific example, I give a punctuation survey on the first day of class that asks students to identify each commonly used punctuation mark, including the three dashes (hyphen, en dash, and em dash.) (See Fig. 23 if you are curious about the different uses for each dash.) No one has ever been able to identify these three dashes, and in fact, every semester, someone has protested that no normal human being ever uses all three dashes. Their peers always agree: Only an English teacher has ever seen or ever cared about this excessive range of dashes. So, I ask them to read a paragraph that uses all three dashes and ask if they are at all confused by the marks. They aren't. I have them reread a paragraph with the dashes exchanged and ask if that looks weird to them. It does. They may not consciously know about even the presence of such differences, but their brain has stored the patterns of such differences nonetheless. Granted, the difference between an en dash and a hyphen is minute, but it is present. The brain is well designed to notice such subtle differences and attribute meaning to them (Eagleman 5). It is also designed to keep those distinctions from conscious notice nearly all of the time.
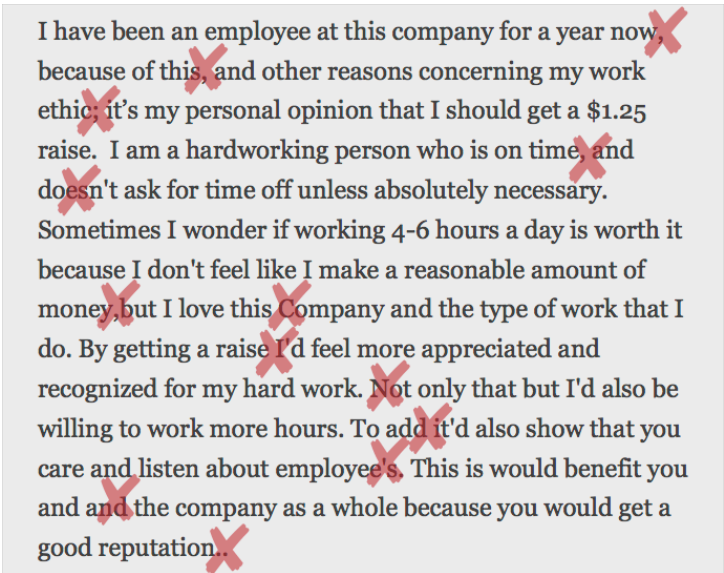
Fig. 23 Comparing the different dashes

As Eagleman describes, conscious attention is necessarily limited to just the information that the brain cannot process automatically. "Awareness of your surroundings," he says, "occurs only when sensory inputs *violate* expectations" (emphasis in original, 49-50). There is simply too much stimuli in the world to consciously consider it all. The brain observes patterns, makes predictions that guide nearly all behavior, and only focuses on the differences between the prediction and the actual processed information (49). In college reading, the student might be surprised by nearly all of the factual content of a text, but they shouldn't be the slightest bit surprised by the punctuation embedded within it. Academic writers use the same marks with consistency in order to speed up the reading process. So, the brain has no reason to notice the well-punctuated structure, but the cognitive load of the ideas requires intense and highly conscious focus. The brain distributes its attention accordingly.

Circling the Errors Reinforces the Errors

Composition instructors often thoughtfully mark all the grammatical errors in student essays, but Zull explains that simply pointing out an error actually reinforces the neurological pattern that created it (see Fig. 24). As a reminder, Hebb's theory argues that networks that wire together will fire together more and more easily as similar experiences trigger the same responses (118). To put

I have been an employee at this company for a year now, because of this, and other reasons concerning my work ethic; it's my personal opinion that I should get a $1.25 raise. I am a hardworking person who is on time, and doesn't ask for time off unless absolutely necessary. Sometimes I wonder if working 4-6 hours a day is worth it because I don't feel like I make a reasonable amount of money, but I love this Company and the type of work that I do. By getting a raise I'd feel more appreciated and recognized for my hard work. Not only that but I'd also be willing to work more hours. To add it'd also show that you care and listen about employee's. This is would benefit you and and the company as a whole because you would get a good reputation.

Fig. 24 Reinforcing the errors, rather than preventing the errors

it another way, Eagleman explains, "When the brain finds a task its needs to solve, it rewires its own circuitry until it can accomplish the task with maximum efficiency. The task becomes burned into the machinery" (71). So, simply noticing a repetitive pattern reinforces its neurochemical connections. It is entirely possible that instructors make students' errors more persistent by repeatedly drawing their attention to them if instructors don't also provide a way to challenge and change that error. The brain needs to perceive the difference between what it expected (e.g., this comma is placed effectively enough) and the stimulus it receives (e.g., this comma placement got a teacher's negative attention,) but it also needs to be able to perceive how to create a better solution in the future.

While a teacher or student cannot remove errant information, instructors can help students to expand and challenge existing information by viewing it as incomplete, rather than completely wrong (124). To exemplify this point, I'll return to the student surveys about punctuation that were given on the first day of class. For brevity, I'll focus on their answers regarding the comma. Every student could identify the comma, and they displayed a consistent understanding of this mark. While each student tended to give only one purpose, three main purposes emerged: a comma puts a pause in a sentence, breaks up words or a sentence, and breaks up lists. 67 out of 68 students wrote perfectly grammatical sentences that used a comma.

When I studied the students' essays, it was clear that students did not fully understand the comma. The essays were plagued with comma splices, fused sentences, and other comma errors. While the students didn't follow grammar conventions, they did follow their own metacognitive rules for the placement of this mark: Their commas break

up sentences, insert pauses, and break up lists. This incomplete metacognition certainly keeps students from using a comma effectively, but it can be leveraged to show that they are successful in one area and can transfer it to another.

Near the beginning of each semester, I have the students perform a simple counting task on a piece of their own writing. Using Microsoft's word count feature, I have them analyze their number of words, letters, spaces, capital letters, periods, etc. I have them consider how many of those choices were completely automatic and how many they had to consciously consider.

	Functional	Dysfunctional
Grammar	149	2
Mark	13	8
Font	13	1
Space	142	1

Fig. 25 Student D's functional and dysfunctional choices

Even in a single paragraph, they made hundreds of conventional writing choices without almost any conscious work. To revisit Figure 24, Student D made 12 unconventional writing choices in this single paragraph, but she made 317 of conventional choices, too (see Fig. 25). As the *Framework for Success in Postsecondary Writing* asserts, each of these is a habit of mind (1). She learned conventional and unconventional choices throughout years of writing development, and she can relearn to make more conventional choices with the same ease.

Different Literacy Histories

Those ever-changing neurological chain also explains how two human beings can hold radically different beliefs, even about something as simple as placing a comma. Each time someone writes, they are accessing their entire life experience with that writing symbol, which varies incredibly from one person to another. As a reminder from an

earlier chapter, Walter Ong argues that writing expands a language's potential "almost beyond measure, restructures thought, and in the process converts a certain few dialects into grapholects" (7-8). Because language is a social process, it necessarily changes the humans who engage with the language, too. Maryellen Wolf reports that children are genetically created to gather language, but early access to the grapholect can radically change a child's eventual facility with written language.

Like Ong, Wolf insists that written language—especially the extensive written language of books— is significantly different than oral speech. Written language utilizes a different syntax and has a much broader range of vocabulary that have little or no representation in oral speech. It has a much greater reliance on metaphor and analogy. Wolf cites multiple scholars who found that the language of books deeply enriches all aspects of a person's language, including "syntactic, semantic, morphological, and pragmatic aspects" (88). The more a person reads, the more their language—and all the neurological patterns that encode language— changes and expands. Their sentence complexity changes, their vocabulary expands, and they grow more comfortable with increasingly complex sentence structures that are rarely present in oral discourse. A student's language production and reception are both radically changed.

To be clear, this does not mean that highly literate people are somehow more evolved, intelligent, or complex than people raised in a low-literacy or no-literacy culture. Change is not entirely positive; gaining something always means sacrificing something else. As scholars like Walter Ong have shown, "Oral cultures indeed produce powerful and beautiful verbal performances of high artistic and human worth, which are no longer even possible once writing has taken possession of the psyche" (14). The

permanence of print allows people to change their reliance on memory, social gatherings change or disappear, etc. Like Howard Gardner's theory of multiple intelligences strenuously asserts, there are many ways to be intelligent, and linguistic intelligence is only one of them (41). Writing facility is only one part of that intelligence, too.

That said, a college student's current learning is still greatly impacted by their early literacy experiences. Wolf writes that children gain much more than just an expanded language from an early relationship with books; they also grow in print awareness. They learn early which direction the text should be read, to recognize the invariant shapes of letters as distinct from each other and from other symbols, and to begin to name the letters (91-92). By the age of four or five, children with a strong literacy background "learn that printed words represent spoken words; spoken words are made up sounds; and very importantly, that letters convey those sounds" (97). Reading is always a physical process, and every step of that process must be learned. Some students learn it earlier than others.

If students come from a low-literacy background, their primary exposure to these many linguistic and visual associations comes in kindergarten. So, some students come to school with a significant learning advantage, and the others are working to catch up. The learning difference is immense. Todd Risley and Betty Hart performed a study that showed that students from "impoverished-language environments have heard 32 million fewer words spoken to them than the average middle-class child" (qtd. in Wolf, 102). Beth Moats, who coined the term *word poverty*, explains that children from impoverished-language environments use "less than half of the number of words already spoken by their more advantaged peers" (qtd. in Wolf, 103). These learning differences

are long-lasting. According to Andrew Biemiller, students who score in the bottom 25% in kindergarten will score a full three grade levels behind vocabulary and reading comprehension by the sixth grade (qtd. in Wolf, 103). As every college instructor knows, these comprehension problems do not disappear by the time a student enters college. Instead, they are shown starkly in college remediation statistics, which were discussed in an earlier section.

This racial/socioeconomic discussion reappears here because composition instructors should consider many of the writing problems that their students face are really problems of fluency. Fluency is a key factor in learning. As Wolf defines it, fluency is not measured by speed. It isn't how fast a person can read or write. Instead, fluency is the ability to "utilize all the knowledge that a [person] has about a word—its letters, letter patterns, meanings, grammatical functions, roots, and endings" (130). A high literacy student will be able to unconsciously access all of that information, while a low literacy student may still be struggling to consciously connect those aspects.

Wolf continues, "Fluency does not ensure better comprehension; rather, fluency gives enough extra time to the executive system to direct attention where it is most needed—to infer, to understand to predict, or sometimes to repair discordant understanding and to interpret meaning afresh" (131). Wolf's point is that high literacy students (like those whose SAT scores exceed the college readiness benchmark) can use their unconscious processing for far more tasks than a low literacy student can. The low literacy student will spend more conscious effort on word meaning, syntax, metaphor, etc., which leaves less cognitive room to engage in other areas. Their literacy histories will provide different benefits and impediments to the learning environment, which

instructors should be aware of.

The educational playing field is not even, but composition can help to provide specific support to struggling students. The next section will offer specific suggestions on how to level that playing field in the composition classroom.

Section 3: Writing is Always a Second Language Acquisition

As a reminder from an earlier chapter, Dryer explains that writing is not a natural act or a genetic predisposition; writing skill is always consciously and laboriously gained (27-28). Writing is always a second language acquisition, even in one's native language. As Biber and Vásquez note, SEAE is a particularly difficult grapholect to master because it "shows extreme characterizations of informational density, elaboration, and precision" (538). To restate in less SEAE, academic writing uses the most complex sentences with the most obscure vocabulary of any widespread writing system, and those sentences contain the most complex punctuation structures to try to help a reader navigate them. At times, it seems that academic texts are written to be purposefully inaccessible to the untrained readers outside of their disciplines. Whole textbooks, like Gerald Graff and Cathy Birkenstein's *They Say I Say*, are centered around the concept that academic writing uses literary moves that exist nowhere else (1).

FYC students, despite the name, are nowhere near their first year of learning about writing, though this may be their first immersion in a world fluent in SEAE. They are highly fluent and advanced writers, and their writing habits—effective and ineffective alike—are completely embodied. It is worth remembering that even the most struggling college student has many more effective writing choices than ineffective ones. Still, the errors that persist create highly challenging texts that damage the writer's relationship

with the reader. In the same way that a second language speaker can mark themselves with unusual grammar or pronunciation, a writing student can mark themselves as outside of the academic discipline by common mistakes like spelling or documentation errors.

As Ellis explains, second language learners often have fossilized errors, or persistent, repetitive errors that display a misunderstanding of the target language features and seem to resist all correction (29). Somewhere along this learner's journey, this mistaken concept became so deeply embedded that it seems difficult or impossible to change it. Applying that to a writing example, a student may exhibit a fossilized, persistent misunderstanding of the comma that seems to resist all lessons aimed at correcting it. While FYC handbooks would suggest focusing on the mark, SLA recommends focusing on the student to understand the conditions that lead to this performance. It is worth considering features like how long this student has likely had this habit, what incentive they have to change it now, how such errors limit their social performance, and how those limitations may keep a student from engaging with the material at all. Learning is never just about handing off or gaining knowledge; it is always about building a relationship between an instructor and student that allow knowledge to transfer.

Humans Are More Emotional Than Logical

Like all human relationships, the learning process is always emotional. Zull explains that every decision—no matter how logical it may seem—is a mix of feeling and reason. Knowledge itself is a feeling, rather than a concrete item. Humans may test that feeling many times through their experiences. They may feel reassured in that knowledge by reading other people's experiences and experiments. Such repetitive experience may

make the results feel fairly reliable, but knowledge is a feeling nonetheless (73). Feeling

that something is right and being right are not the same thing. My students often feel sure

about at least some of the grammar rules. For example, multiple students in different

course sections have reported that they know that a comma goes after every *and*. While

this grammar rule works well while distinguishing a series, that concept does not work in

other writing situations, like when a student uses a comma to break up a pair of verbs. In

another common instance, their punctuation surveys usually report that a comma marks a

pause, but they are equally likely to assume that it goes where the writer did pause or that

a comma goes where the reader should pause, neither of which is a reliable gauge since

readers don't actually pause during reading.

Mistaken or limited prior knowledge like this often results in *negative transfer*.

As Ellis defines it, negative transfer is when a learner's prior knowledge influences their

current learning in dysfunctional ways (51). In other words, the learner is wrong, but

feels justifiably right. Kathryn Schulz explains that that is the dilemma of prior

knowledge: Being wrong and being right are exactly the same experience. In fact, "there

is no experience of being wrong. There is an experience of realizing that we are wrong, of

course....by definition, there can't be any particular feeling associated with simply being

wrong" (18). As soon as someone realizes they are wrong about something, then they

know something else and are safely back in the feeling of being right. Schulz continues,

"The whole reason it's possible to be wrong is that, while it is happening, you are

oblivious to it" (18). I certainly knew that grammar rules were a critical part of student

learning, just as certainly as I know now that they are both antiquated and limited. In both

cases, I felt right.

To be clear, it is possible to be wrong, to feel bad about being wrong in the past, or to be scared about being wrong in the future; it is just impossible to feel wrong in the present. Feel free to experiment with that idea and come up with something you are wrong about right now. You cannot. Even if you came up with an idea that you might be wrong about, the challenge itself leaves you in a position of at least feeling right about possibility of being wrong. Schulz says that human beings are almost plagued with an omnipresent feeling of rightness.

> A whole lot of us go through life assuming that we are basically right, basically all the time, about basically everything: about our political and intellectual convictions, our religious and moral beliefs, our assessment of other people, our memories, our grasp of facts. As absurd as it sounds when we stop to think about it, our steady state seems to be one of unconsciously assuming that we are very close to omniscient. (4)

Certainly, life continually challenges and replaces the feeling of omniscience, but the educational system places that learning process on public, graded display. That is a highly emotional process. As James Zull explains, human brains are driven by a survival instinct that is constantly seeking "to understand their environment, controlling their own actions, avoiding danger, and searching for pleasure" (51). The learning environment must take all these needs into account, even though the needs are often contradictory. Zull makes it clear by saying,

> We hope that understanding something will give us control over it, but fear may block that understanding. Or we may lose control by seeking to satisfy our pleasure brain. Or we may give up pleasure to gain control or accept fear and suffering to

keep it. The entanglement of cognition, control, fear, and pleasure are obvious and

endless. (52)

Because humans have primal drives and a unique life experiences that shape our current

emotional reaction to any situation, an instructor should sculpt the learning experience so

that the learner has as much control as possible (52).

Being Conscious of the SLA Problems

As SLA scholar Tom Scovel explains, gaining a second language is difficult in

part because the first language interferes with gaining the second, a concept logically

called *interference*. Applied linguists believe that *interference* is the most important

factor for any second language learner (45). As the previous section explains, the brain

already has an established, automatic neurological pathway for handling most situations,

linguistic and otherwise. So, if someone sees a symbol of a tree, a native English-

speaking brain will automatically think *tree* and a native Spanish-speaking brain will

automatically think *árbol*. To become fluent in the other language, the brain must find its

way to circumvent the interference of the most used neurological pathway that

necessarily interferes with creating a new one because they both use the same stimuli.

Obviously, a brain can be fully literate in two languages, so it can overcome the

interference, but it is harder to learn a second concept when a similar one is already

embodied.

To apply this concept to writing, students arrive with many entrenched writing

habits. Andrea Lunsford explains that all writers must use their memories of writing that

are created through their lived experiences and personal knowledge (54). They already

have preferred vocabulary, form, punctuation choices, etc. Those previous habits often

interfere with their presentation as an academic writer. A FYC course isn't teaching students something new about writing, or at least not often. Instead, FYC teaches students to selectively choose when to use such writing habits and when to circumvent their most common choices with the choices preferred by other audiences who speak/write other dialects.

By neurological necessity, a student must compare a new learning situation to their prior experiences. In agreement with Lunsford, Scovel explains that this can result in *positive transfer* (effectively using knowledge learning in one situation and applying it another) (45). It can also result in *negative transfer* (ineffectively applying prior knowledge to this situation) (45). Students may *overgeneralize* the logic of one situation to every situation, like when they believe that a comma follows every *and* because a comma follows an *and* in a series (52).

Composition theory, as Shirley Rose explains, already strongly asserts that writers always have more to learn. Each writing situation requires adaptation as writers realize that the strategies that work well in one situation may not be at all suited for this new situation (59). This is related to SLA scholar Larry Selinker's concept of *interlanguage*, which describes the long process of developing competence in a target language. As students move through the learning process, they develop an *interlanguage* which necessarily carries over some native language traits into the target language (Scovel 51). Essentially, each language learner creates a unique variation that bridges the two languages. They make choices that no one else is likely to make because they have a unique life experience that no one else has. They make effective and ineffective choices based on their own unique reasoning or habits.

Interlanguage is a normal and expected stage of development. It means that students will make mistakes in performance as they attempt to move from one language to another. In the FYC classroom, a student may carry the tone that they use in texting into a professional email. They may use vocabulary that works well in a social media post but fails in an essay. They may rely on their fluency in speaking when they should consider writing's unique affordances. Scovel recommends that instructors stop seeing these problems as mistakes that need punitive attention and see them as learning patterns to make apparent (51). Boyle then recommends serial practice to help students to gradually and automatically make the transition between the two rhetorical situations.

What a Typical FYC Student Might Know on Day One

Many FYC students, especially those placed into the more elementary composition courses, know that they are not stellar writers, and they doubt an English teacher's ability to help them improve. On the first day of class, I ask

Fig. 26 Students' self-descriptions

students to describe themselves as a writer. I received the answers in Fig. 26 during Fall 2016's 1101P, and the results are similar to other semesters. Some self-descriptions are positive, most are neutral, and some are quite negative. Also, on the first day of class, I

ask students to fill out a punctuation survey that asks them to name each punctuation

mark, give its purpose, and give an example of it in use.

I assumed that students would view the punctuation survey as a neutral

assessment tool, and they would try to fill it out to the best of their ability. I was surprised

at the strong emotional reactions that this survey produced, as evidenced by the

discussions after. Multiple students in multiple semesters have expressed something

similar to "This survey made me feel stupid," which got a lot of assenting nods from their

quieter peers (and which is why I now always follow the survey with a discussion.)

Despite having no possibility of grade impact and with ample encouragement to guess,

most students later expressed that they chose to leave answers blank (which guaranteed

that they would be wrong) rather than guess and document the specifics of their

ignorance. While gaps of knowledge caused some of the blank answers, our post-survey

classroom discussions brought the affective problems of the survey (and of punctuation

pedagogy in general) to light.

Losing Control

SLA offers an explanation for why my students would be reluctant to answer such

a survey and offers implications about how instructors should use and frame such

learning tools. A quiz, no matter what the stakes, absolutely shows that the learner is not

in control of the learning experience. The punctuation survey challenges a learner's

language ego, a term first coined by Alexander Guiora in 1972. The language ego is part

of a learner's affective domain. Learning is both a positive and negative process. While

students experience positive gains in knowledge, learning also requires the learner run

headlong into their knowledge boundaries as they expand into new territories. Such a

process can be humiliating and uncomfortable, no matter how carefully the instructor frames the experience. H. Douglas Brown discusses the process of learning a language "can easily create within the learner a sense of fragility, a defensiveness, and a raising of inhibitions" (72). Adults who can fluently represent themselves in other environments suddenly find themselves mute, missing key vocabulary to express their ideas, mistaken, and defenseless (72).

Such a defensive fragility, Brown argues, means that language learners often show "an *un*willingness to communicate" (italics in original, 73). A student signed up for a language course—and a writing course is a language course, after all— in order to learn the language, much like a writing student signed up to learn writing. But learning always requires a student to take risks, and risks always allow for public failure, which can cause great anxiety (73). These conflicting drives often keep a student silent, even when it actively prohibits their improvement. Sometimes, a student may feel like their only control is not to participate, and anxiety often pushes them to exercise this unproductive option.

To combat this, Brown recommends that an instructor should purposefully display a supportive attitude towards students as they venture into unstable territory, provide a cognitive challenge that is achievable, and think deeply about the learner's affective state as they design course materials and activities (72). In other words, think about how the learner will feel when presented with this learning opportunity and find ways to mitigate the consequences of experimentation. This will help, as Zull recommends, to reduce a student's fear and anxiety, so that they can free up cognitive space to master the material at hand (60). Fear is a vicious cycle of failure. If students are worried about failing, they

cannot focus on learning not to fail. An instructor can help break that cycle by systematically expanding the tasks so that the student is challenged and sees a clear path to accomplish the challenge.

The Struggle Must Be Worth the Payoff

Prior English classes have not always provided a clear way to succeed at punctuation, even though it is frequently graded on student writing. FYC students have decades of prior experience that has often proves their inability to write in a way that pleases an English teacher as much as it improves their ability to write. Bonny Peirce's social theory of L2 acquisition argues that L2 acquisition can be framed in terms of *struggle* and *investment,* a theory that has equal application in a writing classroom. Ellis summarizes Peirce's ideas like this: "Learners are not computers who process input data but combatants who battle to assert themselves and investors who expect a good return on their efforts" (42). Writing students struggle to master material, but their lifelong experiences do not suggest that investing effort in writing mechanics will result in appreciable learning gains.

When I began this process, I used to use a copious marking system. I marked every error and tried to provide a reference in the writing handbook that could solve that problem in the future. I surveyed multiple sections at mid-term, asking how many students made any attempt to translate my editing marks on their papers into some kind of useful information that could prevent errors in the future. About 30% of students said that they made some attempt. After discussing the answer in class, I believe even that low number is optimistic. Some students admitted that they answered with what they should do rather than what they did do. Even those who tried to research their mistakes were

uncertain that their efforts would result in fixing errors in the future. The punctuation rules are rarely a good investment for any but the most accomplished learners, who have the least to improve. The writing classroom needs to consider how to show that punctuation information is worth the investment, and that there is a clear path to its mastery.

As the metaphor suggests, a path is long series of small steps that each help the student to recognize and expand on prior knowledge. As Zull describes it, the learning pathway is always neurological, and the changes are always physical and gradual. The learning experience should help the learner's brain to connect different ideas in novel ways and then offer many ways to use those ideas. The teacher invents the stimuli that can help connect prior knowledge to new knowledge, but the brain does all the long-term learning (118).

Studying the Learners Like a Text

SLA scholar Kathleen Graves recommends critically analyzing the learner, much like FYC teaches students to critically analyze texts. She presents this instructor task list that I will adapt to FYC. First, know who your learners are (Graves 103). A FYC instructor should consider how a student arrives in their classroom, including factors like whether they are teaching in an open admissions or more selective institution. For example, students at an open admissions university are more likely to struggle with study habits than those at more selective institutions, so a FYC course may take that into account. Instructors should consider the likely ethnic, cultural, literacy, and linguistic backgrounds of their students so that they can choose texts according to their shared histories. It's worth analyzing the course texts to see how much cultural knowledge is

required or how much metaphoric content is present in order to choose more accessible texts. Every cognitive task takes effort, and an instructor should consider lessening the efforts in some areas to focus on their learning objectives.

Second, know the learners' level of language proficiency (Graves 103). Instructors should know how the institution places students into each course and what the skills/deficiencies that those placement strategies make apparent. They should also know how the university informs the student of these skills/deficiencies. If the university's materials are negative (you failed to meet a benchmark and so you must take this course,) then students will likely already be anxious about their performance and frustrated at that labeling. If the university's materials are positive (This course is well designed to help you gain all the desired skills,) then the students may enter with less trepidation.

Third, gauge the students' level of intercultural competence (Graves 103). A student is not just trying to gain competence in SEAE, but they are entering the collegiate culture as well. For example, a community college with a lot of first generation college students can expect a different level of intercultural competence than a selective university. Everything from acquiring textbooks to navigating the campus to emailing a professor can present challenges, and FYC students may have few resources to help them understand how to do those tasks gracefully. Instructors should be kind when they can in order to encourage the students to keep learning, even if when things don't go smoothly.

Fourth, understand their interests (Graves 103). Certainly, this suggests allowing the students to help select readings and topics that interest them, but it has more concerns than that. As Bazerman describes, the rhetorical situation expects students to recognize "the specifics of a situation [and] the exigency the situation creates" but it must also show

that the effort of communicating will our situation better (36). Writing always changes the world, at least a little, and the writing classroom can show that improved communication improves the writer's life, rather than just meeting class expectations. Especially in the area of punctuation and other so-called mechanical skills, students believe that they improve them to please an English teacher. It's important to emphasize how these skills can allow a writer to create their professional identity by showing they understand the conventions of different disciplines, as Estrem explains (55).

Fifth, investigate student learning preferences (Graves 103). Throughout the initial weeks of the semester, design different activities that see how students like to engage with one another, with the material, and with the instructor. For many students, the assessment features of a writing class are opaque. They understand what the assignments are, but they are not sure how to improve them to meet the instructors' expectations. This causes a great deal of anxiety, especially if there are only a few graded assignments that are worth a lot of the course grade. Let students practice how they will be tested with very low or no stakes assignments, like a graded essay that is worth little or no points. Then, examine the writing assessment process like a text, inviting discussion and critical analysis to see where the process could be improved.

Sixth, help clarify the students' attitudes about themselves as learners and about gaining fluency in the academic world (Graves 103). As longstanding members of academia who are often second (or more) generation college graduates, instructors often forget how many radical cultural changes are expected. College students, like all language learners, do not view all of those changes are welcome or consider them positive. Brown explains that "language and culture are intricately intertwined. Any time

you successfully learn a language, you will also learn something of the culture of the speakers of the language" (74). To adopt another's language is to become acculturated, at least to some degree (Scovel 29). It may also seem like academics is trying to assimilate its students, attempting to erase elements of their home culture in the process of bringing them into academic disciplines. In other words, asking someone to write like you also requires that they stop writing like them. It can be a frustrating, devaluing, and discouraging process that their home culture may or may not support.

Asao Inoue directly addresses such concerns, expressing that colleges and universities are becoming increasingly diverse, both culturally and linguistically (68). Drawing on Paul Kei Matsuda, he challenges the FYC to directly address the "myth of linguistic homogeneity" which assumes that students are "native speakers of a privileged variety of English" (68-69). Instead, students arrive with "more and more global Englishes" that require more thoughtful assignments, creative classroom approaches, and flexible assessment measures (69). The student cannot make all of the changes; the institutional practices must adapt, too. Learning is always change, and change can impact the learner in many unexpected and often emotional ways. Students often feel a profound disconnection from their home cultures, which seems encouraged by higher education. As Graves recommends, look for ways to integrate a student's strengths and experiences into the curriculum, so that they can see that they add value to the classroom and that their viewpoints are welcome in academics as a whole (103).

Tying It All Together

In summary, I thought my research would find a way to teach punctuation. Instead, my research taught me how complex learning a language is, especially a variety

as complex as SEAE. All language learning is an embodied process that relies upon meaningful patterns, and punctuation is an essential part of writing's patterns. Readers have long histories with each written symbol, often so long that they have become a part of the unconscious processing of a text. It is worth making unconscious writing knowledge conscious again. The next chapter will show how to do that.

CHAPTER 6: SEEING THE FRAMEWORK

Developing the Desired Habits

This section of the dissertation specifically follows the recommendations of NCTE 2011 *Framework for Success in Postsecondary Writing*, which asserts that FYC students are expected to develop the habits of mind of a disciplined writer through writing, reading, and critical analysis (1). Specific to this dissertation, students are expected to develop a knowledge of conventions, defined as "the formal rules and informal guidelines that define what is considered to be correct (or appropriate) or incorrect (or inappropriate) in a piece of writing" (9). Those conventions are defined as the "surface features of a text such as mechanics, spelling, and attribution of sources, as well as more global concerns such as content, tone, style, organization, and evidence" (9). To accomplish those pedagogical goals, the 2014 *WPA Outcomes Statement for FYC* describes the "writing knowledge, practices, and attitudes that undergraduate students develop in first-year composition," which include developing a "knowledge of linguistic structure, including grammar, punctuation and spelling" (1, 6).

This dissertation has already challenged the *surface-level* descriptor of such writing features, but it agrees with all the other contentions. This dissertation asserts that an explicit knowledge of linguistic structure can help students to develop habits that utilize conventional grammar, punctuation, and spelling. In particular, it utilizes Halliday's explanation that the language is constructed in ranks, and each of those ranks is spelled with a combination of both letters and punctuation (7). Students can be taught to see the rank scale, and then taught how to the linguistic symbols interact with the non-linguistic symbols to create meaning at every level.

This learning system obviously cannot cover every aspect of the writing system. Instead, it focuses upon the sentence and its primary elements. In SEAE, a sentence is always a composition of one or more clauses that are related to one another through conventional punctuation. Those who worry that they will need to become a grammarian to implement this system should rest assured that the goal is not to help anyone—instructor or student—become an expert at grammatical diagnosis. Instead, the goal is to help students to see the patterns of their writing so that they can tell what works and where it can be improved. The patterns are simple, and every fluent English speaker will recognize them; this system just offers a different way to see them.

It is broken into four main resources. The first section provides instructors with an essential vocabulary, places it into a metacognitive structure, and explains different challenges that students will face as they develop this knowledge. The second section provides an in-depth guide to teaching the constituent map, giving a deeper knowledge to instructors than a student may need. The third section provides the punctuation resources that can be applied after students have mastered the map. The final resource provides marking system that can help catch the errors and mistakes that persist into polished drafts, whether or not an instructor has time for extensive grammar instruction or not.

The Caveat

The Idaho State Board of Education expects that a student should be able to demonstrate seven basic competencies upon the completion of FYC:

- Use flexible writing process strategies to generate, develop, revise, edit, and proofread texts.

- Adopt strategies and genre appropriate to the rhetorical situation.

- Use inquiry-based strategies to conduct research that explores multiple and diverse ideas and perspectives, appropriate to the rhetorical context.

- Use rhetorically appropriate strategies to evaluate, represent, and respond to the ideas and research of others.

- Address readers' biases and assumptions with well-developed evidence-based reasoning.

- Use appropriate conventions for integrating, citing, and documenting source material as well as for surface-level language and style.

- Read, interpret, and communicate key concepts in writing and rhetoric. ("General Education")

That is a wide range of expected competencies, which necessarily limits the depth of study that is possible in each. My pedagogical goal was to make this system as simple as possible for the students to understand the basic concepts of conventional sentence structure, allowing instructors to preserve the most time for the other requirements. The system is designed to be implemented in the first semester of the first-year composition series.

Because of pragmatic limitations, this dissertation uses, redefines, and often vastly reduces popular linguistic and grammatical terms. The terms are redefined (rather than renamed) because they are so prevalent in other grammar resources that using completely different terminology wouldn't allow students to challenge their existing beliefs, and it would leave students unable to access other resources as their study progressed. It seemed better to clarify and apply existing vocabulary instead. The classifications are greatly reduced on the assumption that a linguist or grammarian needs

a wealth of nuanced terms to fully describe the language, but a FYC student can utilize a far simpler and more accessible system to create effective, conventional sentences. For example, grammarians like Bob Brannan often distinguish between phrases that have no verb (e.g., *because of her talents*) and clauses that have a verb (e.g., *because she had talents).* This system combines both into a single category, called a modifying clause, because the punctuation strategies are the same.

Grammarians also make many other nuanced distinctions between clause types, like subordinate, main, noun, adjective, adverbial, etc. (Brannan 159-161). Again, from a punctuation standpoint, a simpler classification of two clause types (essential and modifying) is sufficient to punctuate according to convention. As a last example, Halliday offers an intricate system which labels each of the constituents with multiple labels, which I simplified to just four, fairly broad categories.

To be clear, I agree with Halliday's admonition that the study of language is complex "because grammar is complex—it has to be, to all the things we make it do for us. It does no service to anyone in the long run if we pretend that semiosis—the making and understanding of meaning—is a simpler matter than it really is" (5). I am certain that my teaching strategies will not teach students everything about their language or realize its full, intricate, semiotic potential. I doubt that a lifetime of linguistic study could do that. This material is not designed to be a foundational linguistics course, a field that is exquisitely prepared to correct any semantic differences between their usage and mine. Instead, it is meant to be one small part of a freshmen composition course.

To clarify further, this material is designed to be part of a foundational composition course. It is specifically *not* remedial or aimed just at struggling students,

though it is easiest to see the largest improvement in this group. Every discipline should provide a clear explanation of its terms. In essence, every discipline is helping students to acquire their individual dialect and grapholect, which necessarily has a unique vocabulary and syntax. Composition is no exception. Estrem explains that "writing—as a means of thinking, a form of inquiry and research, and a means for communication within a discipline—plays a critical role in…identity transformation and expansion" (56). Roozen agrees, arguing that helps a writer to create their sense of self, particularly with in a discipline (50). Villanueva expands that idea, agrees that a person contains actually many linguistic identities, and that different rhetorical situations will require different dialectical representations of the self (57). Like Bakhtin explains, the messy process of living means that each speaker/writer will create a "multitude of bounded verbal ideological and social belief systems; within these various systems (identical in the abstract) are elements of language filled with various semantic and axiological content and each with its own sound" (674-675). In other words, as people interact, their language systems become more complex, inflected with a socially-shared but still unique meaning and sound.

FYC students have been engaged in the messy process of writing for decades and arrive with their own unique interpretations of many of composition's primary terms. Even concepts that seem simple—like the subject of a sentence—are actually quite complex, and individuals can have widely varied definitions. It is worth taking the time to clarify the definitions to be sure that we are all speaking the same dialect of SEAE while we are teaching them to write it. This system offers a simple place to start.

The Distinctions

This dissertation is focused on helping students to construct grammatically sound, conventionally punctuated sentences, which can be a large cognitive challenge. The sentence construction problems are as diverse as the writers themselves. To discuss those problems, this dissertation will use two primary distinctions: grammatical/ungrammatical and functional/dysfunctional. As Chomsky describes, a grammatical utterance has the right order and form to be acceptable to a native speaker (13). To extend that concept specifically to writing, a grammatical writer uses the writing symbols—linguistic and non-linguistic— in the right form and order to be acceptable to another fluent writer/reader of that grapholect. Like linguists conventionally do, this dissertation will use the asterisk to denote ungrammatical texts, like the following: *The girls doesn't play here.*

Ungrammatical word order and form are an obvious problem. Students may fail to put the words into the right form and order, like this example from Student J:

I am a hardworking person who is on time, and doesn't ask for time off unless absolutely necessary.

The previous sentence has serial verbs (*am* and *doesn't*), but only one agrees with the subject (I), and the comma breaks a single clause into two. But SEAE has many conventions that involve form and order but are not specifically linguistic. To give an example, an author may write a paraphrase that is grammatical in APA style (example #1), but it would be considered ungrammatical in MLA (example #2), which uses different elements in a different order. Example #3 is a grammatical set of words, but it is

not a grammatical quote in either citation style since it is missing the author attribution and the page citation.

1. Eagleman (2011) explains that most cognitive processing is unconscious (4).

2. Eagleman explains that most cognitive processing is unconscious (4).

3. *"Most of what we do and think and feel is not under our conscious control."

Grammar Matters, but Function Matters, Too

College and professional writing demands more than just the symbols arranged in the appropriate order and form. Composition studies is at least as concerned with the writer/reader relationship as it is with the physical object of the text itself. David Russell explains that the written text functions as an intermediary between the writer and the reader (26). Because the writer/reader relationship is a crucial writing consideration, the writer should also judge if the sentence is likely to be **functional** or **dysfunctional** in that particular context. A functional text has two criteria:

1. The sentence portrays the author as desired.

2. It achieves the author's intended purposes.

So, a sentence might be perfectly grammatical and be punctuated conventionally, but it could still be dysfunctional in that particular context. For example, Student A wrote this sentence (and many like it):

My experiences with the petit mal seizures prior to having the grand mall seizure

fit with Eagleman's explanation about the brain filling in peripheral vision.

The sentence is grammatical, and its punctuation is conventional, but it is far more difficult to read than it could be. Such a sentence is dysfunctional in the college and professional world because those readers often read in massive volume and at very high

speed. Those readers are intolerant of overly complex texts that take too long to read for the amount of information contained. While they might make that kind of sacrifice for a peer or a superior, college and professional writers are unlikely to take extra time to sort through a student or employee's overly complex set of words for a simple idea. If the reading must be done, then the end result will almost certainly receive less rewards than if the reading were easier (e.g., lower grades, less promotions).

This is equally true at the other end of complexity. Student N, for example, writes perfectly punctuated, grammatical sentences nearly every time. She also writes incredibly repetitive, simple sentences. One of her polished essays used pronouns (usually *I*) as the subject of 86 of her 90 clauses. As Biber and Vásquez point out, academic writing uses far more nouns than pronouns, and speech uses four times more personal pronouns than academic writing (542, 540). So, Student N's word choices would be acceptable in speech, but they break the conventions of academic writing. To think of it another way, Pinker describes English as a subject-prominent language (*The Language Instinct* 232), and Student N made herself the subject of nearly every sentence. Vanity aside, this strategy is rhetorically ineffective as it moves the main content of each sentence to the end, where it is least likely to be noticed.

Coming back to the larger point, Student N's overly simple sentences are as dysfunctional as Student A's overly complex ones. They both use far too many words in inefficient orders to convey information that could be written far more simply. Students often cannot make that distinction because they cannot compare their sentences to others. They are unable to identify the structural components well enough to perform that kind of diagnosis. As the results chapter will discuss in more depth, my 1101P students could not

identify almost any words of their subjects or verbs, which means they can't compare theirs to others in any ongoing conversation. This dissertation offers the constituent map, which was designed to help with problems of punctuation and grammar, but it also helps students to make more subtle composition distinctions.

Creating Some Nuance

Sociolinguist Steven Pinker argues that *grammatical* is not always a hard line of acceptable or unacceptable. A certain sentence, for instance, might be considered "grammatical, ungrammatical, or having various degrees of iffiness…. Designating a sentence as ungrammatical simply means that native speakers tend to avoid the sentence, cringe when they hear it, and judge it as sounding odd" (*The Stuff of Thought* 33). Many pieces of text fall into the middle ground, where a writing instructor may not be inclined to consider something completely ungrammatical as much as clumsy or difficult to understand. To use a more concise term, I will declare the middle ground between *grammatical* and *ungrammatical* to be *questionable*, understandable but just awkward enough to make a fluent writer/reader ponder whether the text is rhetorically effective.

To be sure, effective academic writers use all levels of grammaticality because all have rhetorical value. In general, effective academic writers usually write grammatical sentences that contain at least one essential clause, an idea covered in depth later in this section. Academic writers usually avoid creating ungrammatical sentences because they disrupt the meaning of the text, damage the credibility of the author, and harm the relationship with the reader. Usually. It may be perfectly effective to write ungrammatical sentences, like I do throughout many examples in this chapter. Academic writers may also use questionable grammatical constructions, but they tend to be used rarely and only

for a readily apparent rhetorical purpose. For example, effective writers will often use a combination of sentence fragments (sentences that only contain a modifying clause) like the following examples: Why? Because it draws more attention to a particularly important point than an essential clause would.

As stated often during this dissertation, the difference is that knowledgeable composers understand the conventions enough to know when they are broken and be able to predict the rhetorical impact that such a choice will have on the reader. Intuitive composers make these decisions accidentally or without a way to test how a text will be received.

The Real Problem is Composition, Not Punctuation

The focus of this research is to provide a FYC instructor with pedagogical resources designed to help their students to write more conventional, grammatical, functional sentences. The resources are designed to help students to see the sentences that they already compose, unlike sentence combining which teaches students to develop new sentence strategies. The resources are designed to help students to determine which of their many sentences are grammatical and functional by showing how the elements relate to one another, much like diagramming does. This system also provides punctuation support, which diagramming usually does not cover. This system also helps to teach students to see the complexity of their sentences and recognize when complexity works for or against their purposes.

The sentence is the focus of this work because students write a great deal of them, and they frequently display an inadequate understanding of the sentence's structure and purpose. The problem is not that students don't know how to punctuate a sentence.

As I have observed student writing throughout eight years of teaching college composition, every single student has been able to correctly punctuate the sentence's visual frame (beginning with a capital letter and ending with terminal punctuation). FYC students often struggle with what to put inside that frame, though. Sometimes, students write a clause that is missing key linguistic pieces, like the following sentence fragment from Student M, which contains no verb:

Not training them to work to hard that they want to quit.

Often, students put so much information into a single sentence that it is difficult to keep track of its main idea, like this sentence from Student D:

Here is my other proposition if I am covering for someone in a different area of building (for more than a week), who earns more money than I do an hour, it's my opinion I should at least make the same amount as them.

Students often use unconventional punctuation and place it in ineffective places, breaking up key linguistic relationships, like this sentence from Student D:

Furthermore, I'd like to add that, because I have been trained to do more than just one specific job duty; I can work in different areas of building.

I contend that students write to the best of their current ability. While they make some mistakes of haste, many of their malformed sentences represent a gap of knowledge. They often don't know what SEAE requires in a sentence or how to tell if its components are there. To provide an effective test, I will provide SEAE's basic sentence requirements, which are often described by grammar rules.

The Essential Elements of an SEAE-Approved Sentence

Throughout the centuries, many grammarians have tried to prescribe and describe the conventions of SEAE through massive amounts of grammar rules. Problematic as the grammar rules may be, like Anne Curzan argues, they have value if a scholar looks deeper than just the grammarians' stated intentions that try to limit language change or demand convention (7). Taken as a whole and in their best possible light, the grammar rules show that SEAE's writing conventions have evolved to make reading more efficient. The rules explain how a fluent SEAE reader will likely interpret each symbol, so that the writer can use the same symbol in predictable ways. The rules recommend ways to highlight linguistic structure. The grammar rules describe a sentence structure that is predictable and understandable (even if the rules themselves are quite difficult to understand). Finally, the grammar rules encourage writers to join different disciplines with confidence by explaining its disciplinary signs and conventions.

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Unlike many less formal grapholects, SEAE has specific requirements for a typical sentence (see Fig. 27):

1. Each sentence should contain at least one essential clause.

2. Each sentence should contain any modifications to that essential clause.

3. The writer should use conventional punctuation choices (including citation punctuation) to make the clausal relationships clear.

4. Each sentence is punctuated with an initial capital letter and concluding terminal punctuation (period, question mark, exclamation point).
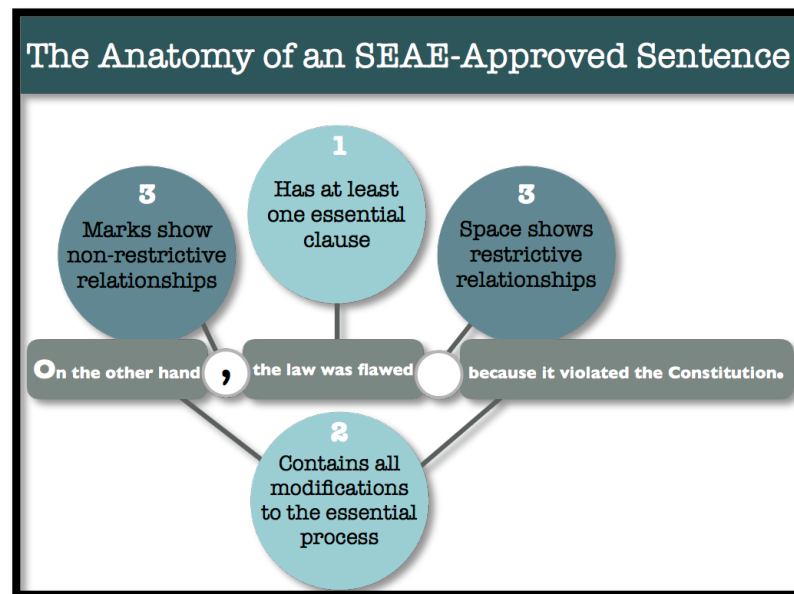
Fig. 27 The Anatomy of an SEAE-Approved Sentence

In other words, academic writing assumes that each sentence will give all the necessary information to understand one complete process and its participants. The author may wish to modify that process, and any modification should be included within the same sentence. SEAE also expects that the clausal relationships will be punctuated so that it is easy to find all its components. This includes citation information, which punctuates many academic sentences. The reading brain is always looking for patterns; clear word choices and punctuation make the patterns apparent. Because each

punctuation mark has societally agreed upon uses, a writer can use conventional marks to help the reader to decode the patterns faster. Further, breaking SEAE's requirements can be a highly effective rhetorical tool, but the writer should know where they are breaking convention so that they can predict what the impact on the reader is likely to be.

That sounds so simple; it is so simple for so many academic writers/readers who are fluent in this grapholect. It is not simple to many students, especially those whose home cultures and dialects are syntactically, lexically, and culturally distant and distinct from SEAE. All writers bring a wealth of neurologically embodied life experience, some of which helps them and some of which impedes their progress. Often, writers of every ability level have no effective way to test their sentences to see which are conventional and which are not, and they have no way to be sure that their editing improves them. Both must trust their intuition because they lack a better strategy. While intuition may be sufficient before college training, it is not sufficient any more.

CRITICAL SENTENCE-BUILDING SKILLS

1 FIND THE CLAUSES
Clauses are grammatically complete groups of signs. To know if you found the right clausal boundaries, hide it and look at the remaining words. They should sound grammatical and complete.

2 IDENTIFY THE CONSTITUENTS
Each clause may have four different constituents that perform different functions. Use the constituent map to help you see what constituents you have. If the constituents are hard to find, the sentence is hard to read. Consider rewriting it!

3 ESSENTIAL OR MODIFYING CLAUSE?
An **essential** clause has a subject group, verbal process group, and doesn't start with a conjunction/question group.

A **modifying** clause has a no verbal process group or starts with a conjunction/question group.

4 RESTRICTIVE OR NON-RESTRICTIVE?
Restrictive: Two clauses that give one elaborate idea. No punctuation marks separate them.

Non-Restrictive: Two clauses that give two separate ideas. Separate with punctuation marks.

5 GATHER THE PROCESS + ALL MODIFICATIONS
Each sentence should contain one essential clause and all its modifications. Look at how the clauses are related to see if they should stay in one sentence or move to another.

6 USE PUNCTUATION TO SHOW CLAUSAL RELATIONSHIPS
Choose conventional punctuation strategies by using the visual resources. Every mark and space has meaning. Choose the right one!

by Amy Brumfield

Fig. 28 Sentence-Building Skills

To test a sentence's conventionality, a writer should be able to perform the following tasks on their own writing:

1. Find the clauses within each sentence

2. Identify the constituents of each clause

3. Distinguish between an essential and a modifying clause

4. Determine if the clauses are in a restrictive or non-restrictive relationship

5. Gather an essential clause with all its modifications into the same sentence

6. Use conventional punctuation strategies to show restrictive and non-restrictive clausal relationships, including removing excess punctuation that disturbs the clausal structure and adding beneficial punctuation (see Fig. 28).

Most FYC students will struggle with every item on this list at the beginning of the course. The terms and the concepts behind them are unfamiliar, which is equally true of proficient and struggling writers. Each of these terms will be explained, and this dissertation will provide new tools to help students to grasp each concept. For right now, know that sentence construction has predictable features that work on very simple organizational principles that can be effectively tested. To start to see those principles, the next section will show the organization structure of written language.

Pedagogical Resource #1: Seeing the Structure

Pinker explains that language is a *discrete combinatorial system* (*The Stuff of Thought* 75). To break that term apart, language is a system of elements that are each discrete (individual and distinct) and capable of being combined with other pieces to create a larger, more complex meaning. As Wilhelm Von Humboldt describes, language "makes infinite use of finite media" (qtd. in Pinker, 75).

For example, English has a relatively small number of finite pieces. There are just 26 letters in its alphabet. Those 26 letters can be combined into any of English's 1.5 million words, according to Walter Ong (8). 1.5 million may seem like a lot until it is compared with the literally infinite number of meaningful sentences that can be built with those few letters and relatively few words. Obviously, the letters and words cannot be arranged into any order if a particular meaning is desired. One language speaker can generate an understandable message for another language speaker by using the language's grammar. *Generative grammar*, according to the OED, is "the grammatical description of a language using a set of logical rules, formulated to be capable of generating the infinite number of possible sentences of that language."

Noam Chomsky explains that "the central notion in linguistic theory is that of 'linguistic level.'" A language is a complex phenomenon, and so there are actually many different linguistic levels that one could analyze, like the phonemics (a language's sounds) or morphology (the word's forms) (11). This dissertation will focus on how the language can be broken into different linguistic levels based on phrasal structure and specifically the phrasal structure in the English writing system.

Fig. 29 An Adaptation of Halliday's Rank Scale of Language
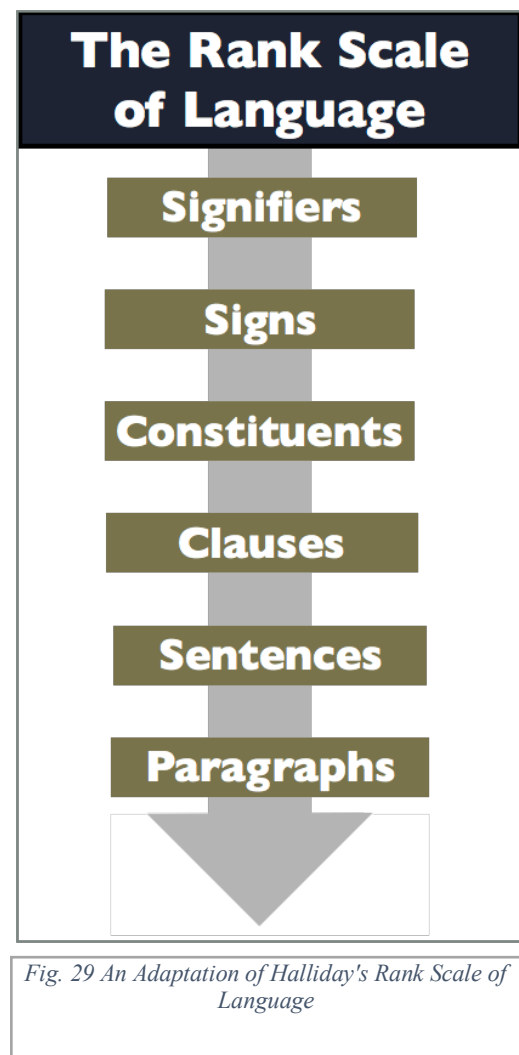
Chomsky describes how every language has a "finite set of phonemes (or letters in its alphabet) and each sentence is representable as a finite sequence of these phonemes (or letters), though there are infinitely many sentences" (13). Linguist M.A.K. Halliday expands on Chomsky's idea, breaking the sentence into a collection of smaller ranks (5). Halliday specifically listed four ranks (letter, word, sub-sentence, sentence) (6). I have expanded and adapted his system, using the terms *signifiers, signs, constituents, clauses, sentences, paragraphs,* etc. (see Fig. 29). This system explains how each of these ranks are discrete and how fluent SEAE writers typically combine them. The next section will explain the terms, while this section will give an overview of why the rank scale is useful.

Defining the Ranks

In this section, I will define the ranks as this system will use them and explain the basic categories of each. As a caution, learning this way is much like trying to learn a language by studying the dictionary. A list of terms is helpful as a place to start and a resource to reference, but the linguistic ranks become much more apparent once they are placed in actual use.
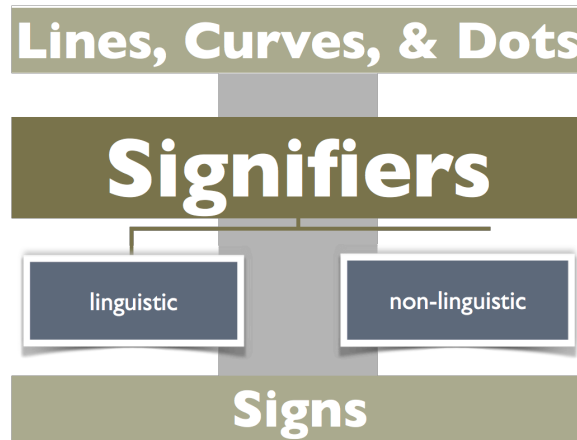
Fig. 30 The Rank of Signifiers

To adapt Saussure's term, a ***signifier*** is the first rank on this rank scale (see Fig. 30). Signifiers are individual symbols that can be combined to make signs, the next rank. Writing's most common signifier is the letter, but punctuation, numerals, mathematical symbols like + or =, emoticons, or other symbols are signifiers that are used to create meaning, too. It is important to remember that space is a key signifier, too. It is present in and allows the comprehension of every rank.

There are two primary categories of signifiers: linguistic signifiers (symbols that are typically voiced when reading a text aloud) and non-linguistic signifiers (typically unvoiced symbols). So, letters, numbers, mathematical operators, and emoticons are typical linguistic writing tools because they are typically voiced when a text is read out loud. Punctuation is a non-linguistic writing tool since its marks, spaces, and fonts are rarely pronounced, but page numbers, other formatting symbols, genre, etc., are non-linguistic signifiers, too. Kress is right that every element of a text does semiotic work, even though most are not explicitly expressed (1).

The binary of linguistic and non-linguistic is a false dichotomy, really. The terms are established to allow easier distinction and discussion, but, like Halliday says, each linguistic rank is composed of spelling and punctuation (7). The punctuation is always as

rhetorical as the linguistic elements, and they work together and can often be

distinguished in the same signifier. A capitalized roman letter, for example, can create

different meanings than a lowercase italicized letter can create. In other words, a signifier

is always a combination of linguistic and non-linguistic signifiers. Fig. 31 shows

English's typical signifiers.
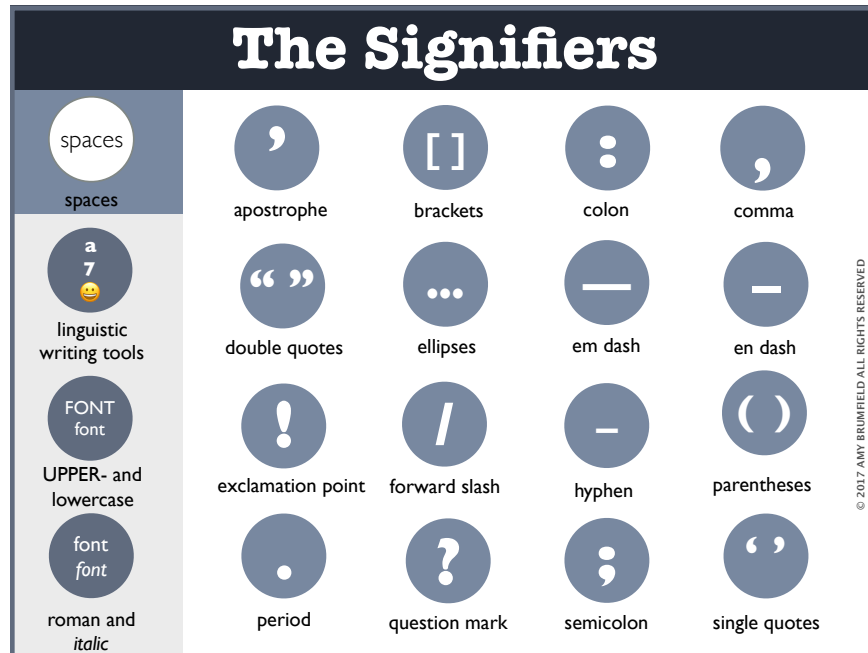
Fig. 31 The signifiers
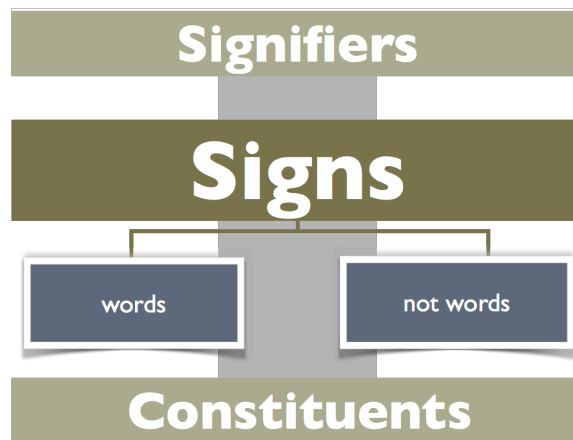
Fig. 32 The rank of signs

Signs are the next linguistic rank, which are composed of one or more signifiers (see Fig. 32). In extensive writing, those signs are most often words, but there are many commonly used signs that are not words. For example, academic writers often include signs like *(10)* at the end of a sentence to indicate the page number where a source can be found. This is different than a sign like a page number, which uses the numeral, location on the page, and the punctuation of space to indicates its meaning. A date (e.g., January 18, 2018) is a mix of letters, numerals, and punctuation. Even when it is broken in three visual units (i.e., month, day, year,) it could still be considered just one conceptual sign since it could be ungrammatical to remove some of its parts. For simplicity of this system, the two categories of signs will be *words* and *not words*.
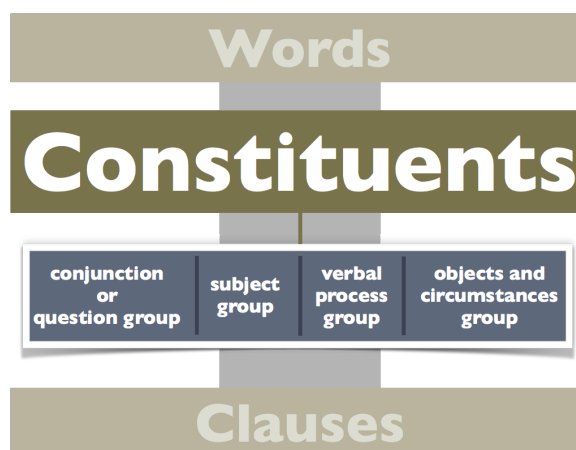
Fig. 33 The rank of constituents

While the term ***constituent*** is unfamiliar to most people, the constituents'

functional categories usually sound at least a little familiar: conjunction or question,

subject, verbal process, and object and circumstances groups (see Fig. 33). The ranks of

constituents and clauses are the most difficult to recognize, so they will get extensive

treatment in later sections. For right now, remember that humans are always trying to find

out who (the subject) did what (the verb) to whom (the object). That is the basis of every

linguistic interaction. Readers often find out the circumstances like when or how

something happened. They might also find out how this process links to other processes

(conjunctions,) or need to ask a question about the whole thing. Because a single sign or

multiple signs can perform each of those communicative functions, this teaching system

describes each constituent as a group, like Halliday does (9).

Constituents are determined by their spatial relationship to one another. The

constituent order is essential to establishing meaning because English is, as Pinker

explains, "a fixed-word-order, poorly inflected, subject-prominent language" (238). In

other words, English largely lacks inflection that might indicate if a word is functioning

as a subject or an object; it is generally only the constituent order that allows a reader to

understand who is doing what. In fact, the constituents can perform these grammatical functions *because* they are in this ordered relationship. For instance, a dog can bite a girl, a girl can bite a dog, and a dog can be bitten by a girl, but a writer must show the constituents in these precise orders to show who exactly is doing the biting and being bitten.

To help people to see the constituent pattern, I developed the constituent map that is shown in Figure 34.

Mapping the Constituents

Punctuation marks don't separate constituents in the same clause, but they often separate one clause from another.

Clause	Conjunction or Question Group	Subject Group	Verbal Process Group	Objects & Circumstances Group	E or M	Mark
	Shows how the clauses are related to each other.	Participates as the focus of the process.	The process unfolding through time, including when it happened and its probability	The other participants in the process and the details of how/when/why, etc., that the process occurred	The two kinds of clauses- essential and modifying	Where the punctuation should go
1		The ninjas	fight	ferocious battles all the time	E	.
2	Why do	the ninjas	fight	ferocious battles all the time	M	?
2	Because	they	drink	too much Red Bull	M	.

Fig. 34 A constituent map

The chart is an adaptation of Halliday's teaching strategy. Halliday is concerned with the spoken language. This adaptation is developed for written language, allowing the writer to write every word and punctuation mark into the map in the order that they were written. By mapping their words, writers can see how the constituents relate to each other, find the clausal boundaries, determine the clause type, and see where punctuation

should or should not be placed. They can also quickly see the balance of their constituents and find dysfunctional patterns. I will use examples of the constituent map throughout this section, and then I will explain how to help students to fill out their own map in the next section.

The map contains explanatory information at the top, describing the general punctuation principle and outlining the constituent functions. The grey sections are functional boxes. The first line of grey boxes provides a description of each category. The Clause box numbers the clauses for easy discussion. The E or M box has students designate what kind of clause is present, and the Mark box is where clausal punctuation should go. Students use that box to compare the clausal combinations, access the visual resources, and place the conventional mark.

The white sections show where the text is entered. The constituents are mapped exactly as they are written in the full text including all punctuation. The map can be read just like a normal text, left to right and line by line. Once the map is completed, students can look back over their clauses to see if extra punctuation is present that should be removed or if more punctuation is needed. More importantly, the map helps students to gauge how difficult the sentence will be to read. If the writer has a hard time deciphering its pattern, a reader will surely struggle more. Once the elements are easy to find, students can edit far more effectively.
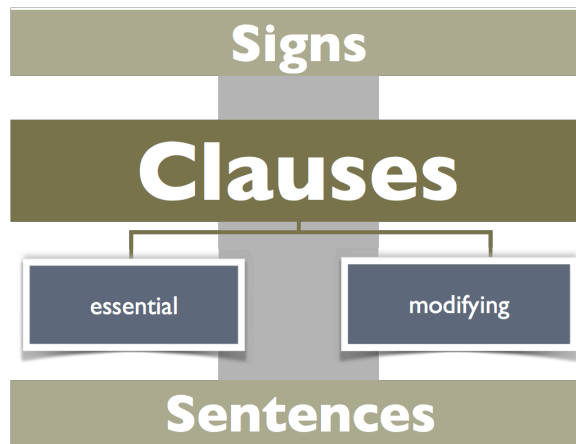
Fig. 35 The rank of clauses

As expected, a clause is one or more constituents (see Fig. 35). Halliday explains that a clause consists of three basic linguistic components that show "a process unfolding through time [the verbal process], … the participants involved in the process [the subject and object], [and the] circumstances associated with that process" (220). In this system, this kind of clause would be considered an ***essential clause***. Fig. 36 shows the required elements of an essential clause, as well as some examples.

An essential clause has a grammatically possible subject working with a verbal process group, giving the essential information of *who did what* with optional information of *to whom* and the circumstances of how all of that was done. It also does not start with a conjunction or a question word, which would grammatically tie that set of words to another clause. Because an essential clause has all the required pieces and no linking constituent, an essential clause has all the requirements to be a functional sentence in SEAE.

Essential Clause

1. **Has a grammatically possible subject group working with a verbal process group.**
2. **Does not start with a conjunction.**

Clause	Conjunction or Question Group	Subject Group	Verbal Process Group	Objects & Circumstances Group	E or M	Mark
1		There	is	no reason to try that twice	E	.
2		The old woman in the sweater	was slowly walking		E	.
3		The woman who was walking her dog	never appeared	to notice other people	E	.
4		Walking her dog	seemed	to make her happy	E	.
5		To walk her dog	made	her happy	E	.
6		You	shouldn't touch	that	E	!
7		(You) assumed subject	Don't touch	that	E	!

Fig. 36 The Essential Part of an Essential Clause

In contrast, a **modifying clause** either does not have a verbal process group or it begins with a conjunction/question group. Because of their grammatical construction, modifying clauses can add to or limit the information in another clause, but they cannot express a complete process by themselves (see Fig. 37 for an explanation and examples). Because of this, SEAE's conventions generally require that modifying clauses are placed into the same sentence as the essential clause that they modify. SEAE allows some modifying clauses to serve as a sentence on their own, but only if the rhetorical impact is clear and the use is rare.

Modifying Clause

Has no verbal process group

OR

Starts with a conjunction or question group

Clause	Conjunction or Question Group	Subject Group	Verbal Process Group	Objects & Circumstances Group	E or M	Mark
1			X	Because of a lack of interest	M	,
2			X	For instance	M	,
3			X	To put it another way	M	,
4	Even as	the neuroscientist	presented	her findings at the conference	M	,
5	Why didn't	the neuroscientist	present	her findings at the conference	M	?
6	Are	some spouses		more likely to cheat	M	?

Fig. 37 The Essential Elements of a Modifying Clause
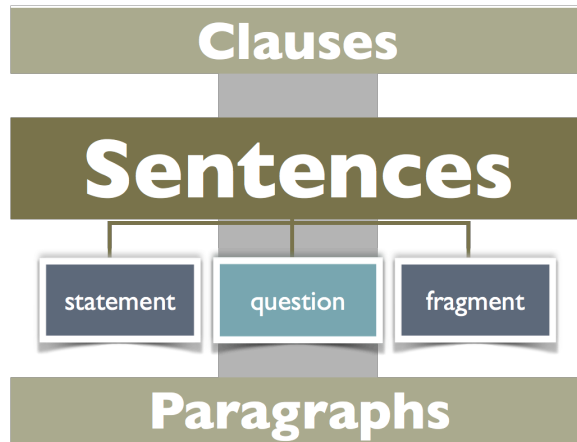
Fig. 38 The Rank of Sentences

As expected, a sentence is composed of one or more clauses (see Fig. 38). While the smaller ranks have direct comparisons to oral language, sentences and larger ranks do not; Halliday explains that the term *sentence* relates only to "a pattern of language that occurs in written texts" (46). While speech and writing are organized in clauses, humans don't speak in sentences, paragraphs, or chapters. Those are strictly visual organizational units that allow the writer more rhetorical control and the reader more convenience.

A sentence can be defined as a visual container of all the clauses that are focused on the same essential process. This system defines three different kinds of sentences: statements, questions, and fragments. A statement contains at least one essential clause. A question, of course, uses an interrogative structure, either by beginning with a question word like *who* or *where* or simply by being punctuated like a question (*You are dating her?*). Questions are considered modifying clauses because their nature requires that the reader look to another text to get the cognitively required information. A sentence fragment is a sentence that contains no essential clause. Sentence fragments are prohibited on nearly every editing list ever given in a FYC textbook because they are cognitively disturbing. The reader cannot be sure what should be modified by that

information. As discussed earlier, sentence fragments can be functional if they draw the readers' attention to important information, but students often use them simply because they cannot make the distinction between the types of clauses.

The sentence is the last linguistic rank that this dissertation will explain in depth, largely because there are such abundant resources at the larger organizational levels.

How the Brain uses the Ranks to Predict What is Coming Next

At its simplest, communication is just trying to get the thoughts in one brain into the brains of other people. To do that, humans have to share a symbol system where they all agree that a sound, gesture, visual, or tactile image means the same thing so that they can speak, sign, write, or use a tactile system like Braille to transmit an idea to someone else. If each language user uses the same symbols in the same ways, the writer can reasonably predict what meaning the reader will get from a certain text.

At the smallest end of the rank scale, signifiers don't have almost any predictable meaning. They are used in so many meaningful relationships (e.g., letters arranged in so many words) that the brain can't see one signifier and predict what it will mean. The letter *C*, for example, doesn't even help a reader to reliably predict which language the text might be written in. Lots of different languages use the Latin alphabet, like Spanish, French, and Italian, and I could use the Latin alphabet to gloss Chinese words. Because a signifier is meaningless, a reader cannot understand the meaning of the word *coy* by adding up the definitions of *c+o+y*; knowing how *C* functions in *coy* won't transfer so that someone would be able to figure out the meaning (or even the pronunciation) of *cease*, *perceive*, or *quick*, either.

Punctuation signifiers have no determined meaning, either. A reader can see a period, but they won't be able to guess if the writer plans to use a period at the end of a sentence, in an abbreviation like a.m., and in a series of ellipses to show an interrupted thought. Like Derrida explains, signifiers cannot be defined; instead, they can be understood by placing them into a larger system and seeing the difference between them and the others (280). Exemplifying Derrida's ideas, I'll use the signifier *C* as an example. If asked to define *C*, a writer might explain that it is the third letter of the alphabet, contrast it against a *B* or a *D,* give an example of a word that uses it, or show that it is a marginal grade in a grading schema. But none of those define the signifier. Like Derrida explains, they just point out the difference between this signifier and others like it (280). It is the comparison that gives meaning, like how giving a student a *C* only matters if there are other grades that are better or worse to compare it to.

Similarly, a period can be contrasted to other marks; it isn't a semicolon or a colon, neither of which usually end a sentence. But a period cannot be defined in any way that would guarantee that a reader could see it without context and understand its meaning. Like Kress's multimodality argues, meaning is always determined by the entire composition.

There is No Easy Way Out

There is a natural desire to want to define the signifiers, especially the punctuation. It seems like it would be so easy to memorize a list that prescribes exactly what a comma can or cannot do, for instance. This would be much like trying to memorize all the words that contain a *C.* A writer may know many words that use that letter, but it isn't possible to know all of them. It also isn't helpful to try to study the

language that way. Instead, it is better to see how the alphabetic system works and apply those concepts to new words as they arrive.

Similarly, while this text can show someone how punctuation is generally used in extensive academic writing, it certainly can't describe how it must be used in any writing situation or condemn people who use it differently. Signifiers are used so often and in such varied situations that it is better to learn how they generally function and look for those functional patterns instead of trying to limit exactly what those uses might be. In other words, the writer must always make those rhetorical choices and decide if the punctuation or other signifiers convey the right meaning in that particular context to that particular audience.

Overly Meaningful Signs

Signs have more predictable meanings than the signifiers, but a reader still can't predict what a sign will mean without seeing it in context. Signs are almost always polysemous or have multiple definitions. To use the sign of words as an example, the more common the word is, the more meanings it is likely to have. The word *like*, for example, has multiple definitions and can be used in multiple grammatical categories, like in this improbable sentence: Like I said, I like her likes on Facebook, but likes aren't enough for me to like her. (To see it mapped, see Fig. 39). Similarly, I can use the sign of 10 as a page number, citation indicator, the top of a Likert scale, or an interstate highway.

Clause	Conjunction or Question Group	Subject Group	Verbal Process Group	Objects & Circumstance Group	E or M	Mark
1	**Like**	I	said		M	,
2		I	**like**	her **likes** on Facebook	E	,
3	but	**likes**	aren't enough	for me to **like** her.	M	.

Fig. 39 Mapping the many functions of like

In other words, signifiers are in so many words that they are meaningless, and signs have so many definitions that they are far too meaningful. It is only when signs are placed into constituents that they begin (and only begin) to have a consistent meaning. Like Dylan Dryer explains, "Words get their meanings from other words" (23). The word's context (rather than a dictionary) usually tells the reader what meaning is intended. A typical English reader could read my *like*-filled sentence and have no problem understanding each and every use, but they couldn't predict which of those many uses I might choose to express until I put them all in context.

The Constituents Start to Narrow the Field

This is important: Like signifiers and signs, a constituent has no consistent meaning unless it is placed into a clause, the next larger rank. It is the relationship of one constituent to another that creates meaning, much like human relationships. A human being can only be identified as aunt if that person is or has had a niece or nephew, and a bride only gets to be called a bride if there is a groom involved somewhere. Likewise, a group of signs might have the grammatical potential to be a constituent (like *the snarky teenager*), but that group can't be labeled as a particular constituent (like a subject or an object) until it is placed into the larger clausal structure to see how it is functioning in any

particular instance. Language is flexible, and nearly any group of words can be used in nearly any category if the writer is creative enough, like Figure 40 shows.

Clause	Conjunction or Question Group	Subject Group	Verbal Process Group	Objects & Circumstance Group	E or M	Mark
1		**The snarky teenager**	**irritated**	**his mother**	**E**	**.**
2		**His mother**	**irritated**	**the snarky teenager**	**E**	**.**
3		**His snarky teenaged-ness**	**irritated**	**almost everyone**	**E**	**.**
4		**He**	**snarky-teenagered**	**himself into being grounded**	**E**	**.**

Fig. 40 The constituents can move around

Like the desire to define signifiers, there is also a desire to memorize words so that someone can always find a constituent category like the verbal process group, for example. A student might be helped to study the most common linking verbs (e.g., is, am, was, were, be, being, been). Because these verbs don't fit a traditional definition of an action, they are often missed as the VPG of a sentence, but even the most commonly used verbs can be used in other constituents. For example, the word *is* can be a perfectly good subject group or object and circumstances group, too (see Fig. 41).

Clause	Conjunction or Question Group	Subject Group	Verbal Process Group	Objects & Circumstance Group	E or M	Mark
1		**Is**	**was**	**my favorite word**	**E**	**.**
2		**My favorite word**	**might be**	***is***	**E**	**.**

Fig. 41 No words are completely consistent

Memorizing a list of commonly used words might help a learner to see the overall patterns, but in academic sentences, a sign's current function matters more than its traditional use.

Clauses as Linguistic Cement

Evolution favors simple and effective solutions, including linguistic evolution. As cognitive linguists Richard Futrell, Kyle Mahowald, and Edward Gibson explain, "grammars of languages evolved so that language users can communicate using sentences that are relatively easy to produce and to comprehend" (10336). To put it another way, English allows at least a hundred conventionally used signifiers to be arranged into millions of signs that can be arranged in infinite clausal combinations. To make that level of complexity understandable, the pattern that relates all of those elements has to be simple.

The clause is that simple pattern, which the constituent map should start to make apparent. By using a repetitive pattern of constituents, the entire range of human signifiers and signs can be grammatically connected into a logical pattern that any other language speaker/reader can easily identify, even if they have never heard that particular combination of words before and never hear it again. It is completely logical to wonder why those words are in those particular boxes or why they are labeled that way; that will be explained in the next section. For the moment, please notice that the words within each box are not interchangeable. With a few exceptions, each word of each constituent and each constituent is grammatically fixed into place. They cannot move to another place within the clause without creating ungrammatical relationships or radically changing the meaning, including making the whole composition meaningless. There are a

few exceptions. Adverbs might move a little, and writers use commas to distinguish a series of interchangeable words, but on the whole, once the word is in a clause, it is grammatically cemented in place.

The constituent map is helpful because it makes this constituent and clausal pattern very apparent. This can be helpful to students, though it isn't because students cannot write clauses. Barring mistakes of haste, fluent English speakers will almost always write in complete clauses, but they may also use punctuation to fracture them into strange pieces. Misplaced punctuation may fracture a clause within a sentence or it may fragment a modifying clause away from the essential clause that it is modifying by placing them into two different sentences. This is a typical stage of writing development. Students are using their proficiency in oral speech in their writing, too. They just don't understand the groups that their visuals are creating yet. In other words, their speech habits also interfere as they attempt to move their oral skills into writing in SEAE. The typical terminology to describe a clause is part of the problem.

Redefining the Clause

Many grammar descriptions use terms like a *complete sentence* or an *independent clause*. For instance, Maimon et al.'s *A Writer's Resource* says that "a **sentence fragment** is an incomplete sentence treated as if it were complete" (emphasis in original 487). This dissertation will explain why terms are problematic, and then it will offer a more precise term (essential) to identify SEAE's required clause.

Complete is an imprecise term, especially in connection to language. Speech uses many clauses that are grammatically complete (they sound normal to a fluent English

speaker) but don't describe a complete process by telling who did what, like the following conversation.

Speaker 1: Hungry?

Speaker 2: Yeah.

Speaker 1: For what?

Speaker 2: Oreos, ramen noodles, and Slim-Jims.

Speaker 1: On a diet?

Speaker 2: Obviously.

Mapped, that conversation looks like Figure 42. Because there are no VPGs, there can't be any subjects, either. All of these grammatical clauses are just circumstances of this nutritionally-challenged conversation. Despite providing circumstances, the conversation is perfectly grammatical and understandable because all the utterances are complete clauses. They are not grammatically connected to the words around them; each group is a self-contained unit that is capable of transmitting a small packet of information without requiring the words around it.

Clause	Conjunction or Question Group	Subject Group	Verbal Process Group	Objects & Circumstance Group	E or M	Mark
1				Hungry	M	?
2				Yeah	M	.
3				For what	M	?
4				Oreos, ramen noodles, and Slim-Jims	M	.
5				On a diet	M	?
6				Obviously	M	.

Fig. 42 Mapping a verb-deficient and nutritionally deficient conversation

Speech's turn-taking allows the speakers to take a lot of efficient short cuts. In fact, it would sound oddly formal if speech used only essential clauses, which are mapped in Figure 43.

Speaker 1: I am inclined to buy you groceries.

Speaker 2: Thank you. I am hungry.

Speaker 1: A desired list is appreciated.

Speaker 2: I would like Oreos, ramen noodles, and Slim-Jims.

Speaker 1: That list has remarkably little food in it.

Speaker 2: I am strongly considering my dietary choices.

Clause	Conjunction or Question Group	Subject Group	Verbal Process Group	Objects & Circumstance Group	E or M	Mark
1		I	am inclined	to buy you groceries	E	.
2		(I) assumed	Thank	you	E	.
3		I	am	hungry	E	.
4		A desired list	is appreciated		E	.
5		I	would like	Oreos, ramen noodles, and Slim-Jims	E	.
6		That list	has	remarkably little food in it	E	.
7		I	am strongly considering	my dietary choices	E	.

Fig. 43 An overly formal and complete conversation

Speakers can take a lot of short cuts and get provides immediate feedback if someone makes the wrong assumption. Writers do not have that luxury. Since the author could quite literally be dead before the reader gets a chance to interpret the document, writing has to provide a great deal more support to make sure that the reader can get the

desired message. So, it isn't enough that a clause is complete enough to be understood; it must also either convey a complete process or be attached to another clause that does.

Like *complete*, instructors, students, and grammar guides often use the terms *independent* and *dependent*, but those are imprecise, too. This is a key distinction: Clauses are always *grammatically* independent of one another; they do not require the words before or after them to sound grammatical to a fluent speaker. Clauses are always *semiotically* dependent upon one another and on every other factor in the overall context. Every linguistic rank in a well-constructed document is dependent upon one another for meaning. Removing a letter, clause, paragraph, or chapter from any given text radically changes the meaning and may make the text meaningless because all the pieces are (or at least should be) dependent upon one another. So, if a writer is asked which of their clauses are independent, the correct answer should be that all clauses are grammatically independent of one another, and none of them are truly independent. Each sentence needs all its pieces to be grammatical, and all of them must all be placed into a larger context to be understood.

So, rather than considering a clause to be complete or independent, it is better to think of a clause as *grammatically fixed*. The clause is the first linguistic rank that cements the grammatical function of each signifier, sign, and constituent in that particular text. The clausal structure shows the reader how all the parts are related to each other so that the reader can understand what the whole group means.

Because a clause cements all the pieces into place, the clause can move to different places within the same sentence or it can be removed from a sentence altogether without damaging the grammaticality of the other clauses. If the writer wants to test to

see if they found a clausal boundary, they just have to remove one of the proposed

clauses and look at the remaining words. If they sound grammatically complete, then the

writer found the right boundary. Using the constituent map, the writer can read a single

line to see if it sounds grammatically complete or if it should be attached to the line

before or after it.

The Sentences Get the Whole Process Working Together

The sentence helps the brain to predict which clauses should be considered

together, and the choice of punctuation at the clausal borders make their relationships

apparent. Essentially, each sentence can be viewed as a moment on a cognitive timeline.

Each moment will contain all the pertinent information that the writer wants the reader to

consider in that particular process. So, a sentence will typically contain at least (and

usually only) one essential clause, as well as all modifications to it. By including related

clauses in the same structure, the writer can control how the information is presented and

what is linked together.

Figure 44 shows sentences as a literal timeline. Each sentence represents a

described moment that contains an essential clause. An essential clause always shows a

process unfolding in time, the participants of that process, and any circumstances. The

modifying clauses add to or limit that process. The essential clauses are shown in red and

the modifying clauses are in blue.
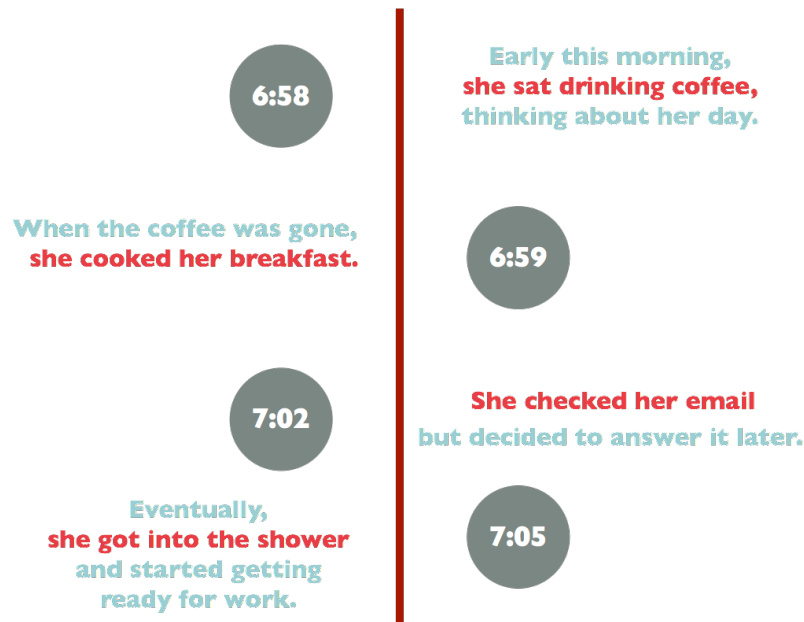
Fig. 44 Sentences always exhibit a process unfolding in time.

By gathering the clauses into sentences, the writer can guide the reader. The reader can predict that each sentence will be about one primary process and any modification will be enclosed. Equally important, the modifications won't be unattached, like a fragment floating between two sentences. Presumably, the sentences will be arranged in a logical order, too.

Finding the Constituents

While a speaker can rely on their oral skills to determine if a clause is grammatically complete, a writer cannot rely on just oral skills to determine if a clause is essential or modifying. As many students have already discovered in graded essays, some clauses that sound essential are still missing required elements. Students often make the wrong assumptions about their clauses and choose the wrong punctuation to mark them. For a more sophisticated and reliable diagnosis, writers should be able to identify all of the clause's constituents. The constituent map, which has been used throughout this

chapter's examples, can help writers to see exactly what each clause contains, but it has other useful features, too.

Pedagogical Resource #2: The Constituent Map

First, the constituent map makes it easy to see where the clauses (the next larger linguistic rank) start and stop. A clause is simply a series of constituents. If the series starts over, then those words are in a different clause from the words that came before them. Since a lot of punctuation goes on the borders between two clauses, this makes it a lot easier to see where punctuation should go. If a writer has a strong grasp of where and what kind of clauses are contained in each sentence, hundreds of grammar rules about punctuation can be simplified into a few, easy-to-use charts.

Second, the constituent map will help writers to catch and fix a lot of awkward writing. If the writer can easily identify all the constituents, then it is probable that the reader will be able to discern the same patterns easily, too. The sentence should be easy to read, even if it has complex information within it. As my students have often discovered, their sentences often contain bewildering word groups that are difficult for the author to identify. Students often want me to be the expert that tells them what their own word groups are doing. Sometimes, I can make a good guess, but often, I'm just as bewildered as they are.

If the constituent pattern is unclear or filled with overly complex elements, the reader will be forced to consciously and slowly figure out the structure. Certainly, this can be a functional rhetorical strategy. Writers may use extra complication to get the reader to slow down and focus on an important point or show that some complex ideas are intimately connected. More often, the complication is accidental (or a conscious

attempt to make word count without saying any new ideas.) The map can help students to see the unnecessary complexity as they struggle to diagnose their elements. They can also look at the balance of the mapped elements to see if any are especially long and cumbersome. If mapped element seems overly large, a student has a good indicator to edit carefully there, usually by redistributing the contents across several clauses.

Sometimes, the writer chooses many simple sentences with repetitive elements that could be reduced and composed into a more readable, complex single sentence. The map makes redundant elements apparent, too. On the whole, readers resent unnecessary complexity, whether it is piled into one sentence or stretched over many. If readers have a choice, they will just stop trying to decode the confusing words and do something (pretty much anything) else.

Third, the constituent map can help writers to find a lot of ungrammatical writing. Many students make mistakes like subject/verb agreement, leftover words from past edits, extra or missing words, etc. These mistakes are easy to overlook as student speed through a draft, but they become apparent as writers transfer the writing into another form. Sometimes, their sentences are so complex that they lose track of what should agree. The map can help them to compare different elements easily, and it encourages students to add in elements (like an assumed subject) that may have been omitted on the first draft.

Don't Get Better at Mapping; Get Better at Rewriting

Ultimately, the constituent map shows this: If the author can't map the sentence easily, then the reader can't read it easily either. If the writer isn't sure how a word or group of words is functioning, the reader will certainly be even more confused. The

writer at least has the benefit of knowing what she intended; the reader is stuck trying to guess.

These principles will seem very easy, especially as a writer reads the clear examples in the book. When students get to map their own sentences, they will find it can be much harder. When they find a sentence that confuses them, they are highly encouraged to rewrite rather than spending a lot of time deeply pondering about how to expand their grammatical knowledge or flipping through infinite examples to figure out what category these words might fit into. Rewriting is free, and it takes very little effort. Regaining a reader's attention is difficult, and it can be very costly or impossible. Often, an author only gets one shot to make their point. It's worth making it well.

The Next Caveat

This system has four constituent categories. This section will define them briefly so that they can be understood in the larger context first. This information is tricky to teach because it is rather circular. It is easiest to see the clauses when a writer can identify the constituents, especially when the constituents are complex grammatical constructions of their own. Mapping the constituents is easier if the writer can identify the clausal boundaries first.

Altogether, it is best to remember that gaining fluency in SEAE is like any other second language acquisition. Like Norbert Schmitt explains, a language learner needs a certain amount of vocabulary to place it into the grammatical syntax, but they need the syntax to understand the vocabulary; the two are fundamentally linked (14). It is possible to teach a student all of these categories using abstract examples, but real learning happens when the writer puts these concepts to use in their own writing for their own

communicative purposes. Since every sentence is unique, it often takes multiple cycles for a student to see the same pattern simply because the pattern's distinct pieces make it hard to see.

That said, I have been able to get every student to be able to see their clauses and completely fill out the map. It seems overwhelming at first, particularly for students without an intuitive grasp of clausal structure, but they get the concepts quickly. It just takes practice, like every other learning experience.

The Constituent Categories

A clause consists of one or more constituents (see Fig. 45). If it has every possible constituent, it will have these categories in this order:
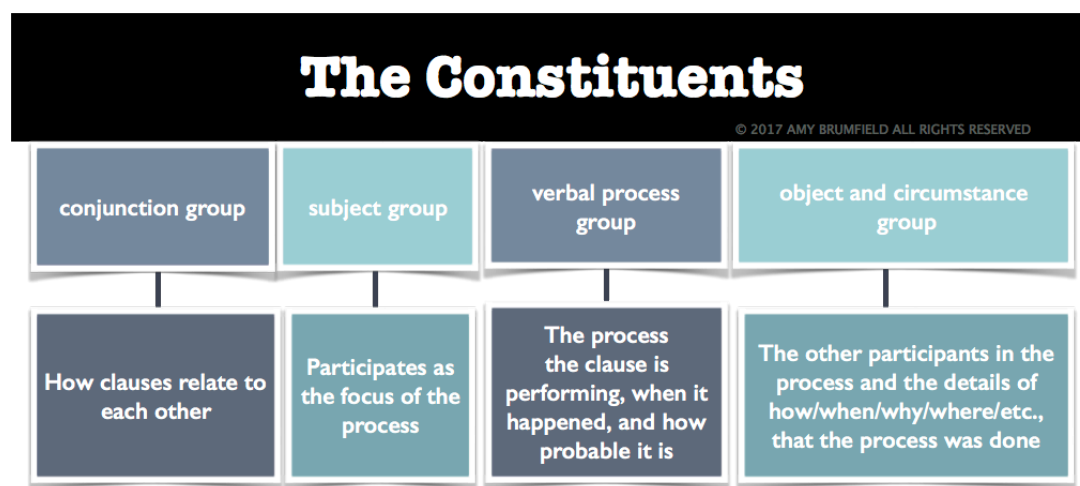
Fig. 45 The Constituent Elements

The first possible constituent, geographically, is the conjunction and question group (CQG). If it is present and performing a function as a constituent, it will be to the far left. To be considered a CQG, as you might expect, it will be a word or group of words that show how clauses relate to one another. This might be a typical conjunction, like *and, but, before, because,* etc. It might also be a question word, like *how, why,*

where, etc., which necessitates an answer in the next clause. Granted, this is a broad interpretation, but both groups show how one clause connects to the next.

A SG is a word or group of words that participates as the focus of a clause. If there is a SG, it is always found to the right of the CQG and to the left of the verbal process group (VPG). It functions as the focal participant of the clause.

The VPG will be to the right of the SG, and it tells the process the clause is undergoing, when it happened, and how probable it is. The VPG is the key component of each clause; it determines all the other constituent functions. Because of its grammatical importance, most of the instructional energy is used to teach students to find the VPG. Once they can find that, they can literally look to the left and right to see the other pieces.

If present, the objects and circumstances group (OCG) is always found to the far right on the constituent map, which means it may be a clause all its own or it may be the last constituent of another clause. As the name implies, OCG a merged category because the boundaries between them are quite fuzzy. A clause might have one or more objects and many circumstances, and it is often difficult to tell whether a group of words is an object or a circumstance. Like mentioned earlier, from a punctuation point of view, it is irrelevant. There is no punctuation in between objects and circumstances in the same clause (or between any other constituents in the same clause, for that matter). Because of that, a writer can just lump those vague categories together. As they are mapping, a writer just has to notice when the OCG stops and another constituent begins, since that means they changed clauses.

Testing the Map

The map's pedagogical goal is to help a student to test their own sentences, which means they also have to be able to test how they filled out the map, too. While the instructor will almost certainly have to help with this process in the beginning, a student needs to be able to see if they are labeling parts effectively without needing an expert to verify their results. This is easier than it may seem.

conjunction & question group	subject group	verbal process group	object and circumstance group
Not grammatically complete	Grammatically complete	Not grammatically complete	May have several grammatically complete pieces

Fig. 46 How to Test a Constituent

As Figure 46 notes in its lowest boxes, the CQG and the VPG are not grammatically complete. Both constituents create links between other constituents, rather than conveying whole ideas or images. The CQG links two different clauses, and the VPG links the SG to the OCG (if there is one). In contrast, the SG and the OCG are grammatically complete; they will sound like something that it is possible to say in a normal conversation. As I explain it, the students can test something's grammaticality by thinking of a question that might use that constituent as an answer.

There aren't many questions that could be answered with a conjunction like *because* or *as well as*. I could ask, "What is your favorite conjunction? Because." Beyond a question like that, a conjunction will always sound incomplete because their function requires them to be connected to other words. The same is true for a VPG. If I look at the VPGs of this paragraph (aren't, could ask, will always sound, requires, is), none of them sound complete on their own.

On other hands, the SGs and OCGs could answer lots of questions and sound grammatically complete, even though it is a little strange to strand them out by themselves. *Where did it happen? There. Who did that? I. What is it? A conjunction. What is true? The facts of the matter. When did it happen? On a dark and stormy night. How did that happen? Slowly and painfully.* The questions are useful to make the teaching point, but it is easiest just to look for weird words at the end of any SG or OCG that imply more words should follow. If it ends with an odd word like *the* or *who*, then chances are that the constituent boundaries are incorrect.

To test the constituents, it is helpful to cover up all the columns but one. Then, scan down one column at a time looking for grammatically complete groups. If students find a grammatically incomplete group of words in the SG or OCG or a grammatically complete one in the CQG or VPG, then they need to reexamine the constituent distribution. For example, the following map was created by Student A at the beginning of her learning process (see Fig. 47). Student A creates some incredibly complex sentences that often have 5+ clauses in a single sentence. She found the mapping process very difficult as a result. Still, she tried, but she got lots of groups in the wrong place.

Together, we scanned down each individual column. When the boxes were isolated, she could easily determine that some groups of words (marked with 1, 2, 3) were ungrammatical on their own. When she scanned the whole list of VPGs at once, she could easily see that *lightning storm* didn't fit with the others; it did seem complete on its own. After that and with help, she could redistribute the constituents into their expected places. Eventually, the concepts all slid into place and she could redistribute the elements correctly, like the bottom of the map shows.

Clause	C&QG	Subject Group	Verbal Process Group	Objects & Circumstance Group	E or M	Mark
1		While I	was sleeping		E	.
2		During this time the	lightning storm	in my brain misfired	E	.
3						
1	While	I	was sleeping	during this time	M	,
2		the lightning storm in my brain	misfired		E	.

Fig. 47 Testing the map and reconfiguring the constituents

After scanning the columns for strange groups, then students perform the same task line by line. Each clause/line should sound grammatically complete. Again, I have students pay close attention to the last words of each clause to see if more words are expected after it. If so, then the student should look at the next line to see if all of the words are actually in the same clause and move them into it. If they can't tell, the clause just needs to be rewritten more clearly.

The Restrictive Power of Punctuation

Before discussing the constituents, it is important to understand how punctuation supports and highlights the whole linguistic structure. This is a concept called *restriction*. Punctuation restricts the reader to consider different cohesive groups at every linguistic rank. At the sign level, most signs are surrounded by the punctuation of space. This makes it clear to the reader that one set of letters is one word, and the next set of letters is another. The space restricts how the reader breaks up the string of signifiers. Restriction

always impacts the meaning. At the sign level, a writer can tell the reader about butterflies (the insect) or butter flies (the aerodynamic dairy product.)

At the larger ranks, a paragraph uses indentation to show that one set of sentences is describing a different aspect of the argument than another set of sentences. The reader is restricted to keep that set together and consider it differently than the other paragraphs. So, the letters of a word and sentences of a paragraph are in a restrictive relationship. Different words and different paragraphs are in a non-restrictive relationship. The punctuation strategies shows that they are distinct and separate or cohesive.

The same is true at the constituent and clausal levels. A constituent like a subject group may have a clause embedded within it. If the writer wants the reader to consider it as one elaborate idea, then there is no additional punctuation. The writer uses the lack of punctuation marks to restrict the reader to see the whole group of signs as one elaborate idea instead of two. If the writer wants to show that two clauses are separate ideas, then the writer surrounds the embedded clause with punctuation (see Fig. 48).

- The woman **who stole my birdcage** is a terrible person. (restrictive embedded clause)

- The woman**, a despicable thief,** is a terrible person. (non-restrictive embedded clause)

Clause	Conjunction or Question Group	Subject Group	Verbal Process Group	Objects & Circumstances Group	E or M	Mark
1		The woman who stole my birdcage	is	a terrible person	E	.
2		The woman			M	,
3				a despicable thief	M	,
4			is	a terrible person	M	.

Fig. 48 Mapping restrictive and non-restrictive clauses

The clause follows the concepts. If the writer wants the reader to consider two clauses as one elaborate idea, then there is no punctuation in between them. The conjunctions *that, because*, and *or* usually signify restrictive relationships, so punctuation rarely goes before them (see Fig. 49).

- I stole her car because she owed me back rent.

- I thought that she was a terrible person.

- I could take her car or I could resent her forever.

Clause	Conjunction or Question Group	Subject Group	Verbal Process Group	Objects & Circumstances Group	E or M	Mark
1		I	stole	her car	E	
2	because	she	owed	me back rent	M	.
3		I	thought	that she was a terrible person	E	.
4		I	could take	her car	E	
5	or	I	could resent	her forever	M	.

Fig. 49 Typically restrictive words

The conjunction *which* almost always signifies a non-restrictive relationship (see Fig. 50).

- The woman is a terrible person, which is why I refuse to speak to her.

Clause	Conjunction or Question Group	Subject Group	Verbal Process Group	Objects & Circumstances Group	E or M	Mark
1		The woman	is	a terrible person	E	,
2	which		is	why I refuse to speak to her	M	.

Fig. 50 Which *usually marks a non-restrictive clause*

There are lots of different ways to modify information. For example, authors often use appositives, or words that describe the noun right before them, like these examples (see Fig. 51):

- My mother, Sally Wyne, is a splendid human being.

- My sister Maria makes more art than my sisters Emily and Sarah.

Clause	Conjunction or Question Group	Subject Group	Verbal Process Group	Objects & Circumstances Group	E or M	Mark
1		My mother			M	,
2				Sally Wyne	M	,
3			is	a splendid human being	M	.
4		My sister Maria	makes	more art than my sisters Emily and Sarah	E	

Fig. 51 Some appositives are restrictive, and some are not

Since I only have one mother, adding the appositive information of her name could be considered bonus material. The sentence makes the same sense without it, and the non-restrictive punctuation makes that apparent. On the other hand, I have many sisters, so

adding their name is required information since the reader couldn't know which woman I'm describing without it. Because of that, I restrict the reader to consider the title and the name as one elaborate idea instead of two.

While it is tempting to create grammar rules that say this must be restrictive and this is always non-restrictive, language is never so simplistic. Instead, the author is required to look at the rhetorical impact of the groups that they are creating, and they should experiment to see which arrangement conveys the intended meaning.

The Verbal Process Group: We are All Verbal Creatures

To find all the other constituents and diagnose any clause, a writer has to be able to find the VPG first (see Appendix C for a set of student handouts to help with this process.) As Pinker explains, humans describe ourselves as verbal because we are always rightfully concerned by the activities of our world. We want to be able to describe what we are doing or what is going on around us, so that we can talk about what might happen to us next. It is common to define a *verb* as a word that describes an action. That definition is a good start, but it needs to be expanded in order to understand the complexity of more sophisticated sentences.

Halliday's functional grammar offers a more sophisticated view of the verb. Rather than showing an action, every sentence shows a process unfolding through time, along with its participants and its circumstances (220). Because that process might be a single word or multiple words, it is called a *verbal group* (76). I adapted his term to *verbal process group* (VPG) to tie a student's prior knowledge of the term and to remind them of its expansion past simple action. By keeping the term somewhat familiar, it

should allow other grammar resources to be accessible, which will almost certainly just use the term *verb*.

So, the VPG is the constituent that explains what process the participants are undergoing. It also tells when the process occurred and how probable it is. In other words, the VPG is the clause's time keeper. In other constituents, a whole word has to be replaced to change time, like changing *before* to *after*. In contrast and as a way to find it, the VPG has time embedded in the words themselves. By subtly changing a VPG, the process can change a lot. Change a letter or two of *blink, run, live,* and *love,* and it can show that someone blinked, ran, lived, and loved in the past instead of right now. Trade a D for an S, and *loves* is happening right now instead of being loved yesterday.

Seeing Where the Action Is

This system defines three different kinds of VPG: action, linking, and atypical. Action VPGs describe a process that someone could observe, like *run, steal, bake,* or *bedazzle*. These are typically easy for students to identify because they follow their traditional understanding of a verb (see Fig. 52).

The VPG might also include the modal verbs and adverbs. These words can show when the process happened (e.g., is, was, will, have been); its probability (e.g., not, might, never, usually, always); or its intensity (e.g, almost, hardly, just, only). Essentially, all the words that describe how the process is occurring will be included in the VPG. As the map should make clear, modal verbs and adverbs must be before or embedded within the main process of the clause to be part of the VPG. If they are found other places in the clause, they will have a different constituent function.

Action Verbal Process Group

the participants are performing a process that you could observe

Clause	Conjunction or Question Group	Subject Group	Verbal Process Group	Objects & Circumstance Group	E or M	Mark
1	When	she	is running		M	,
2		She	runs	often	E	.
3		She	was running	yesterday	E	.
4	Because	she	never ran	a race	M	,
5		She	will probably not run	a marathon	E	.
6	Even if	she	will never run	a marathon	M	,
7		She	might run	a 5K	E	.

Fig. 52 Action verbs are actions you can observe

Linking VPGs are more difficult to identify because a linking VPG has no observable action. Instead, a linking VPG links the subject to more information about itself through words like *is, was, appears, thinks,* and *seems.* Think of clauses with linking verbs as the Kardashians of the academic writing world: Linking verbs are everywhere, but they don't do much besides reflect upon themselves (see Fig. 53).

Linking verbs are much more prevalent in academic prose than conversational speech (Biber and Vásquez 542). This is one reason that academic writing is challenging to students to read; the reader doesn't have much to do but watch the subject think about itself. It is also why these VPGs are hard to find. Biber and Vásquez explain that spoken subjects tend to be animate, concrete, and engaged in action; in academic writing, the subjects are often inanimate concepts and the verbs just link together complex grammatical constructions together (543).

Linking Verbal Process Group

Links the subject to more information about itself

Clause	Conjunction Group	Subject Group	Verbal Process Group	Objects & Circumstances Group	E or M	Mark
1	Even though	the dog	might be	smart	M	,
2		it	is	always in trouble	E	.
3	Because	the man	never was	kind to anyone	M	,
4		he	appears	to be alone	E	.
5		Your mom	seems	to be annoyed	E	.
6	If	she	thinks	about it	M	,
7		she	will be	just fine	E	.

Fig. 53 Linking verbs tie the SG to the OCG

The last category is atypical VPGs. English, like every language, can change to meet each new communication situation. English allows any word to function as almost any constituent if the author is creative enough. For example, the word *vodka* is usually used as a subject or an object, but it can be a VPG, too (e.g., I vodka myself into the ER every weekend) (see Fig. 54).

Clause	C&QG	Subject Group	Verbal Process Group	Objects & Circumstance Group	E or M	Mark
1		I	vodka	myself into the ER each weekend	E	.
2		I	Tinder	whenever I am bored	E	.
3		I	Facebook	way too often	E	.

Fig. 54 Almost any word can be transformed into an atypical verb

Because there is such a range of possible VPGs, it is more useful to be able to diagnose a word or set of words that are functioning as the verbal process group, rather

than to try to memorize lists of potential verbs. That said, most of my students do not

recognize any of *to be* forms (e.g., is, am, are, was, were, be, being, been) as verbs. Biber

and Vásquez point out that these words are twice as likely in academic writing as speech

(542). They are also highly likely to be at the center of clauses that have complex SGs

and OCGs. Memorizing that short list of common (and nearly invisible) words can be

beneficial just because they are used so often, especially in complicated sentence

structures.

The Verbal Imposters

SEAE is English at its most complex, dense, and specific (Biber and Vásquez

538). Students often try to model that complexity with a range of functional,

questionable, and dysfunctional results. To give an example, Student J wrote this

questionable sentence:

> *How we use our brain and how we think we use our brain is the main idea I get*
>
> *from reading the book by David Eagleman, Incognito.*

The sentence is grammatical and it is punctuated conventionally, but it is hard to read. As

the writer discovered as she tried to map (and many others like it), the constituent pattern

is hard to find. The sentence is easier to discuss if it is mapped first (see Fig. 55).

Clause	C&Q G	Subject Group	Verbal Process Group	Objects & Circumstance Group	E or M	Mark
1		How we **use** our brain and how we **think** we **use** our brain	is	the main idea I **get** from **reading** the book by David Eagleman	E	,
2				*Incognito*	M	.

Fig. 55 A lot of not-VPGs make it hard to find the real VPG

As the map makes clear, the actual VPG is *is*, but it gets lost between an extensive SG and OCG. Both are full of words (written in bold) that seem more verb-like than the actual VPG. A person seems more likely to *use, think, get,* and *read* than they are to *is*. In fact, perfectly grammatical clauses can have many words that look like they are portraying an action, but they aren't the actual process that the participants of that particular sentence are performing. To say it differently, many words may actually look more like verbs than the actual verb. I call this category *the not-VPGs*. These grammatical constructions tend to keep students from finding the real VPG, at least at first. More importantly, the not-VPGs tend to slow the reader as they try to decipher a difficult pattern. Further, a not-VPG can trick students into thinking that they wrote an essential clause when they wrote a modifying one. Many sentence fragments—the most likely grammar mistake to make an editing list—have a not-VPG involved.

Recognizing the Not-VPGS

There are three main not-VPGs: gerunds, infinitives, and relative clauses (see Fig. 56). A not-VPG can be a perfectly grammatical SG or OCG, but their grammatical construction disqualifies them from being VPG. I do not give a grammatical explanation of not-VPGs to students. I just give students the list, help them find not-VPGs in their writing, and see if anyone asks questions about why these words are different. (No one has asked any yet). This explanation is provided for instructors just in case someone gets curious.

Cannot be the VPG/ Can be SG & OCG	Subject Group	Verbal Process Group	Objects & Circumstance Group
Gerunds: Words that end in -ing	**Running**	is	**walking** really fast
Infinitives: To____	**To love**	is	**to live**
Relative Clauses: the person who_____	**The woman who bought** my car	is also	**the person who hired** me
Relative Clauses: the objects that _____	**The company that built** the first submarine	created	**a speaker that plays** underwater

Fig. 56 The grammatical constructions that never get to be the VPG

Not-VPG #1: Gerunds

As a reminder, VPGs perform the timekeeping function within the sentence, and they must be able to express different moments in time. A gerund is the noun form of a word that is usually a verb, and like all nouns, a gerund cannot change back and forth in time. A gerund is a word that ends in -ing (e.g., running, looking, reading). They look and sound a lot like verbs. They definitely imply some kind of action, but they aren't actually expressing that action in the sentence because gerunds aren't linked to any particular time. A gerund participates in the process, but it cannot be the process itself.

Here is an example with two gerunds: ***Running** is **walking** really fast.* (It is mapped in Fig. 56). A person can run, might run, will run, and may never run again, but the sentence itself is not about running. The sentence links *running* to *walking*, but no one is currently walking or running. That becomes most clear when I try to add a SG to a gerund, like the following examples:

*I running is walking really fast.

It is still ungrammatical if I add a modal verb:

*I am running is walking really fast.

As Fig. 56 shows, I have students classify gerunds that come after the VPG as part of the OCG. To be fair, it would be fine to classify it as part of the VPG, too; it won't change the punctuation strategy either way. I recommend that students classify them as the OCG just to remember that gerunds aren't the VPG, no matter how action-filled they seem to be.

Not-VPG #2: Infinitives

A word that is often a VPG can lose its ability to tell time if the author adds the word *to* in front of it (e.g., *to read, to run,* or *to steal every single one of his favorite record collection*). This is called an *infinitive* because the word is now infinite. If I say, "I love to cook," the reader can tell that I love right now, as opposed to *I loved, I never love,* or *I probably should not love*.

In contrast, *to cook* gives no indication of when I'll be cooking. An infinitive can't change to indicate any other time, either. Grammatically, I can't say that *"I love to should cook," or "*I love to might be cooked." Instead, *to cook* becomes eternal and is disqualified from being the VPG, though it can still be in the SG or OCG.

Not-VPG #3: Relative Clauses

In English, writers can modify a word by putting descriptors before it (called *pre-modification*) or after (called *post-modification).* To give examples, I can pre-modify *the woman* by saying *the brilliant woman* or post-modify her by saying *the woman who is brilliant*.

Students rarely have trouble seeing that *the brilliant woman* is going to be in the SG or an OCG somewhere, but post-modification causes students a lot of trouble. *The woman who is brilliant* looks like it contains a SG (the woman) and a VPG (is), and so it

seems like it should be an essential clause (and a sentence) all by itself. This is reasonable. Many grammar guides, like Maimon's *A Writer's Resource*, define an independent clause as having a complete verb, a subject, and not starting with a subordinating word (488). Figure 57 shows how many students map the example, per our discussions in class:

Clause	C&Q G	Subject Group	Verbal Process Group	Objects & Circumstance Group	E or M	Mark
I		**The woman who**	**is**	**brilliant**	E	

Fig. 57 Relative clauses are easy to misidentify

According to this map, this set of words would appear to qualify as an independent clause, even though almost all writing instructors would disagree.

Again, when the student scan the SG by itself, they can see that it is grammatically incomplete, which should make them question if they mapped the sentence correctly. Instead, the whole group has to go into the OCG because it doesn't have a VPG (see Fig. 58). There is no process to participate in, so no one/nothing can be participating in it. Instead, the whole group is just a circumstance of some other clause, or, more likely, a free-floating fragment that will annoy the reader.

Clause	C&Q G	Subject Group	Verbal Process Group	Objects & Circumstance Group	E or M	Mark
I				**the woman who is brilliant**	M	

Fig. 58 Without a VPG, they get placed in the OCG

Mistakes like this happen because students misunderstand relative clauses. As it is typically defined, a relative clause is a clause that begins with *who/whom, that, which,*

whose, where, and *when*. A relative clause post-modifies the word that precedes it. Most grammar guides, like Douglas Biber, Susan Conrad, and Geoffrey Leech's *Student Grammar*, consider the relative clause to be a separate clause (279).

This system does not consider a relative clause to be a separate clause (at least in this case). Relative clauses like these are restrictive or essential to the meaning of the overall process. Because of that, the essential and relative clause aren't separated by punctuation. In other words, the writer restricts the reader to consider the whole group as one elaborate idea, rather than two. Mapping the entire relative clause into the subject helps to make that restrictive relationship apparent. Like the rest of the not-VPGs, I make the relative clause structure apparent to the students, but I don't give much grammatical explanation. The constituent map usually makes it unnecessary. When they have a grammatically complete subject and a grammatically incomplete VPG, they can be (relatively) sure that they found the right constituent structure.

Students can also see why this construction can be awkward and difficult to read. Mapping this kind of structure always takes longer than a simpler clause does. Again, slowing the reader down isn't a bad thing; it just should be a purposeful thing. To make that clause complete, it needs a VPG, like example 1 in Figure 59. Students are encouraged to play with different constructions to see if the sentence would read easier without the doubled *is* (like example 2 in Fig. 59) or at least move the second *is* into the OCG where it won't disturb the constituent pattern (like example 3 in Fig. 59).

Clause	Conjunction or Question Group	Subject Group	Verbal Process Group	Objects & Circumstance Group	E or M	Mark
1		The woman who is brilliant	is	getting a Nobel prize	E	.
2		The brilliant woman	is	getting a Nobel Prize	E	.
3		The Nobel Prize winner	is	a woman who is brilliant	E	.

Fig. 59 Playing with the arrangements

To be clear, there are some relative clauses and other kinds of embedded clauses that do need to be distinguished and separated. Those distinctions are made as the students learn about the subject group, rather than when they are just trying to distinguish the VPG. In this section, the pedagogical goal is just to realize that a relative clause cannot contain the main VPG.

The Subject Group: The Focus of All That Attention

The VPG's flexibility shows that the adage *who did what to whom* is not sophisticated enough for more complex writing. The same is true for the subject group (SG.) It is apparent that the subject of a clause can be a *what*, rather than just a *who*, but the SG might not be performing the process of the VPG, like the passive voice sentence in Fig. 60.

Clause	Conjunction or Question Group	Subject Group	Verbal Process Group	Objects & Circumstances Group	E or M	Mark
I		The obnoxious dog	is being walked	by her more obnoxious owner	E	.

Fig. 60 Passive construction

This structure makes the reader focus on the dog, even though the dog has a passive role in the process. The dog just has to endure the actions of the obnoxious owner who is an unfortunate circumstance of the canine's existence. *How* anything participates in the process doesn't matter; *where* something is participating does. If it is to the immediate left of the VPG, then it can be the clause's subject. (It doesn't have to be the SG; it might be a CQG, too.) If it is to the immediate right of the VPG, it can be the OCG. Trade their geographic location, and their constituent function changes, too (see Fig. 61).

Clause	Conjunction or Question Group	Subject Group	Verbal Process Group	Objects & Circumstances Group	E or M	Mark
I		Her obnoxious owner	is being walked	by her more obnoxious dog	E	.

Fig. 61 The SG and OCG can often change places

This part is easy. All the participants are concrete, and it is easy for students to see how to map them, whether they are passive or active in each sentence.

What becomes incredibly apparent when students try to map a subject is just how abstract that *what* can be, much like SG of this overly complex sentence (see Fig. 62).

Clause	Conjunction or Question Group	Subject Group	Verbal Process Group	Objects & Circumstances Group	E or M	Mark
1		What becomes incredibly apparent when students try to map a subject	is	just how abstract that *what* can be	E	•

Fig. 62 Some SGs can be very complicated

In class discussions of sentences like this one, all of my students were bewildered by sentences like this one. They all voted that it was questionable (at best). Interestingly, most students are equally confused by SGs that have placeholder words like *there* or pronouns like *it, that,* or *she* (see Fig. 63). They want the subject of the sentence to be its most prominent words or ideas. Class discussions can explore how the sentence's impact changes if the SG becomes more or less visible.

Clause	Conjunction or Question Group	Subject Group	Verbal Process Group	Objects & Circumstances Group	E or M	Mark
1		There	is	no reason to believe her	E	•
2		It	is	bank robbery	E	•
3		That	was	a million dollar necklace	E	•
4		She	could be	a raving lunatic	E	•

Fig. 63 Pronouns don't seem much like subjects, even though they can be

If the student has identified the VPG, they just have to look to the VPG's left to find the subject. If writers have doubts about the SG's boundaries, they can test the SG like the VPG section discussed. First, they can look to see if the SG sounds grammatically complete. If it sounds complete, they likely found the SG. They can also

create a who/what question with everything from the VPG to the end of the clause. The SG is the only constituent that can grammatically fit. The rest of the sentence should stay the same, although the VPG may change a little. Both questions and answer should sound perfectly grammatical.

Embedding Complications

As mentioned in the not-VPG section, it is possible to embed one clause inside another, and the SG is a likely to place to find an embedded clause. One of the most common is the relative clause (e.g., the girl *who stole my self-esteem*.) A relative clause can be restrictive or non-restrictive. According to Biber et al., a restrictive clause pinpoints the exact thing being described. Without its description, the reader might confuse it with something else, so they are restricted from removing the description (279). I would clarify that definition a little to say that the lack of punctuation mark restricts the reader to see the whole linguistic group as one elaborate idea, rather than two. It seems unlikely that a reader will ever fling a group of words out of a text; that's certainly a writer's job. The writer shows the relative clause's rhetorical significance by leaving it in the flow of words, rather than separating it with punctuation marks. The whole group of words stays visually cohesive (see Fig. 64).

Cannot be the VPG/ Can be SG & OCG	Subject Group	Verbal Process Group	Objects & Circumstance Group
Relative Clauses: the person who_____	**The woman who bought** my car	is also	**the person who hired** me
Relative Clauses: the objects that _____	**The company that built** the first submarine	created	**a speaker that plays** underwater

Fig. 64 Looking at restrictive relative clauses

Restrictive relative clauses cause a lot of sentence fragments, since they give every appearance that there is a functional subject and verb. In contrast, some SG and OCG contain non-restrictive clauses. These give extra information, but the reader could still get the intended meaning even if that clause were removed. The following example contains a non-restrictive clause enclosed in parentheses: *The woman (who shares my birthday) bakes a splendid apple pie.* (See Fig. 65.)

Clause	C&Q G	Subject Group	Verbal Process Group	Objects & Circumstance Group	E or M	Mark
1		**The woman**			**M**	**(**
2				**who shares my birthday**	**M**	**)**
3			**bakes**	**a splendid apple pie**	**M**	**.**

Fig. 65 Mapping a non-restrictive relative clause

The detail about the birthday might be interesting, but it doesn't help the reader to know exactly which woman bakes splendid pies. The facts are related but separate ideas. Because the meaning of the essential clause is the same either way, the non-restrictive relative clause is surrounded by parentheses.

When the sentence is mapped, like in Figure 65, all the clauses are marked as modifying because all of them are fragmented. This is cognitively disturbing, which is why this structure can be highly rhetorically effective. The reader will pay more attention to the strange information that is disrupting the subject/verb pattern. As long as the writer is using this strategy to draw the reader's attention to the disruptive information, the strategy is functional, like the following sentence (mapped in Fig. 66): The woman—this is critical—started embezzling on her first day of work.

Clause	C&Q G	Subject Group	Verbal Process Group	Objects & Circumstance Group	E or M	Mark
1		The woman			M	—
2		this	is	critical	M	—
3			started	embezzling on her first day of work	M	.

Fig. 66 A highly emphatic non-restrictive clause

Often, embedded non-restrictive clauses are just distracting, and the writer should move the information to other places in the sentence or just remove it altogether.

Writers make that relationship clear by separating those clauses with punctuation (see Fig. 67 for those punctuation strategies and Fig. 68 for explanation and examples.) Again, I don't give students much explicit instruction on this until they can consistently see the whole pattern, though I do introduce the terms *restrictive* and *non-restrictive*. Instead, I just encourage students to use the handouts as examples and look for where they might have used these structures.
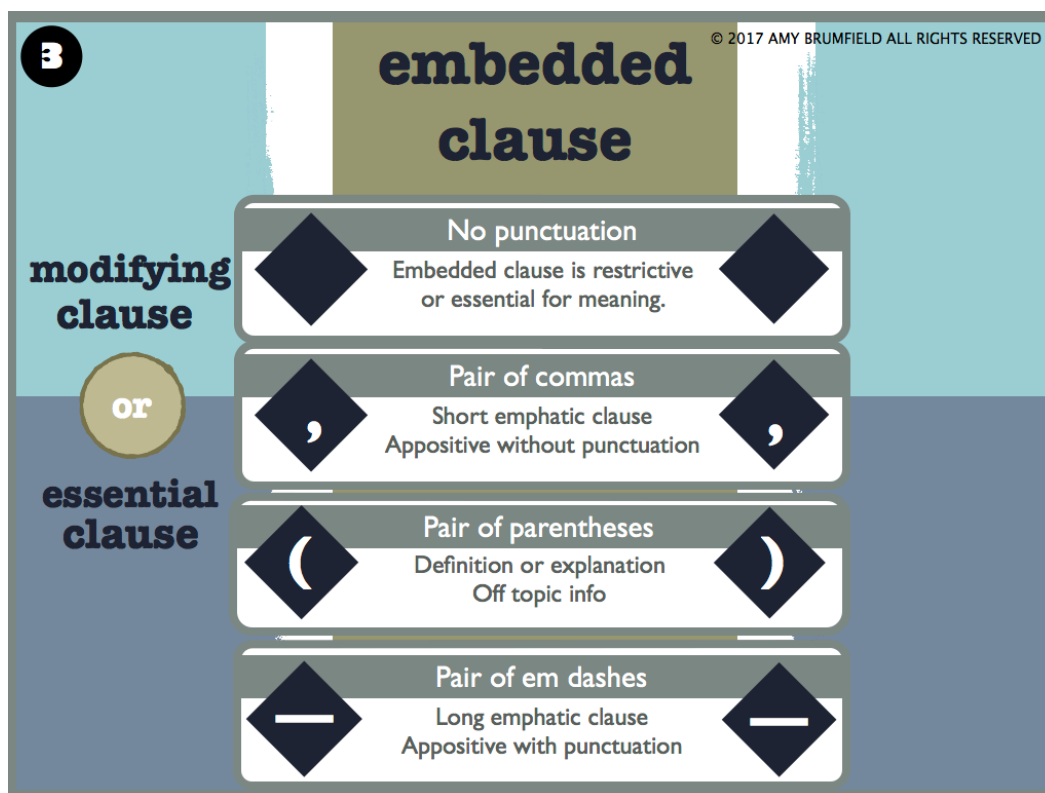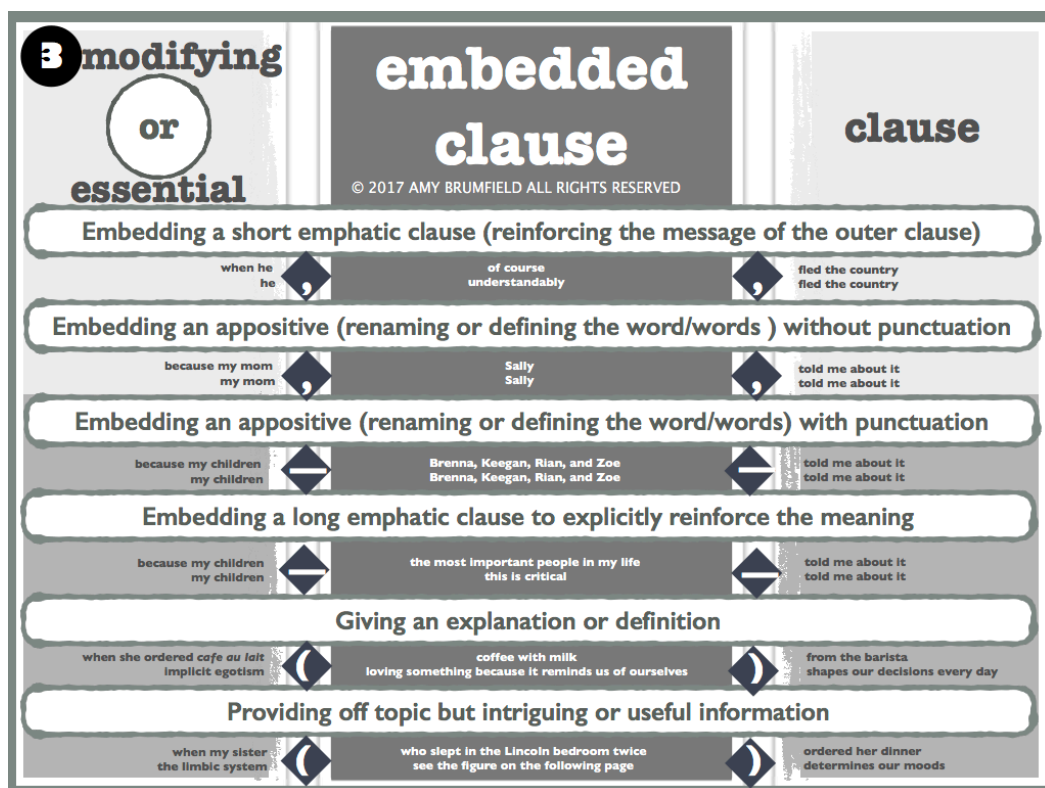
Fig. 67 Embedding Clauses

Fig. 68 Explanations and Examples of Embedded Clauses

The Conjunction and Question Group: Bringing Everything Together

With a little reminder about the term *conjunction*, students find it easy to find the conjunction and question group. The question part is easy. English allows two ways for a writer to ask a question: use question words (e.g., **How do** you make a question?) or simply punctuate a statement with a question mark (see Fig. 69). As mentioned earlier, all questions in are considered modifying clauses in this system because their structure requires an answer somewhere outside of the sentence. In essence, the question and answer are always grammatically tied together.

Clause	Conjunction or Question Group	Subject Group	Verbal Process Group	Objects & Circumstances Group	E or M	Mark
1	Why didn't	the neuroscientist	present	her findings at the conference	M	?
2		The neuroscientist	presented	her findings at the conference	M	?

Fig. 69 The two forms of a question

Granted, labeling a question as modifying or essential has little punctuation importance since the question is punctuated the same either way. The distinction is more important rhetorically. Writers will often use a question and modifying clause together to make their point more strongly than a single statement could do on its own, like the examples shown in Fig. 70.

Clause	Conjunction or Question Group	Subject Group	Verbal Process Group	Objects & Circumstances Group	E or M	Mark
1	Why didn't	the neuroscientist	present	her findings at the conference	M	?
2	Because	she	didn't want	to show her competitors her techniques	M	.

Fig. 70 A typical use of a question and fragment

A modifying clause in a sentence by itself is grammatically disturbing; the reader is always trying to find the SG and the VPG, and a modifying clause's structure requires them to look elsewhere to find it. The question/answer combination fills in all the linguistic gaps, but it takes the reader a little more cognitive reassembly to see the pattern. Questions are labeled as modifying mostly to draw the writer's attention to the challenge that they give the reader and to consider if that challenge if functional.

An unanswered question—another prevalent problem in freshmen writing—is grammatically disturbing, too. The brain expects resolution of the question's pattern, and the reader will quickly become frustrated if the writer expects the reader to supply all the answers. Equally likely, the reader will answer the question with something that the writer did not intend. Because of this, as Biber and Vásquez note, questions are almost non-existent in academic writing, even though they are prevalent in conversation (540). So, when teaching about questions, it is recommended that questions are used incredibly rarely and nearly always accompanied by the desired answer.

Seeing Conjoined Relationships

Conjunctions are slightly more complex, but only slightly. To be a CQG, the conjunctions must be functioning as one or more words that link two *clauses* together, like in FIgure 71.

Clause	Conjunction or Question Group	Subject Group	Verbal Process Group	Objects & Circumstance Group	E or M	Mark
1	Like	I	said		M	,
2		I	like	her likes on Facebook	E	,
3	but	likes	aren't enough	for me to like her.	M	.

Fig. 71 A CQG links clauses together, not just words or phrases

Students can usually recognize (though not name) the most familiar with the coordinating conjunctions or the FANBOYS (**f**or, **a**nd, **n**or, **b**ut, **o**r, **y**et, **s**o.) The other categories are not as apparent. Conjunctions can subordinate (e.g., because, that, after, as long as, rather than, as though) and correlate (e.g., either/or, but/nor, if/then, as/as). To be clear, it is not important that a writer know these individual categories; it's more important that they see the wide range of words can link one clause to another.

As the map makes clear, the CQG will be the first word or set of words in a clause. They might be relating two clauses in the same sentence or the conjunction might link clauses in different sentences (see Fig. 72). The CQG might also begin a clause with a SG and VPG (e.g., *because she left him*) or it might not (e.g., *because of him*). Either way, it doesn't change either the punctuation or the diagnosis of the clause. If a clause starts with a CQG, it can only modify something else. Students are encouraged to map the whole clause if they see a VPG, and anything without a VPG goes just into the OCG.

Clause	Conjunction or Question Group	Subject Group	Verbal Process Group	Objects & Circumstances Group	E or M	Mark
1			X	Because of a lack of interest	M	,
2			X	For instance	M	,
3			X	To put it another way	M	,
4	Even as	the neuroscientist	presented	her findings at the conference	M	,
5	Although	the neuroscientist	presented	her findings at the conference	M	,
6	Because	some spouses	are	more likely to cheat	M	,

Fig. 72 Mapping a clause that starts with a CQG

The constituent map can show the difference between an OCG that is distinguishing a break in clauses or one that is functioning in a series (see Fig. 73) In those, the conjunctions will always be contained within the series, rather than its first word(s). The map helps makes that apparent, especially in serial verbs, like Examples 2, 3, and 4.

Clause	Conjunction or Question Group	Subject Group	Verbal Process Group	Objects & Circumstance Group	E or M	Mark
1		The ninja, the girl, **and** the librarian	ran, jumped, **and** evaded	the police, the FBI, **and** the PTO all night	E	.
2		The ninja, the girl, **and** the librarian	slathered	the car in peanut butter	E	,
3			spammed	her email	M	,
4	**and**		hid	her hairspray	M	.
5		She	came		E	,
6		she	saw		E	,
7	**and**	she	conquered		M	.

Fig. 73 Helping students to see how series are mapped

It is tempting to think that conjunctions are so set in their grammatical function that they can just be memorized, rather than seen as a functional item. English is not that accommodating. A clause may start with a word(s) that seem question- or conjunction-like, but they aren't actually performing a conjunctive function within the sentence. For example, Student J's sentence has a grammatical subject that begins with *how,* which is typically a question word (see Fig. 74, lines 1-2), and Fig. 74's line 3 shows a subject that begins with *because*. Both are part of the SG, rather than relating two clauses together. A writer always has to look at the current context, rather than just relying on typical usage.

Clause	C&Q G	Subject Group	Verbal Process Group	Objects & Circumstance Group	E or M	Mark
I		How we **use** our brain and how we **think** we **use** our brain	is	the main idea I **get** from **reading** the book by David Eagleman	E	,
2				*Incognito*	M	.
3		"Because I said so"	is	my mother's favorite saying	E	.

Fig. 74 Even CQG words aren't always consistent

The Objects and Circumstances Group: Just About Everything Else

The last constituent category is the objects and circumstances group, which, as the name implies, contains all the objects and circumstances involved in the clause's process. The best functional definition for the OCG is that it is (obviously) everything to the right of the VPG until it gets to another constituent (CQG, SG, VPG, or another OCG.) Because the OCG is the last constituent in the clause, if a writer finds another constituent group, then that indicates a new clause.

Granted, academics are unlikely to accept that vague category definition, so I'll give more clarification about how traditional grammar considers this category, and then I'll offer an explanation for the simplicity of my system. Biber et al. defines the sentence elements as *subject, verb phrase, object, predicative, adverbials, long verb phrases,* and *truly peripheral elements* (50-52). Their categories are extensive and useful to an advanced student of the writing system or linguistics. For a freshmen composition course with other learning objectives, a highly simplified system has to be employed.

I'll give a short explanation to highlight the problems of this category. A grammatical English clause can have zero, one, or two objects (see Fig. 75.) It is grammatically possible to just bake, bake someone's mother (not recommended,) or bake someone's mother a cake (a better, less felonious choice.)

Clause	Conjunction or Question Group	Subject Group	Verbal Process Group	Objects & Circumstances Group	E or M	Mark
1		She	baked		E	•
2		She	baked	her mother	E	•
3		She	baked	her mother a cake	E	•

Fig. 75 Seeing the objects participating in the process

So far, so good. It would be easy to teach students to identify *her mother* as the indirect object (the first object after the verb) and *a cake* as the direct object (the second object after the verb.) In each of those examples, the objects are tangible objects, which makes them easy to identify. But English is not always so concrete, even in sentences with the same exact structure in place, like Fig. 76.

Clause	Conjunction or Question Group	Subject Group	Verbal Process Group	Objects & Circumstances Group	E or M	Mark
1		The woman	is	a doctor	E	•
2		The woman	is	brilliant	E	•
3		The woman	is	uncertain about her fate	E	•
4		The woman	is	representing her clients	E	•

Fig. 76 The line between an object and a circumstance can be fuzzy

For example, the object of the first example is clear: The woman is a doctor. *A doctor* is a tangible object that someone could touch (though the doctor would probably not prefer

that.) In the next examples, the object/circumstances line is far less clear, even though it has the exact same structure: *The woman is brilliant. Brilliant* is participating in this process as it is linked to *the woman*, though it isn't a tangible participant. *Brilliant* might be the circumstances of being the woman (lucky her.) Similarly, *uncertain about her fate* and *representing her clients* might be considered an object or a circumstance, depending on how someone defines either. While a linguist is likely to have a clear opinion, my students are generally bewildered. Since there isn't a punctuation difference, it is easier to just lump the whole amorphous category together.

Students are instructed to look over each OCG to see if they contain another constituent, like this one in Fig. 77:

Clause	Conjunction or Question Group	Subject Group	Verbal Process Group	Objects & Circumstances Group	E or M	Mark
1		The woman	is	representing her clients in the lawsuit about the intentional poisoning of Clearwater Creek in the fall of 2014	E	,
2				too	M	.

Fig. 77 OCGs can be extensive, which makes it hard to find the next clause

Students can look for a word or group of words that don't seem grammatically tied to the words around them. Like all clauses, they can be removed from the sentence and the remaining words seem grammatically complete.

Rhetorically, students are also instructed to consider whether extensive constituent is functional or whether the group might be better understood if it were broken into smaller clauses. Sometimes, the relationship is critical, and so all the words should

remain together in the same constituent. Other times, it is more functional to break them up so that the details can get a little more notice on their own. There aren't rules to govern such choices. Rather, the writer has leeway to experiment with different strategies to see which suits their purposes best.

Pedagogical Resource #3: The Punctuation Resources

Punctuation marks do not disrupt the basic relationship of the four main constituents. As long as the words are working together in the same clause, they remain visually linked by just the punctuation of space, and punctuation marks go on the boundaries between non-restrictive clauses. This idea is so critical to punctuation strategies that it is included on each constituent map, as the bright orange line on Figure 78.


Mapping the Constituents

Punctuation marks don't separate constituents in the same clause, but they often separate one clause from another.

Clause	Conjunction or Question Group	Subject Group	Verbal Process Group	Objects and Circumstances Group	M or E	Mark
I	Because	there	are	many groups of words in each utterance	M	,

Fig. 78 Seeing what punctuation holds together and keeps apart

While infinite grammar rules exist to describe this principle, punctuation is actually quite simple once the writer can see the linguistic groups that their punctuation marks are creating. The punctuation system evolved to make reading easier. One of punctuation's primary purposes is to delineate the linguistic groups, and the choice of a specific

signifier shows what groups are present and how they are related to each other. The

punctuation symbols each have conventional uses so that the writer and the reader can

agree on the relationships that they create.

At its simplest, a sentence is a visual collection of two types of clauses, and two

types of anything can only be combined in a limited number of ways (see Fig. 79.)
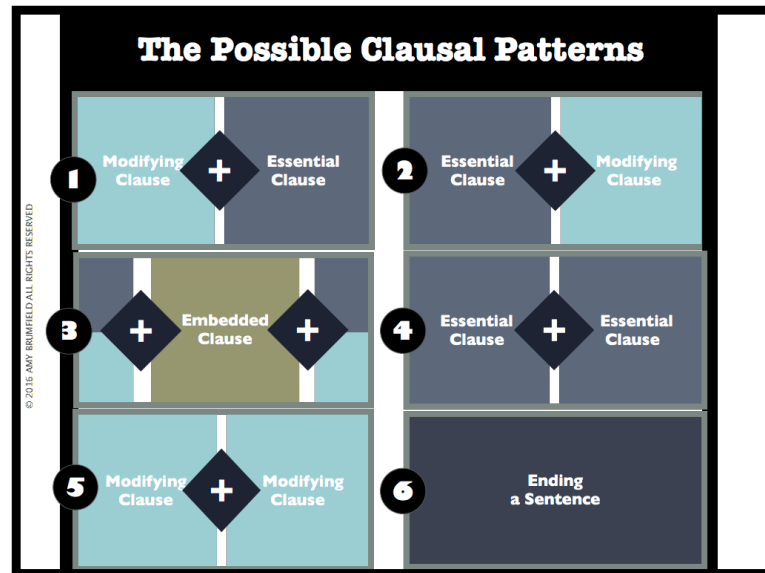
Fig. 79 The guide to the punctuation resources

When students can see what kinds of clauses they wish to combine, they can access

a simple set of handouts to see the conventional punctuation strategies for each kind of

clausal combination. For example, non-restrictive modifying and essential clauses are

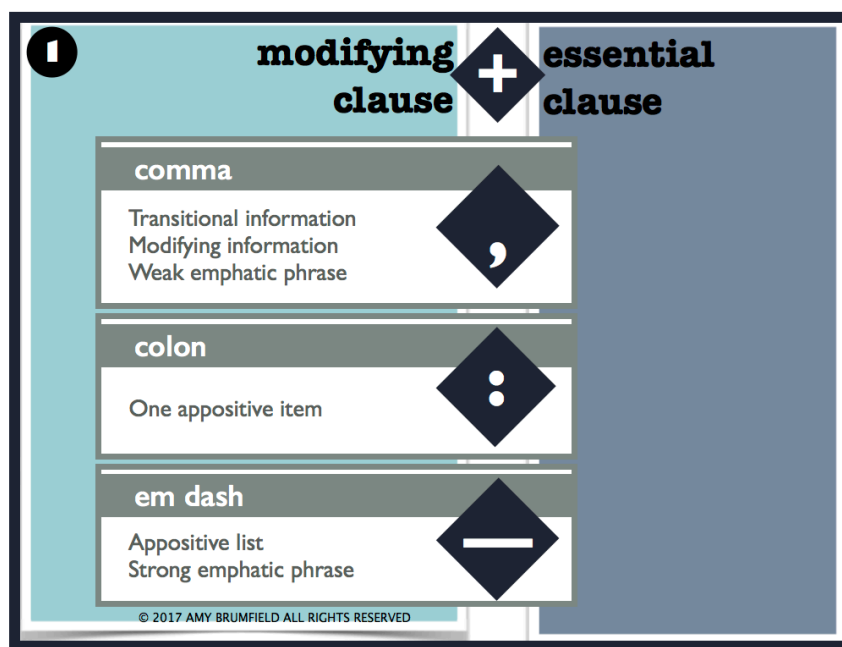generally separated in only three ways, shown in Figure 80:

Fig. 80 An example of the simplified resource

If a student wants further explanation of any of the terms or wants to see example, they

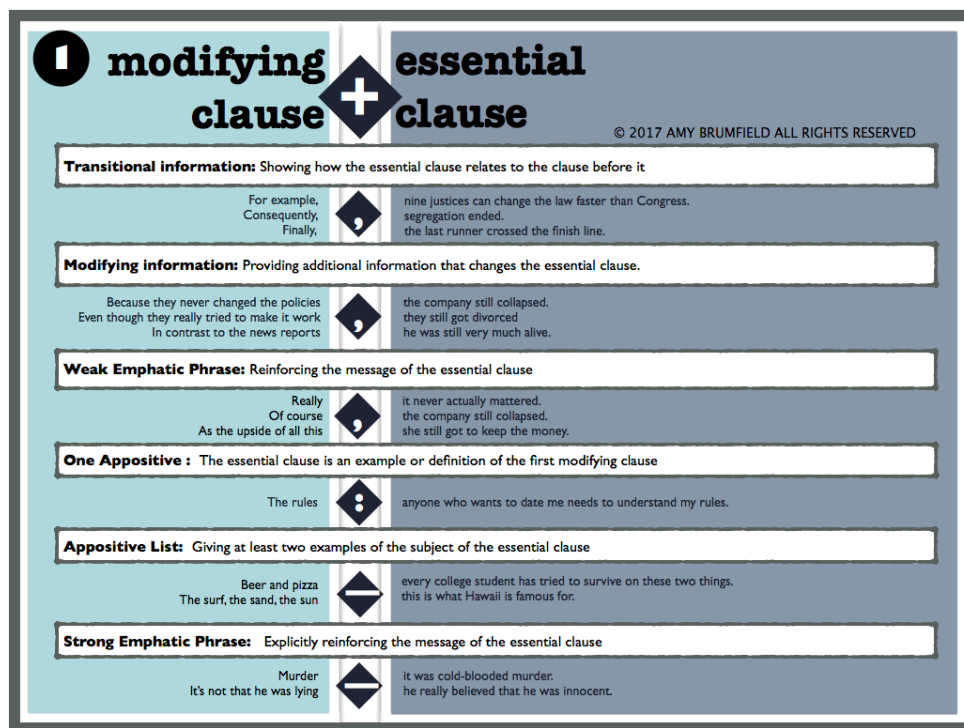can look at the explanatory handout (see Fig. 81):

Fig. 81 An example of the expanded version of each resource

All of the handouts are included in the next section, which also includes ways to teach these materials. This dissertation started by looking for a way to teach punctuation, but I gradually realized that teaching students to create visually cohesive clauses makes a much bigger rhetorical difference. The punctuation is a small part of the larger composition; it took a lot of work to see that. I hope that these resources make it easier for students to see the same thing.

Pedagogical Resource #4: Using SLIM to Catch the Errors that Persist

This learning system is designed to be a semester-long learning process, and students will inevitably continue to create writing with mistakes and errors throughout the learning process and long after it is over. I created the SLIM grading system as a formative assessment measure that can help instructors reinforce these concepts, but SLIM can be used in courses that don't have an extensive grammar component as well. *The Framework for Post-Secondary Success* asserts that "writing well is essential to student success in college and beyond," and that learning to write well is a lifelong process that is fostered by writing in many different disciplines (2). First-year composition (FYC) can introduce writing skills (like effective punctuation placement) that make a writer look more polished and professional, but it is the continual, multidisciplinary practice throughout the college experience that creates a strong writer.

By revising their writing assessment system, instructors in every discipline can help their students to improve on their mechanical writing skills, like grammar and punctuation, even if the instructors don't dedicate any class time to that specific goal. As Ken Bain explains, outstanding teachers use "assessment to help students learn, not just

rate and rank their efforts" (151). The assessment measure should be designed to stress learning rather than just performance (152).

With those principles in mind, I created a simplified, limited, and illustrative marking system (SLIM) for assessing and explaining grammatical and mechanical writing errors (see Fig. 82). This marking system is simplified because it only looks for four basic categories of writing mistakes, which an average reader can easily distinguish and describe without formal grammatical terms. It is limited because an instructor only looks for their established quota of errors before they can stop marking. The quota system also limits the amount that writing mechanics can impact a student's grade, which makes it more equitable for struggling students. The marking system is illustrative because it shows the kind and location of the mistakes. By clarifying the types of mistakes that a student makes, an instructor can guide that student to the most effective campus resources. (See the Appendix for the handout that I give to my students).

WHAT IS SLIM?

S simple
Looks for only 4 basic categories of mechanical mistakes, which an average reader can easily distinguish and describe without formal grammatical terms.

L limited
An instructor only looks for their established quota of errors before they can stop marking. The quota system also limits the amount that writing mechanics can impact a student's grade, which makes it more equitable for struggling students.

I illustrative
It shows the kind and location of the mistakes. By clarifying the types of mistakes that a student makes, an instructor can guide that student to the most effective campus resources.

M marking system

Fig. 82 An explanation of SLIM

To be clear, SLIM isn't a teaching system; it is primarily a diagnostic and incentive system. Instructors can quickly diagnose the overall pattern of a student's errors and give effective feedback that can guide students to the right resources. Students can

glance at their papers and see the density of their mechanical mistakes, as well as the

general comprehension problems that those mistakes cause. While more proficient

students could use this information to access help in a writing guide, the goal is to

incentivize students to seek the appropriate campus resources where they can receive

individualized help, ideally *before* the writing is turned in for assessment. Using SLIM

allows an instructor to show that they value strong mechanical writing skills, while

preserving nearly all class and evaluation time for content.

The Ethics of Assessment

College students enroll with a wide range of writing skills. As Mina Shaughnessy

describes them, there are students who are ready for college writing, students who

survived high school but clearly did not thrive there, and students whose writing seems so

far behind their peers that they may never catch up (2). In the best-case scenario, this

diverse writing group is taking other content-driven courses *while* they are taking FYC;

often, they take other general education courses *before* they take FYC. FYC can improve

student writing, but it certainly can't teach students how to write for everyone in every

situation. Writing, as discussed in depth in the previous chapters, is always a mediation

between the reader and the writer (Bazerman 27). As Chris Anson discusses, by writing

for each instructor, students are attempting to join that instructor's discourse community,

a term that implies "unity, shared practices, shared goals and audiences and genres"

(210).

FYC can teach students to become aware of the conventions, give strategies for

finding the conventions, and help students to model the conventions that they find. While

and after students take FYC, other college instructors step in to teach their own

conventions and show what is valuable in their discipline's writing genres. Quite often, a student's best gauge for what is valuable in a discipline is its assessment standards.

As Tony Scott and Asao Inoue explain, student assessment is never a neutral, objective process. Like writing itself, assessing writing is a social activity that is shaped by many factors like our "disciplinary philosophies of literacy and learning, political agendas, efficiency imperatives, and common cultural assumptions about writers and literacy" (30). In other words, instructors always bring their own biases and life constraints to the grading process. There is limited amount of time and effort to devote to assessing students, and instructors need to make sure the process is as economical and fair as it can be.

Even in the FYC classroom, it is difficult to fairly evaluate my students' mechanical writing mistakes. Certainly, it is neither possible nor expected that a FYC instructor can teach all students to overcome every writing difficulty in sixteen weeks. It is both possible and expected that they will help each student make improvements and to judge each student's writing equitably. Instructors cannot judge each student's mechanical writing abilities against the peer group; the placement tests show that this would be unethical. Instead, they need to evaluate each student based on where they start and help them move to more proficiency.
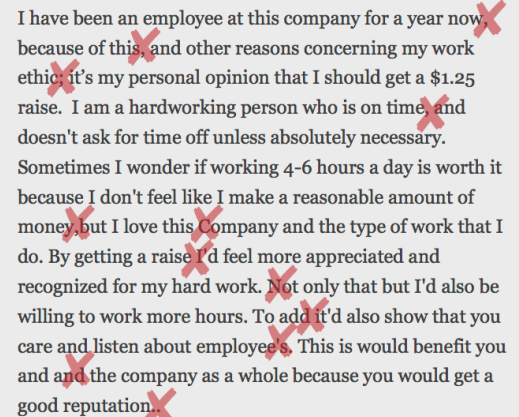
To Mark or Not to Mark

Before I show you how SLIM works, I will show why it is necessary, using this example from Student D (see Fig. 83). This writing sample was taken from the final draft of the first graded essay of the semester. The student submitted the required rough draft, went through

Fig. 83 Student D's writing sample with marked errors

the peer review process, and submitted a final draft. Because she had multiple times to revise, we will assume that this student wrote to the best of her current ability.

Marking Nothing

Figure 83 shows that this student made 12 distinct errors in this single paragraph. An instructor has several options: First, they can exclude mechanics from their grading standards and mark nothing. This doesn't help the student to improve or even see a need to improve. There is no incentive for a student to get extra help if she doesn't know that she needs it or if that effort doesn't impact her grade.

To be fair, college instructors are often rightfully uneasy about marking mechanical writing errors. Very few college instructors have extensively studied grammar (and even fewer wish to). While instructors have strong writing skills, those skills are often intuitive rather than explicit. In other words, it's easy to find the mistakes, but it is difficult to define those mistakes in useful ways for their students. If the mistakes cannot be clearly defined so that students can avoid them in the future, there is little purpose in pointing them out beyond simply punishing students for their ignorance. Further, nearly all class time must be devoted to teaching content, with little or no time to

spend on teaching writing form. This brings instructors to an ethical dilemma: Do we hold students accountable for the writing skills that we know that many do not have (yet) if we cannot dedicate any significant time to improving them?

To resolve this dilemma, some instructors simply don't explicitly include writing mechanics in their grading criteria, but it is impossible to ignore all mechanical issues. Well-composed grammatical sentences are easier to read and transmit their meaning more effectively than malformed ones. A few mistakes—like an occasional missing word or mistaken mark—are simply annoying; a lot of mistakes or class-marking mistakes can deeply damage both the message and the credibility of the writer, as well as the writer's relationship with the reader (See Beason, Hairston). Despite the best intentions, instructors will take the writing mechanics into account, whether the grading is explicit or not. By refusing to quantify the writing mechanics portion of the grade, instructors just hide the grading standard, rather than eliminate it.

Hidden grading standards damage struggling writers more than proficient ones. Obviously, a struggling writer will make more mistakes and will be judged more harshly for that abundance, but a hidden grading standard also removes the student's incentive to seek university resources that would correct the mistakes. Susan Ambrose et al. explain that students are motivated by their expectancies, or the goals and outcomes that they believe they can achieve (76). Instructors have an ethical obligation to make the expectancies of the course clear, so that students have every opportunity to meet them. Essentially, a hidden grading standard guarantees that instructors will read more painful writing since they have provided no incentive to seek guidance. A hidden grading standard unfairly disadvantages the diverse cultural, socioeconomic, and linguistic

groups, since they are the most likely to struggle with writing altogether (Sparks and Malkus 6).

Marking Everything

At the opposite end of the marking spectrum, some instructors use copious marking strategies, defining or at least pointing out every writing mistake. This approach has come under fire for several reasons. First, as Elaine Lee argues, abundant correction makes the instructor both the editor and appropriator of the paper, reducing a student's ownership of the work (qtd. in Sprinkle 275). Second, there is little evidence that students effectively use these marks to guide future decisions. While I used copious, detailed markings, I performed multiple surveys that showed that less than 30% of my students even attempted to decode my markings to find grammatical help. They usually explained that the handbooks were too confusing to understand and that the grade gains weren't worth the effort. Third, specific diagnosis takes far too much instructor time and grammatical expertise. Students can make errors that have no known label and no corresponding rule in any writing guide. I can spend longer trying to diagnose the strange writing error than the student ever spent writing it.

Haswell's Happy Middle Ground

Richard Haswell's strategy of minimal marking is in the middle of the marking spectrum. Haswell places a generic mark at the end each line of text that contains a writing error of some kind. The students are then tasked to find and repair the error. He rereads the paper in class, determines whether the errors were appropriately repaired, and records the final grade. He found that this process "shortens, gladdens, and improves the

act of marking papers" because teachers can quickly acknowledge distracting mistakes but keep their focus on the more substantial writing problems (601).

Minimal marking has some drawbacks. As Haswell notes, it allows students to find between 60% of writing problems, but it leaves about 40% of the errors uncorrected (602). While students can use this method to find mistakes (the student had the appropriate knowledge and simply failed in its performance in this context), a student can't use this method to identify errors (a systematic misunderstanding of a concept) (Ellis 17). An instructor can't tell anything about the pattern of mistakes from this method, either. If every mistake is marked the same, the instructor must repeat the diagnostics twice to determine if the error was found and was repaired correctly. Most importantly, the writer is likely to make the same set of errors in the next writing since minimal marking only catches the errors that were made in haste (which will certainly be problematic in every college assignment) and corrects none of the others.

Recognizing How Much Students Get Right

The problem with all of these systems is that they are entirely negative. They look for what the student did wrong with no appreciation for the many things they get right. For example, even Student D's troubled paragraph gets far more things right than it gets wrong (see Fig. 84). Most

	Functional	Dysfunctional
Grammar	149	2
Mark	13	8
Font	13	1
Space	142	1

Fig. 84 College writers have more functional choices than dysfunctional ones

grading systems provide no scale to see improvement over time, either.

Throughout my years of teaching, I have experimented with the whole range of marking, and I found that minimal marking was more ethical than having no explicit

standards and more effective than copious marking. I appreciate the simplicity of Haswell's system, but I thought that a small amount of diagnosis would help both me and my students.

Defining Error

At this point, I must clarify what I mean by a mechanical writing error. I do not look for mistakes in grammar rules as they are defined in a writing guide. I agree with Devan Cook that "error is a disorderly, amorphous, conflicted concept" that can only be determined in context and by an individual reader (23). Rather than look for broken grammar rules, I look for the places in the text where I experienced comprehension problems, similar to Joseph Williams' concept of a "flawed verbal transaction" (153).

Whenever the linguistic pattern varies from the reader's expectations, the reader must slow down and reread to resolve the dissonance. This isn't a reading habit; this is a cognitive requirement. As Eagleman describes, nearly all the brain's processing happens without conscious attention; in reading and in the rest of life, conscious awareness is only triggered when the brain experiences the dissonance of expecting to find one thing and getting another (50).

Effective writers purposefully create purposeful dissonance by utilizing an unconventional choice that slows the reader down and get them to focus more conscious attention on a piece of information. For example, writers can use a question and fragmented answer, rather than simply stating the information. They might use an unusual spelling or grammatical form to show that they are an insider in a specific cultural group. If an instructor can see that the writer used an unconventional choice to some desirable rhetorical effect, they don't mark it because it isn't an error.

Instructors should mark any deviations that decreases reading speed but don't increase the comprehension of the text or strengthen the credibility of the author. To restate my earlier point, SLIM does not require a deep reading for grammar and punctuation errors; in fact, I recommend that instructors read very lightly for them. We are not our students' editors; we are also not, as Shaughnessy argues, reading their text with a "lawyer's eyes, searching for flaws" (7). The goal is to plant a symbolic flag into the text at every place where we, as (somewhat) normal readers, stumble. In contrast to systems that try to diagnose every error, my system only delineates four categories of comprehension problem.

A Simple Intervention

SLIM is a simple, limited, illustrative marking system. SLIM is simple because it only looks for four basic categories of mistakes that a student can easily correct. The four types of mechanical mistakes are grammar; should be separated; should be together; and right place, wrong tool (see Fig. 85).

Fig. 85 The four simple categories of writing mistakes

A grammar mistake means that the words are not in the right order or form, and Fig. 86 shows the most common grammar mistakes, like missing or extra words, using the wrong word, confusing syntax, and agreement problems.
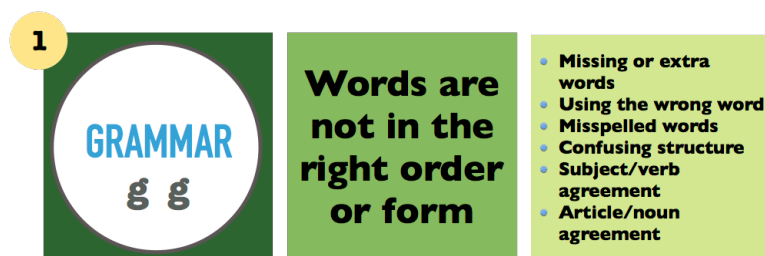
Fig. 86 The grammar category of mistakes

Obviously, *should be separated* and *should be together* are related categories. *Should be separated* means that the text is missing punctuation that should separate two things. *Should be together* means that the text has extra punctuation that is separating two things that should be together (see Fig. 87). Usually those problems are clausal, but sign, constituent, and paragraph level separation problems happen, too.
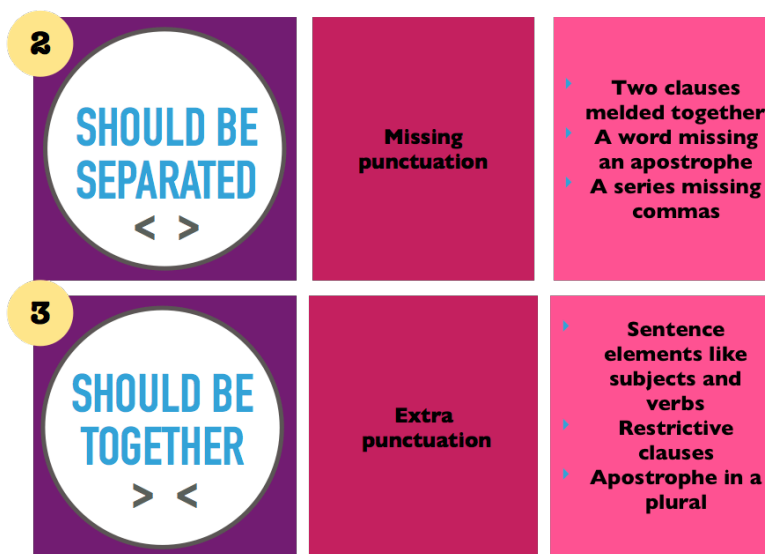
Fig. 87 The Separation Errors

For example, the following example is missing punctuation: *Because I loved him I stalked him mercilessly.* There should be a comma separating the two clauses, so I would mark it like this: *Because I loved him>< I stalked him mercilessly.* This category also covers any other missing marks, like missing apostrophes in contractions, missing quotation marks, etc.

To show how *Should be together* works, I'll use this example:

- The girl who slathered herself in peanut butter, has some issues.

Students often break up a single clause like this one with a comma, separating the subject (*the girl who slathered herself in peanut butter*) and the verb (*has*). So, I can show them where they could remove punctuation, like this:

- The girl who slathered herself in peanut butter>,< has some issues.

This category also works for any kind of extra punctuation, like an extra apostrophe or ellipses that begin or end a quote.

The last category—*right place, wrong tool*—means that the punctuation is in the right place, but the wrong mark or combination of punctuation was chosen (see Fig. 88). Typical examples are comma splices, sentence fragments, run-on sentences, and titles that needed mixed case italics instead of quotation marks and mixed case roman.
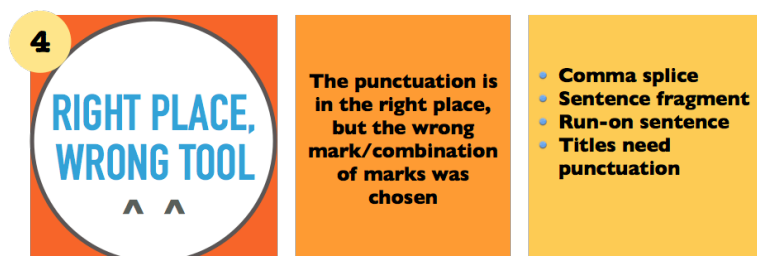
Fig. 88 Right Place, Wrong Tool Category

Limiting the Damage to All Involved

The *L* in SLIM stands for **limited**. This system is limited because the teacher sets a quota for a particular kind of mistake. For example, since most of my students can find all their grammar errors by simply reading more carefully, I set the grammar quota at 0-1 mistakes per paper for full credit, 2-3 mistakes costs 5 points, and 4+ mistakes costs the entire available 8 points for that category. The quota is an explicit part of the grading criteria that should be discussed when the paper is assigned, so that students can prepare

to get adequate help if they wish. Students are given a handout about SLIM that includes campus resources that are available to help the student achieve this part of the grade.

While grading, an instructor looks each kind of mistakes and then stops marking once the quota has been met. If they see any other errors, they just remind themselves that this part of the grade is complete, and the student doesn't need any further punishment for more mistakes. This limits the damage to a student's grade, which makes it fairer for struggling students.

Shining a Focused Light on the Problems

The *I* in SLIM stands for **illustrative**. When the essay is returned, students can see the amount and density of their mistakes, hopefully giving them a specific target to aim for in the next essay. The marking indicates a simple way to fix that problem (though it may not help them prevent the same problems in future essays. Grammar problems are tough for many cognitive and linguistic reasons).

Most importantly, it gives students a specific guide to getting help. If a student has a lot of grammar errors, they either need to proofread more effectively or they should see an ESL tutor for some extra help. Lots of separation errors are very hard to fix because they usually mean that a student is struggling to see the language's clausal structure. That may take a lot of dedicated time with a good writing tutor. Lastly, a lot of *right place, wrong tool* errors means that a student should visit the writing lab and have a tutor explain the basic principles involved. If there are only a couple of mistakes, a student can be referred to a writing guide for help.

Using the Marking System

SLIM offers a different way to mark a text. Instructors are encouraged to read lightly and only mark errors that cause them to slow down and reread. When a distracting error is found, surround the problematic text with a pair of appropriate marks so that the student can easily locate and repair the error. Here are some examples:

- g a girls runned away. g

- Because I love him>,< I stole his car.

- <The girl who stole my laptop, kicked my dog.>

- I love the song ^*Shake It Off.*^

This system uses pairs of marks to enclose problems because writing problems are rarely just a single dysfunctional symbol. (If grading electronically, I use colored highlights instead of marks, highlighting the entire section. I update the student handout to reflect that change.) Instead, writing problems are usually a compositional problem that involves multiple punctuated words. For example, students rarely write a single ungrammatical word (a word that is unacceptable to native English speaker), but they often create ungrammatical combinations of words. Creating a frame helps students to see that language works together, and that all the pieces need to be functional for the text to work. Instructors keep track of how many errors of each kind they see and mark the paper accordingly. Then, stop marking when the quota is reached.

SLIM helps students to focus in on their trouble areas. Looking back at Fig. 83 to see Student D's troubled paragraph, that mass of marking doesn't help the teacher or student to see what her problems are. By quantifying them into categories, it becomes apparent that Student D needs a lot of help with separation
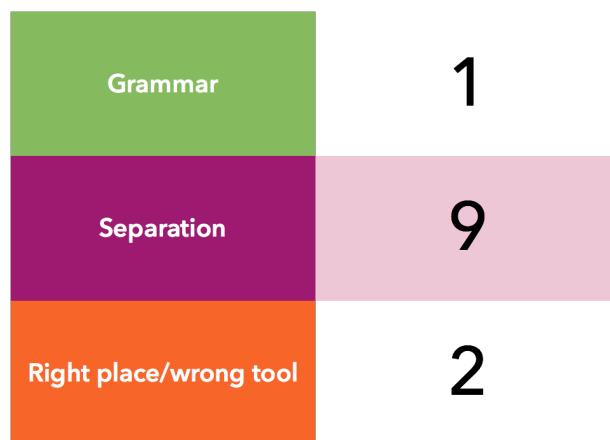
Fig. 89 Student D can see where to focus

errors, but her grammar and right place, wrong tool categories need a lot less work (see Fig. 89). The student can see that she is successful in some areas, and she can focus her efforts and her time with a writing tutor accordingly.

Giving Incentive through Grading Weight

In my FYC course, an essay's grade receives 50% on meeting the assignment requirements, like turning it in on time and on topic. Mechanics and content are weighted equally at 25% of the grade. Composing the thoughts matters as much as composing the symbols that express them. Outside of FYC course, I recommend that grammar and mechanics be weighted as 10% of a paper's overall grade. Mechanics can mean the difference between a good paper and an excellent one, and the grading weight can make that apparent. Since meeting with a writing tutor can help to guarantee this part of the grade, it places this assessment component within reach of even struggling students, who can get lots of help with more substantive writing problems in the process.

The grading weight isn't just helpful to students; I have found it is helpful to me. By putting a specific quota on the mechanical mistakes, I have found that my grading has become fairer. When I reach the quota of errors that I established, I stop marking. I also

remind myself that I am done evaluating this portion of their grade, even when I see many more irritating errors past the last graded one.

Students make many more sophisticated and effective punctuation decisions than dysfunctional ones; their dysfunctional decisions just attract far more notice. That notice can be useful and productive if it leads students to seek the right help to improve. SLIM doesn't teach grammar issues, but it does identify them in a useful way. Effective grammar and punctuation are an important part of every discipline's writing. Using the writing conventions shows that a student is part of the college-educated community. SLIM offers one simple way that every instructor can show the value of effective mechanical writing skills even if they cannot dedicate class time to their instruction.

CHAPTER 7: THE PEDAGOGICAL APPLICATION

Learning is Always a Process, not a Product

To avoid redundancy, this section focuses on how to teach this material, rather than giving another explicit explanation of the material. As a reminder, this system is not teaching students to write constituents, clauses, or sentences. They have been writing these for many, many years. Instead, this system is aimed at teaching students to recognize the linguistic patterns that they already create in abundance, see how those patterns impact the text and its message, and repair dysfunctional patterns with testable solutions. As Boyle suggests, improving writing takes a lot of serial practice. These habits are embodied and take many learning opportunities to achieve lasting change.

This learning process is necessarily circular. All students find it easy to find their constituents and clauses in their simple sentences, and many students struggle to make that same designation in their more complicated sentences. As I stress often, it would be easy to identify the clauses if a student already knew the constituents, just like it would be easy to identify the constituents if a student already knew how to find every clause. A sentence can be easily composed if a student can clearly compose every element in them, but writers has to write some sentences to learn to see the pieces that it contains. Because they can't identify all of those pieces yet, students will have to stumble through the process for a while to gain the required skills.

Stumbling is difficult, especially for students who are deeply invested in performing well. Instructors should remember that students will make many mistakes, forget steps, and overlook answers that may seem obvious to their instructor or their peers. Students will necessarily forget one piece of information while they focus on a

different one. They may have the applicable handout right in front of them and still forget to access its information as they wrestle with other aspects. All of this is normal and required for true learning, but it also means students may frequently feel confused and uncomfortable as their communicative mistakes are placed on display, even if they are the only person seeing those mistakes. Like Brown explains, the language ego is always involved and at risk (72).

The instructor should often stress that the learning goal isn't to be perfect at the beginning (or ever). The goal is to keep creating new experimental texts, study their patterns, and see how to improve them. Experiments do not aim to get a perfect result every time. Instead, an experimenter plays with different conditions and observes the results carefully so that positive results can be replicated and negative ones can be avoided. Instructors can help this process by creating lots of small, low stakes assignments and exercises that give opportunity for relatively immediate feedback. Apps like NearPod and Socrative offer ways to use anonymous student examples that can be created in class and instantly shared, evaluated, and discussed. Learning management systems like Moodle can be leveraged, too, so that students can do simple homework assignments that focus on small steps of the learning process.

Altogether, an instructor should spend a lot of time creating this learning environment and offering as much shelter from harsh judgment as they can, at least in the initial stages. Student texts are much harder to study than polished texts written by excellent authors. Students will need extra time and help to critically read their own writing for both form and content. They also need some emotional support and encouragement because the learning process is always at least a little painful; it is

especially painful for students who come into a FYC course sure that they will either fail or just barely scrape by. They are looking for proof that they are right about their inability to master this set of skills, and writing for an academic audience often hands them ample proof. Hopefully, the FYC course is one place that continually stresses how difficult this craft is and how achievable it is with disciplined practice.

Seeing the sentence structure involves a lot of cognitive tasks that are surprisingly complex, especially to instructors whose Curse of Knowledge has erased any memory of this learning process. Eventually, as I reassure students, this process becomes easier and the steps meld together with practice. The classroom activities, homework, and larger project grading should all take these learning features into account.

To avoid repeating a lot of information that was contained in the previous section, the following pedagogical section will focus on how to introduce and test these concepts, rather than explaining the concepts themselves.

College Students are Highly Fluent Writers, and That's a Problem
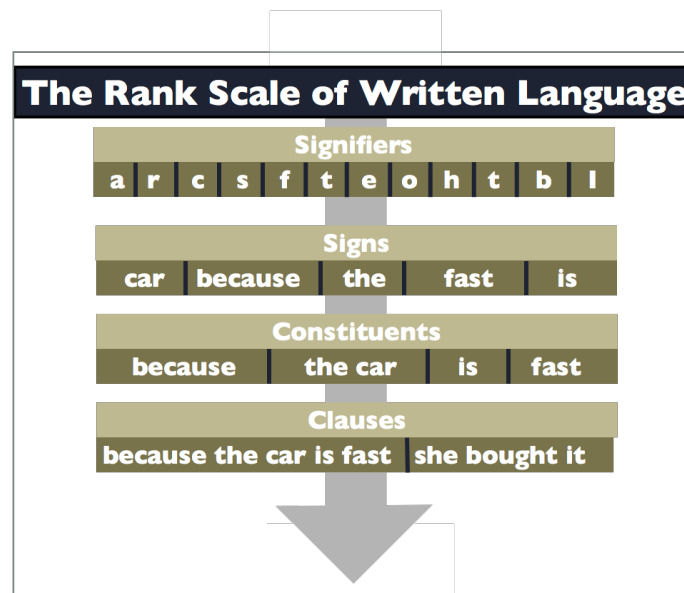
Fig. 90 The rank scale with examples

I introduce the rank scale of language, explaining that students may not know every term on the scale, but they are already experts in using all of them (see Fig. 90 as a reminder). This material aims to that linguistic expertise apparent, give it a consistent vocabulary so that they can discuss their language intelligently, and show them how to test each rank to write more consistently. Further, the FYC course is designed for advanced writers who achieved fluency long ago. They are such fluent writers that many of their writing choices are now completely unconscious, which makes those decisions difficult to challenge. Another of the course objectives is to make many of their writing decisions conscious again, so that students can challenge them, see what works and what doesn't, and then practice them enough that more effective habits replace the dysfunctional ones.

Writing, like reading, seems like a highly conscious activity, but the brain executes many of writing's tasks without any conscious attention. To see that, students analyze a 200-word sample of their writing using a word processor's word count feature (see Fig. 91). Students do some basic math to see things like how many symbols they used, how many

Fig. 91 Using a word count to see the unconscious writing choices

spaces they hit, etc. Then the assignment asks them to guess the percentage of choices that they were conscious of making. They test this concept in a number of easy ways like guessing how many words they had to consciously spell, how many capital letters they consciously chose, etc.

Last, they are asked to write 200 characters without using any space, marks, or changes in fonts, so that they can pay attention to how many habits are automatic. In theory, it should be easier to write an unpunctuated text because it is less symbols/space and thus less work, but it is actually a lot harder. Students fight against their own brain the whole time as it tries to insert all the writing tools that ought to be there. Finally, students lightly analyze how many of their choices are completely unconscious and what implications that this has for learning new writing skills.

Students are surprised at how many writing tasks are done without any conscious thought. Quite literally, they can do the math to see that they made thousands of decisions in that small writing sample, and very few of them required specific thought. Most of those decisions are perfectly functional, but others might not be. We discuss how learning is an embodied process where the brain is literally remodeled each time that it learns. The longer ago it learned something, like placing a comma, the harder it will be remodel that learning. To borrow SLA's term, some of their writing choices are fossilized, where choices are neurologically entrenched but not functional in the target language of SEAE (Ellis 29). By making the whole framework conscious, students can begin challenge those dysfunctional writing habits and with practice, they can replace them.

Seeing the Signifiers

Throughout multiple semesters, students' biggest writing concern is grammar and punctuation. When asked to describe what that term means, students often tell painful stories instead. They speak of failing essays covered in mysterious symbols that indicate errors that they do not understand and cannot see how to correct. This term needs to be redefined for students to begin to change their attitudes about it.

I explain that they are expert grammarians, at least in their native language, and we discuss the concept of grammaticality. According to experts who study language, an average speaker is the best judge of whether a piece of text is grammatical or not, so a native English speaker is a perfect judge of that. The categories are expanded to include *questionable*, a murky middle ground between fully understandable and pleasant to read and not understandable at all. Further, a text can be determined to be functional, questionable, or dysfunctional. A functional text represents the author as intended and conveys the (presumed) intended message. A dysfunctional text obviously accomplishes neither, and a questionable text falls somewhere in between.

The class experiments with this concept by viewing a short PowerPoint and voting whether the examples are grammatical, questionable, or ungrammatical texts, as well as functional, questionable, or dysfunctional. (I use a collection of public signs filled with misspellings, strange syntax, etc., along with effective examples.) As they quickly see, a sign may be grammatical and still fail to be functional; it may have questionable grammatical features but still function exactly as intended. The class can easily prove that they are all expert grammarians who all easily agree on what is grammatical/functional, questionable, and ungrammatical/dysfunctional.

In fact, as I remind them, fluent writers are already experts in every rank. They just need to gain an official name for them. To introduce the rank of signifiers, I have students take the course textbook and look at a page to find all the different kinds of individual symbols. It's easy to compose a list of letters, numbers, space, punctuation mark, etc. Then we discuss how the brain uses the symbol system to make an educated guess about the author's intended meaning. The brain assumes that the author uses the

same symbols in the same way that the reader does, and it uses context to double check that assumption.

Students are asked to define a signifier, like the letter K. Even though students know a great deal about using signifiers, they cannot effectively define a signifier except through contrast to other signifiers, essentially noticing Derrida's

Fig. 92 The grammatical range of signifiers

concept of difference (284). So, we discuss what a reader can reasonably predict from seeing a signifier, asking if they can tell what language the author will be writing in, what medium, etc. It becomes apparent that signifiers can be used in so many ways that a signifier has no meaning until it is placed in a larger context. Signifiers can be grammatical, questionable, or ungrammatical, just like every other rank. In this context, all the symbols are functional, even if they are ungrammatical; they meet my educational purpose. I ask the students to create a set of signifiers that fits into each of those categories to see how easy it is (see Fig. 92 for examples).

Finally, we discuss how each signifier is a limited and specific collection of lines, curves, and dots. The writer restricts the reader to see each collection as a separate letter by surrounding it by space even though it is a really small space at this level. Even in cursive where the letters are joined, they are joined in specific ways so that the reader can be sure of the letters' boundaries. Punctuation shows the reader what to join together and what to keep apart.

Seeing the Signs

To see signs, students do an activity similar to the signifiers. Students grab their textbook and look for groups of signifiers that are functioning together. The words are easy to find, but they may need a little prompting to see the non-linguistic groups that are consistently present in any printed text, like page numbers, dates, chapter headings, citation information, etc. Then, we discuss how well a reader can predict what a sign will mean if it is removed from its larger context. I ask for a common word and have students write a sentence that uses it. We compare if anyone used it in the same sentence (certainly no) or in the same grammatical function (possibly). I project the word's many dictionary definitions to show that a sign has a much smaller range of possible meanings than a signifier, but every sign still means too many things to be predictable.

Next, the students analyze the unconscious features of the reading process. Using the first short writing assignment of the semester, I have students trade assignments and time themselves reading their peers' essay, which takes less than a minute since it is only about 300 words. Then, we discuss the details of that experience. Since they have never seen this piece of writing before, they can't simply remember any of the sentences, though they have a history with nearly all of the words. Their brain must be processing this particular set of sentences somehow. Since we just proved that signs and signifiers have no set meaning, we discuss how impressive it is that the brain can learn anything from thousands of unique signifiers arranged into hundreds of unique signs, none of which have any completely predictable meaning of their own. Not only can the brain make meaning from all those various parts, but it can make (relatively) the same meaning that the author intended.

Then, like the writing assignment, students are challenged to see all the unconscious features of reading. They are challenged find overt physical features that take no conscious processing, like moving their eyes from left to right, word to word, line to line, etc. Then, they are challenged to see the unconscious covert processes, like determining which of a word's many meanings is present in that particular sentence. They may have never seen a sign before, like a person's name, but they can still often get its intended meaning just from seeing the right punctuated form in the right context. Reading is an impressive and largely unconscious process that uses many patterns that the reader may never have noticed at all. This includes punctuation, which effective authors use consistently. The reader may not notice the patterns or be able to replicate them, but their brain definitely notices and uses every symbol.

Next, students create some grammatical, questionable, and ungrammatical signs (see Fig. 93). Again, the discussion covers how even a completely ungrammatical sign is functional in this particular context, even though it may not be functional in almost any others. Context must always be considered.

Grammatical signs	definitely	(10)	May 2, 2018
Dubious signs	definately	(10)	May,2 2018
Ungrammatical signs	defFinitelee defFinltely dfenniittly	)0I(	Amy, 8I 201 2, 2018 mAy 2, 2018

Fig. 93 The grammatical range of signs

Finally, like signifiers, we discuss how a word is composed of discrete signifiers and it is a discrete group, too. The reader is restricted to consider each set of signifiers are different words because of the space or marks surrounding them. Restriction always speeds up the brain's ability to see a meaningful pattern. If the spaces or marks are in the wrong place, then the brain has so slow down and do the reassembly on its own. Students

create short texts where the spacing is misplaced into the center of words to see how much this damages the text, even if all the letters are in the right order and form.

Starting to See Real Grammatical Action

The ranks of signifiers and signs are easy for students to recognize and experiment with. Students have lots of life experience with these ranks, and they understand the systems that these ranks fit into. The next two ranks—constituent and clause—are far more difficult in the beginning, but they are just a pattern, too. To help students to begin to see that pattern, I have them play the following game: I create color-coded flashcards that have collections of articles, nouns, adjectives, and past tense verbs. I break the students into teams of about 3-4 and hand them a stack of randomly shuffled cards. In teams, they race to perform the following challenges:

1. Draw seven cards and lay them out in the order they were drawn like a sentence.

2. Decide if the series is grammatical or ungrammatical.

3. Decide how many words into the series it became ungrammatical.

The game is timed at 3 minutes. The goal is to see how many series they can create, while a scorekeeper keeps track of how many attempts, how many were grammatical/ungrammatical, and the average number of words it takes to know the group isn't grammatical.

Students quickly see that almost no random collection of words is grammatical, and they can distinguish that in just a couple of words. Even with 25 people playing the game, it is rare to have more than one or two randomly drawn, fully grammatical series. Then, I ask them to draw and place the cards in color order (which is keyed to the kinds

of words that they are) to see how many grammatical clauses they can create. They quickly realize that they may make some improbable sentences, but if the right kinds of words are in the right order, they will always be grammatical.

I give out a constituent map and have them fill it in, using the color coding and common sense as a guide. Students are reminded of the terms *subject, verbs,* and *objects*, as well as reminded of their basic functions. When I have them look at the cards in front of them, they can easily see that a whole group of words is working together in those roles. The map makes it easy to decide where to place the words.

Since students don't have to break the groups down any further, they can easily find and label these constituents on the map. Students are encouraged to play with the words to see what can move, and it becomes apparent that the subject and object can trade places, but the verb stays in the center. The language has a clear pattern that they know very well, even if they have never noticed it before. With sentences this simple, it is easy for everyone. I encourage them to make other sentences using their own combinations of words. Then, I explain the other categories: conjunctions and circumstances. They are encouraged to add them into the sentences, too. Students find this easy, and their sentences show it. They are almost always simple sentences with action verbs that rarely have more than 10 words total.

Then, as expected, they write some grammatical, questionable, and ungrammatical constituents (see Fig. 94). While the constituents can be reordered a little if a writer is willing to sound like Yoda, the grammar doesn't let the elements move much. Again, it's impossible to tell if these pieces would be functional anywhere else, though they are functional here.

In terms of restriction, students can see that the whole constituent group has to stay together to make sense. If they break any of the pieces off, then the whole group isn't meaningful any more. Class discussions focus on how punctuation creates or disrupts these groups. The constituents are bound together by

Grammatical constituents	the elegant bride	will be going	down the aisle
Questionable constituents	the bride elegant	going will be	???
Ungrammatical constituents	elegant bride the	going be will	aisle the down

Fig. 94 The grammatical range of constituents

space, and the clauses are (often) separated by punctuation marks. Placing a mark in between the constituent creates ungrammatical groups.

The constituent map makes the break between the clauses apparent, although students can easily see the same thing by playing with the words. They can make separate clauses but without conjunctions, they can't link them together. The clauses stay grammatically independent from one another because they are in a non-restrictive relationship, where the constituents are in a restrictive relationship.

Grammatical clauses	the girl bit the dog
Questionable clauses	The girl the dog bit.
Ungrammatical clauses	dog the girl bit the

Fig. 95 The grammatical range of clauses

The clause is the first linguistic rank that cements the grammatical function of each signifier, sign, and constituent. Once the reader knows how all the words are related to one another within the clausal structure, it would be possible to look up a shared meaning in a dictionary, for example, and be reasonably sure that the writer and reader find the same one. As they begin to play with the constituents, students can see how grammar is holding different words into a grammatical place.

Then, like the rest of the ranks, they make some grammatical, questionable, and ungrammatical clauses and discuss how it is impossible to tell their functionality without placing them into the larger context (see Fig. 95). Every clause is functional in this exercise, even if many wouldn't function well other places. Further, the writer uses space and marks to show what is restrictive and non-restrictive. The words in the clause are in a restrictive relationship; they cannot be moved or removed, so they are surrounded by no punctuation besides space. Each clause (at least in this simple game) would have to be in a sentence by itself. They aren't grammatical if they are mashed together. Because of that, the writer would restrict the reader to consider them as two separate ideas by punctuating them with marks and fonts that show they are separate sentences. Predictably, students create some sentences with misplaced punctuation to see how misplacing the clausal boundaries with punctuation makes reading difficult, even with all the right words in the right order.

If Only It Stayed So Easy

Up to this point, the exercises seem quite easy because they are quite easy. A native speaker and an advanced language learner has little trouble seeing the pattern of simple clauses, especially when they have concrete subjects and objects with action verbs. Then, I introduce some difficult clauses and ask them to diagnose the pattern in those.

- What I meant to say is that I'm sorry for stealing your car.
- The ninja who attacked us with a throwing star and a kick was actually my neighbor.
- Never live a boring day was the motto that she lived by.

Students are rightfully bewildered by sentences like these. They certainly don't fit the *who-did-what-to-whom* model. Each sentence has a complex subject that seems quite clause-like on its own. The verbal process group is a linking verb (i.e., is, was, was), which doesn't fit the verb's typical definition as an action. There are words that do seem like actions (i.e., meant, say, attacked, live,) but those actions aren't what the sentence is about. As might be expected, students rarely have trouble punctuating simple sentences, but they often have trouble punctuating the complex ones.

The next step is to have students apply the same concepts to their own writing. It seems so easy (and is so easy) to break apart color-coded, simple clauses with active verbs and concrete participants. But students don't write color-coded, simple, concrete clauses. They are highly sophisticated, highly fluent writers who create sentences of immense complexity. Often, their high proficiency with the spoken language creates lots of challenges with its written form.

Students look at their own drafts from their most recent assignment, and I ask them to put their clauses into the constituent map. Many students are quickly overwhelmed. They find that they write very complex sentences that don't look at all like the pattern that they filled in so far. All students find some sentences that they can't map, and they always find weird things they didn't know they wrote. Some students struggle mightily as they find many unmappable and undecipherable sentences.

Through my surveys and observation of student writing habits, this is not because struggling students have a lot less explicit grammatical knowledge or because they write ungrammatical words. It is generally because struggling students often write far more complex sentences than their more eloquent/more simplistic peers. For example, some

students write sentences with infinitely complex subjects, serial verbs that stretch out with individual long objects and circumstances, and five or more clauses into a single sentence. These will be far more challenging to map and far more challenging to punctuate correctly. In contrast, some writing is easy to map because the writing is more polished and its elements are more concise. The pattern is easy to discern. In some cases, a writer may easily map their sentences simply because the pattern is repetitive and lacking in content.

Students take a draft of their writing and use different color highlighters to show the restrictive and non-restrictive groups that their punctuation creates. Essentially, they just highlight between each mark, trying to ignore series, quotes, or other internal punctuation. This is necessarily imprecise and fast. They study their texts and the texts of their peers to see how the groups are functioning. Essentially, it becomes clear that some groups of words work well together, and other groups are clearly missing pieces, have extra pieces, or are just unintelligible on their own.

As a group, we look at some sentences with flagrantly mistaken punctuation that is either misplaced or uses an unconventional mark. We can discuss how he brain can discern patterns that have no conscious explanation, and every reader has seen all the marks at least thousands of times. The reader relies on punctuation to set clear boundaries. Each punctuation mark, like each word, has defined meanings and limited functions, even if neither the reader nor the writer can explicitly explain what that meaning is. Intuition is great for reading, but insufficient for writing, so the rest of the course aims to make their writing habits explicit and provide concrete tests that can help them write/edit conventional texts every time.

Clauses as Linguistic Cement

A clause is a structure that grammatically sets all the signs, signifiers, and constituents in place and function. In a well-constructed clause, almost nothing can move to other places within the clause without greatly disrupting or destroying the meaning. Because a clause grammatically fixes all the pieces into place, the clause can move to different places within the same sentence or it can be removed from a sentence altogether without damaging the grammaticality of the other clauses.

Students tend to remember that clauses should be *complete* or *independent*, but they have a difficult time expressing anything substantial about what that means. Some remember that they need a subject and a verb, but as discussed in my results section, most students can't find either in their own writing. The definition of a clause needs a lot more clarification. Grammatically complete means that a native/fluent language speaker would think that a set of words sounds acceptable. It doesn't seem like it is missing pieces, has extra pieces, or has been arranged in an ungrammatical order. Unless an English speaker is interrupted, they will speak in grammatically complete clauses, even if those clauses don't convey a whole message by themselves.

Students look at a presentation of grammatically complete and incomplete clauses, like the ones below:

- *no*
- *of course*
- *on a dark and stormy night*
- *if you promise not to break it*
- *because I wished that I could hide forever*

- *she never even loved him at all*

- *I never said I would show up at your wedding*

- **of*

- **if you*

- **if you promise not*

- **on a dark and stormy*

- **she never even*

- **I never said I*

Students are encouraged to play with this concept in class and in homework. One simple way to do this is to have them look at their recent text messages and perform a count of the last twenty in any conversation. They are instructed to count how many seem grammatically complete versus how many are incomplete. They are welcome to count an emoji as a complete message if they think it conveys an understandable message. For most students, nearly all of the messages are grammatically complete with a few uninterpretable messages tossed in there.

Then, they are asked to do a different count on the same texts. They are asked to compare how many seem to convey a complete message (defined as a message that describes who is doing what to whom) and how many seem to incomplete. For most students, this rating is about 60/40. Then, we discuss how, regardless of the medium, English speakers almost always speak/write grammatically complete word groups, even if they aren't the traditional definition of *complete.*

The text message exercise helps lead to the next big point: A speaker can say grammatically complete groups of words that are missing some vital constituents. These

utterances will sound normal to an English speaker, and both participants will communicate just fine. The same expression in writing can cause problems for an English reader, though. Academic and professional writing requires that the writer provide all the essential pieces of information, not just a grammatically complete expression. For many writers, this distinction can be really hard to make, especially as they start to write the complex sentences of academic writing.

Next, students are asked to compare their text messages against their essay to see just how much more complicated they make their sentences when they write for an academic audience. They look at things like sentence length, complexity, word choice, punctuation choices, etc. The differences are easy to see. Each sentence in academic writing tends to be far more complex than their texting. That means there are a lot more choices about everything, and it becomes harder to compose as the number of compositional elements grows.

More to the point, just having a grammatically complete set of words is no longer enough. What seems complete to a student may not seem complete to their college professor or their employer, and this learning system will students to see the difference. For many people, the only way to find out if they wrote SEAE-approved sentences (not just grammatically complete words) is to guess. They use their intuition to write their best sentences, but they have no way to test if the sentences are working. The only way they find out if they were right is to hand their writing to someone else and let them judge it. No one likes being judged, especially when they can't figure out how to improve their results.

Showing the Pedagogical Target

As has been discussed at length, the reason that students learn the whole rank scale of language is so that they can compose and/or edit clear, concise, and conventional sentences that have all the essential pieces (see Fig. 96):

1. Each sentence should contain at least one essential clause.

2. Each sentence should contain any modifications to that essential clause.

3. The writer should use conventional punctuation choices (including citation punctuation) to make the restrictive and non-restrictive clausal boundaries and relationships clear.

4. The easy part: Each sentence is punctuated with a capital letter at the beginning and terminal punctuation (a period, question mark, or exclamation point) at the end.
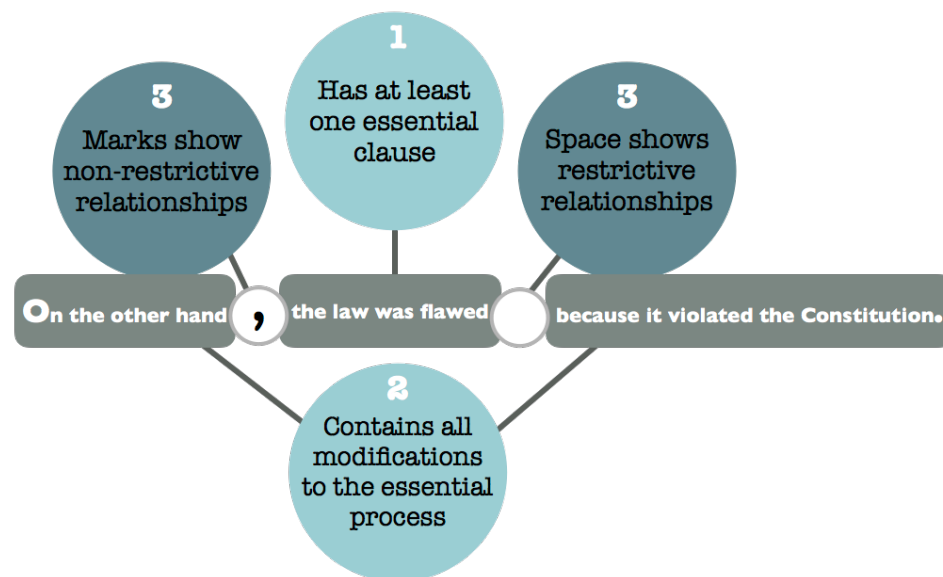

Fig. 96 The Anatomy of an SEAE-Approved Sentence

At this point, it's important to make it clear to the students that they aren't supposed to have all this knowledge yet. A college course is expected to introduce new concepts and explain them well. A writing course has lots of advantages over other disciplines because students are already such proficient writers; this material will help them to name what they know and leverage their prior knowledge to create even more effective writing.

To test a sentence's conventionality, a writer should be able to perform the following tasks on their own writing (see Fig. 97):

1. Find the clauses within each sentence

2. Identify the constituents of each clause

3. Distinguish between an essential and a modifying clause

4. Determine if the clauses are in a restrictive or non-restrictive relationship

5. Gather an essential clause with all its modifications into the same sentence

CRITICAL SENTENCE-BUILDING SKILLS

1 FIND THE CLAUSES
Clauses are grammatically complete groups of signs. To know if you found the right clausal boundaries, hide it and look at the remaining words. They should sound grammatical and complete.

2 IDENTIFY THE CONSTITUENTS
Each clause may have four different constituents that perform different functions. Use the constituent map to help you see what constituents you have. If the constituents are hard to find, the sentence is hard to read. Consider rewriting it!

3 ESSENTIAL OR MODIFYING CLAUSE?
An **essential** clause has a subject group, verbal process group, and doesn't start with a conjunction/question group.
A **modifying** clause has a no verbal process group or starts with a conjunction/question group.

4 RESTRICTIVE OR NON-RESTRICTIVE?
Restrictive: Two clauses that give one elaborate idea. No punctuation marks separate them.
Non-Restrictive: Two clauses that give two separate ideas. Separate with punctuation marks.

5 GATHER THE PROCESS + ALL MODIFICATIONS
Each sentence should contain one essential clause and all its modifications. Look at how the clauses are related to see if they should stay in one sentence or move to another.

6 USE PUNCTUATION TO SHOW CLAUSAL RELATIONSHIPS
Choose conventional punctuation strategies by using the visual resources. Every mark and space has meaning. Choose the right one!

by Amy Brumfield

Fig. 97 The critical sentence-building skills

6. Use conventional punctuation strategies to show the clausal relationships, including removing excess punctuation that disturbs the clausal structure and adding beneficial punctuation

When writers can perform each of these tasks, student can be assured that they are writing SEAE-approved sentences. This system can't tell them what to say; that is still up to each writer. The system can just help them to gauge if they have all the right pieces in the right places to communicate with a sophisticated, highly educated reader.

The Constituent Map

The constituent map is designed to help students to perform each of those critical sentence-building skills. Students are encouraged to use the map during in-class exercises to understand its categories, but the map is most useful if a student writes an essay draft and then maps the draft. If students write into the map first, they tend to write simple sentences, which may or may not resemble anything that they usually write. If students create a draft before using the map, then they can see the writing that they normally produce and are likely to produce again. Because of this, I recommend waiting to introduce the map after the first edited essay of a semester, so the student has some of their typical writing style before the pedagogical intervention. The overall goal is to teach students to edit the sentences they naturally write, gradually developing their writing habits to replace ineffective habits with more effective ones.

Students should be given lots of low- and no-stakes opportunities to practice the map since it will be challenging at the beginning. Every homework assignment has them experiment with these ideas. My typical homework assignment has students read the

published text that we are studying. That text is usually divided into thirds. After reading the text, students perform the following tasks:

1. Create five conventionally punctuated quotes for one section

2. Create five conventionally punctuated paraphrases for one section

3. Write a conventionally developed summary for a section

4. Create a complete thesis (topic, viewpoint, and reasoning) for each section

5. Respond to the reading with at least 200 words

6. Map that response

7. Give at least one sentence that was hard for them to map (which I then integrate into class presentations)

This assignment model gives lots of opportunities to practice citation punctuation, which is complex and needs a lot of practice to master. It helps students to actively read, and it gives lots of ways for me to give commentary to help students to see repetitive mistakes at every level. Because these assignments are generally pass/fail, students can make mistakes without penalty.

In class, I try to do about 20 minutes of work on sentence-level construction throughout each class period, using a wide range of activities. I use student examples whenever possible, usually by pulling anonymous examples from the homework. We also compare student structures to the published examples, looking at different features like point of view, active/linking verb, dependency length, etc. These activities tend to help the more proficient writers to master this set of ideas. The students who struggle the most almost always need some personal intervention, where an instructor helps them to see their unique patterns.

My experience shows that a graded exam is necessary to prompt struggling students to ask for help and clarification. Many are willing to be confused in private rather than put their ignorance on display. The pressure of an exam pushes some to get help. A surprising number are willing to fail the exam and then ask for help after, especially when I point out that they will repeat the exam on each of the remaining essays.

To link this set of ideas to their writing, students map a copy of their essay as a graded exam. The class workshops an essay on the larger structural pieces, like thesis development. Students are encouraged to revise the draft. Then, the exam asks them to map the revised draft. They have 48 hours to complete the map. I am available by email or appointment to answer questions. If students feel confident in their mapping, they can turn it in online. If not, they can come to the regularly scheduled time where I am available to answer any questions. If students are in the P section, they have an additional hour of help. The first exam just tests on their ability to map the constituents correctly and determine if each clause is essential or modifying. The subsequent exams ask them to complete the punctuation portion, too.

The final draft of the essay is graded on some level of proficiency with these concepts to encourage them to use the map to polish their writing. The first mapped essay requires that every sentence has an essential clause, that the sentences are grammatical, and that any citations are conventionally punctuated. The subsequent essays additionally require that the punctuation is conventional and placed correctly.

Below, I have listed pedagogical strategies for teaching all of the essential skills for building a conventional sentence in SEAE. I recommend that instructors invest some

time in each step individually, but I don't recommend waiting for mastery of any before moving onto the next. The point is to help students to see the patterns of their writing. That is very hard to do from any tightly focused perspective. Lots of varied experience works better and is less discouraging than persistence on one small point.

Step 1: Finding the Clauses

The map is designed to help students to find their clauses and constituents, and they often can't be sure of the boundaries of either until they are mapped. This is especially true of embedded restrictive clauses, which tend to confuse a lot of students. Students are given a packet of handouts to help them identify the constituents (see Appendix C for the handouts that are not included in this dissertation), but they are encouraged to look for the clausal boundaries in each sentence first. That gives students a more finite group to try to map.

For many sentences, the clausal boundaries are easy to find. A student can just trust their grammatical skills to see where one idea becomes another. Rather than trusting their intuition, though, it is better to test the clauses. A clause is a grammatically independent constituent or group of constituents. To put that in a simpler way, the clause has to sound grammatically complete without borrowing any words from the clause before it or after it. If the clause is removed from the sentence, the rest of the words sound grammatically complete, too. So, the easiest way to find out if the clausal boundary is in the right place is to move it around and see if there are grammatical groups on both sides. (Ungrammatical groups are marked with an asterisk.)

The man hates | *me I hate him back.

The man | *hates me I hate him back.

*The man hates me I | *hate him back.

While it is grammatically possible to say *the man hates* or even just *the man*, the rest of the sentence is ungrammatical. No fluent English speaker is likely to say just those words together. The words on both sides of the break have to be grammatically complete, so those can't be the right clausal boundaries.

Granted, that sentence is pretty easy. It gets harder when the clauses are not as concrete, like many of those in academic reading. The following example has two clauses, but its break is not as easy to find as the earlier examples:

> *In terms of the implications of the Web on journalism and its communities of consumption much has been written that is based on more speculation than empirical evidence.* (Conboy 215)

As confusing as this sentence may seem, the students can follow the same procedure. They should test the boundary and look on either side until they have something that seems grammatical on both ends. In extensive sentences like this, it is easier to hit enter between the lines so that the difference is more pronounced. If students are looking at a printed text, then literally cover one side or the other with a piece of paper. It is possible to go word by word.

*In

*terms of the implications of the Web on journalism and its communities of consumption much has been written that is based on more speculation than empirical evidence (Conboy 215).

*In terms

*of the implications of the Web on journalism and its communities of consumption much has been written that is based on more speculation than empirical evidence (Conboy 215).

That strategy possible but only recommended if a student is completely bewildered. Instead, they should look for the first break that makes a grammatically complete group on the left, hit enter (or just cover the first possible clause) and look at what remains (see Fig. 98).

In terms of the implications

* of the Web on journalism and its communities of consumption much has been written that is based on more speculation than empirical evidence (Conboy 215).

In terms of the implications of the Web

* on journalism and its communities of consumption much has been written that is based on more speculation than empirical evidence (Conboy 215).

In terms of the implications of the Web on journalism and its communities of consumption

much has been written that is based on more speculation than empirical evidence (Conboy 215).

Fig. 98 Breaking a text to find its clausal boundaries

Step 2: Mapping the Constituents

As mentioned in the previous section, the map's pedagogical goal is to help a student to test their own sentences, which means they also have to be able to test how they filled out the map, too. While the instructor will almost certainly have to help with this process in the beginning, a student needs to be able to see if they are labeling parts

effectively without needing an expert to verify their results. This is easier than it may seem.
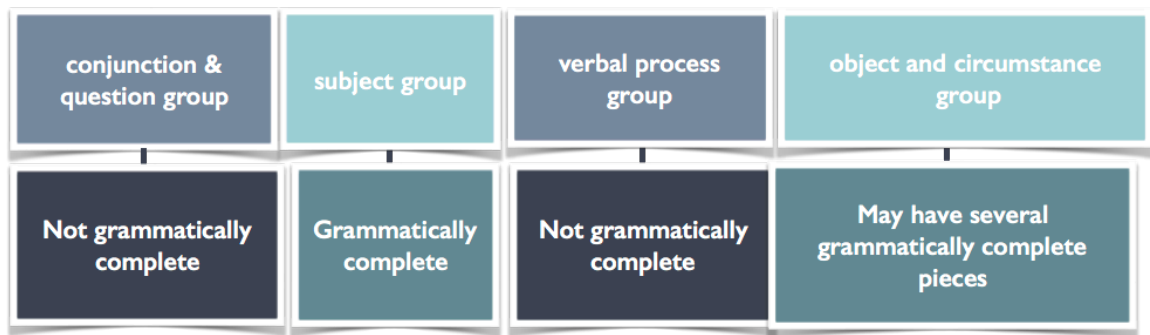
Fig. 99 To test constituents, look at which are grammatically complete

As Figure 99 notes in its lower boxes, the CQG and the VPG are not grammatically complete. Both constituents create links between other constituents, rather than conveying whole ideas or images. The CQG links two different clauses, and the VPG links the SG to the OCG (if there is one). In contrast, the SG and the OCG are grammatically complete, though a OCG may have several grammatically complete pieces. These two categories will sound like something that it is possible to say in a normal conversation. As I explain it, the students can test something's grammaticality by thinking of a question that might use that constituent as an answer.

There aren't many questions that could be answered with a conjunction like *yet* or *as well as*. I could ask, "What is your favorite conjunction? As well as." Beyond a question like that, a conjunction will always sound incomplete because their function requires them to be connected to other words. The same is true for a VPG. If I look at the VPGs of this paragraph (aren't, could ask, will always sound, requires, is), none of them sound complete on their own.

On other hands, the SGs and OCGs could answer lots of questions and sound grammatically complete, even though it is a little strange to strand them out by

themselves. *Where did it happen? There. Who did that? I. What is it? A conjunction. What is true? The facts of the matter. When did it happen? On a dark and stormy night. How did that happen? Slowly and painfully.* The questions are useful to make the teaching point, but it is easiest just to look for weird words at the end of any SG or OCG that imply more words should follow. If it ends with an odd word like *the* or *who*, then chances are that the constituent boundaries are incorrect.

To test the constituents, it is helpful to cover up all the columns but one. Then, scan down one column at a time looking for grammatically complete groups. If students find a grammatically incomplete group of words in the SG or OCG or a grammatically complete one in the CQG or VPG, then they need to reexamine the constituent distribution. This can be done as a class activity. I have students bring an anonymous map, and we pass them around looking column by column. Students scan the columns quickly, marking any odd constituent that they find. They see that they can easily scan a whole paper's SGs, for instance, in under a minute or two.

After scanning the columns for strange groups, then students perform the same task line by line. Each clause/line should sound grammatically complete. Again, I have students pay close attention to the last words of each clause to see if more words are expected after it. If so, then the student should look at the next line to see if all of the words are actually in the same clause and move them into it. If they can't tell, the clause just needs to be rewritten more clearly. Students do this as a class activity, too, helping each other to see what clauses are strange or well-composed.

As the course progresses, we do these same kinds of activities to see more rhetorical features. For example, the class will examine all the SGs to see if the point of

view stays the same or examine the VPGs to see if the time frame is shifting erratically.

They fold the map so that the VPG is hidden, comparing how the OCG in one sentence is

linked to the SG in the next to see coherence. Throughout this process, they realize that a

big block of text hides a lot of issues that the map makes apparent.

Step 3: Determining the Clausal Type

Once the writing is mapped, it is easy to determine the clausal type. The writer

simply needs to look at which boxes are full and empty, with the handouts to help them

(see Fig. 100 and 101). As with learning any new vocabulary, it takes a lot of serial

practice to make the terms and diagnostic process automatic. Students should have lots of

opportunities to hear the terms, practice the concepts, and have immediate feedback if

they are correct or incorrect. This step should be embedded in as many class activities as

possible, even after it seems like students grasp the concept. The pedagogical goal is

automation, not just understanding. If the writer can automatically find and discern the

clauses (like their instructors can do), the brain can devote more cognitive energy to

larger concerns.

Essential Clause

1. Has a grammatically possible subject group working with a verbal process group.
2. Does not start with a conjunction.

Clause	Conjunction or Question Group	Subject Group	Verbal Process Group	Objects & Circumstances Group	E or M	Mark
1		There	is	no reason to try that twice	E	.
2		The old woman in the sweater	was slowly walking		E	.
3		The woman who was walking her dog	never appeared	to notice other people	E	.
4		Walking her dog	seemed	to make her happy	E	.
5		To walk her dog	made	her happy	E	.
6		You	shouldn't touch	that	E	!
7		(You) assumed subject	Don't touch	that	E	!

Fig. 100 Seeing an essential clause

Modifying Clause

Has no verbal process group © 2017 AMY BRUMFIELD ALL RIGHTS RESERVED

OR

Starts with a conjunction or question group

Clause	Conjunction or Question Group	Subject Group	Verbal Process Group	Objects & Circumstances Group	E or M	Mark
1			X	Because of a lack of interest	M	,
2			X	For instance	M	,
3			X	To put it another way	M	,
4	Even as	the neuroscientist	presented	her findings at the conference	M	,
5	Why didn't	the neuroscientist	present	her findings at the conference	M	?
6	Are	some spouses		more likely to cheat	M	?

Fig. 101 Seeing a modifying clause

Step 4: Restrictive and Non-Restrictive

The constituent map can also help students to see what is restrictive and non-restrictive. At each level, it encourages students to decide what should stay together and what should stay apart. By scanning across each clausal line, they can see if extra punctuation is breaking up critical relationships or if it should be added to reinforce separate ideas. After students have created each map, they should be encouraged to look at what groups have been created and modify them as needed.

Step 5: Gather the Essential Clause and Its Modifications

Each SEAE-approved sentence should have an essential clause and contain all the modifications to that essential process. Once the clauses are mapped, students should spend some time looking at each meaningful group of clauses. They are encouraged to circle the sentences, obviously checking that each sentence contains at least one essential clause and gathering all the related clauses together. Each modification should be logically related to the main process of the sentence, so the students can look at the VPG and see if any modifying clause is adding to or limiting that process. If it isn't, it should be removed to another sentence or be edited into an essential clause of its own. Writers should also look at how many clauses are gathered together in order to determine if some information would function better gathered into one related sentence or separated into several sentences. Then, students should compare their map to their original draft to see if the clauses are gathered into the same groups.

Step 6: Use Punctuation to Show Clausal Relationships

Each piece of punctuation is rhetorical. The reading brain expects it to signify certain relationships. I created the visual punctuation resources to help students to choose the most conventional mark for the clausal relationships that they discover.

Introducing the Punctuation Resources

Before I introduce the punctuation resources, I'll give a brief history of how I created them. When I first began this project, I assumed that I would organize the grammar rules into a more coherent system. I created multiple spreadsheets from all the rules in Maimon's *A Writer's Resource*, Strunk and White's *The Elements of Style*, and wide range of grammar websites and popular grammar books. I was trying to find a logical framework that could tie the whole system together. I spent a year failing at that task, but it did give me a deep understanding of the rules that are continually rewritten into different texts.

I shifted tactics to studying punctuation's rhetorical functions. I created a set of visual resources that could show (rather than just tell) students how the visual punctuation system was interacting with their clauses. I handed the resources to students, and then I studied their essays to see if they made mistakes that could have been prevented if the resources had been applied. Most often, the answer was no. Students are infinitely more creative than any collection of rules. Whenever a punctuation situation confused me or my research had shown contradictions, I researched other punctuation-focused sites searching for consensus. I found the following websites to be useful resources:

Quickanddirtytips.com (Grammar Girl)

Grammarly.com

Grammarbytes.com

Grammarbook.com

Thepunctuationguide.com

Theoatmeal.com

Oxforddictionaries.com

Grammar.ccc.comment.edu

*Purdue Online Writing Lab (*https://owl.english.purdue.edu/owl/)

Wikipedia.org

Sometimes, I could find that everyone agreed or at least that the majority held a particular belief. Other times, there were heated debates with opposing camps. Grammarians are not timid or reserved in their entrenched views. They are often willing to defend their positions at length, so I use these sites to get a clearer explanation of grammatical principles. I also consulted the Corpus of Contemporary American English, looking for popular usage, which shows that many writers ignore the heated grammarian debates and prescriptivist rules and still use the punctuation system effectively. Altogether, I have spent about six years refining these documents. I still make changes as the need becomes apparent.

Overall, students report that the visual handouts are far easier to use than the grammar rules. To be clear, I am not trying to prescribe how the punctuation marks should be used; the resources just show how the marks are conventionally used in SEAE. Students are encouraged to study the conventions of the conversation they are attempting to join and use those conventions instead. SEAE is just one grapholect among many, and

they should now have the skills to analyze any grapholect to see how it uses non-linguistic signifiers.

Teaching the Handouts

It is useful to teach students how to use these handouts. I usually break the students into teams of 2-3. I project a sentence, have the students find the clausal break, and diagnose the clauses. Then, I have them race to find the clausal combination handout and pick the mark that fits the rhetorical situation best. It sometimes sparks interesting discussions and debates, but most of the time, the answer is clear. I do this in lieu of covering every single punctuation aspect in class, largely because it takes a lot of time without a lot of gain. If the information isn't applied, there is little use in just saying it out loud. Students really learn these concepts by applying these ideas to their own writing. They fill in the constituent map completely in about a dozen short homework assignments and in drafting workshops (they map three full drafts), which helps them naturally memorize the concepts that they use a lot. The rest can just be accessed as they need it.

Finding the constituents and clauses is the hard part; placing the punctuation becomes fairly easy after that. As I frequently remind them, this set of resources just shows how a majority of authors have chosen to use these marks. The writing system can adapt to any writing situation, and the writer is always allowed to use different choices if it accomplishes their purpose better than the standard choices.

It is well worth knowing what most people do; conventions are usually in existence for a reason. Like Anne Curzan argues, prescriptivism does have some merit. Grammar guides, style guides, Microsoft Word's autocorrect feature, and endless blog posts repeat

much of the same information because sentences are easier to read if the writer can apply (most) of the concepts (5). Sources like guides and a computer program should never be accepted without scrutiny and challenge. Neither should the advice in this dissertation.

Ultimately, the writer must look at their individual writing situation and determine if the punctuation makes the text more functional or not. Remind students that writers must make choices that follow or do not follow convention, but writers don't have to make informed choices. Often, they choose to break convention simply because they don't know a better choice. This system does not prescribe that choice; it just helps them to make informed choices with a more predictable outcome.

With the clauses mapped and gathered, students can use the resources to see conventional punctuation choices for each clausal combination. If there is only one essential clause, it can be punctuated as a sentence. If the map shows just one modifying clause, the writer should ask themselves if this fragment is achieving their rhetorical purpose or if it should be joined with the sentence before or after it. It might just need to be rewritten.

If there is a sentence with multiple clauses, the writer can look at the clausal map and find the right combination (see Fig. 102). After that, they can look at that Clausal Combination sheet with that particular combination to find the conventional punctuation strategies. They can pick the most rhetorically effective and conventional choice and place that mark on the clausal border.
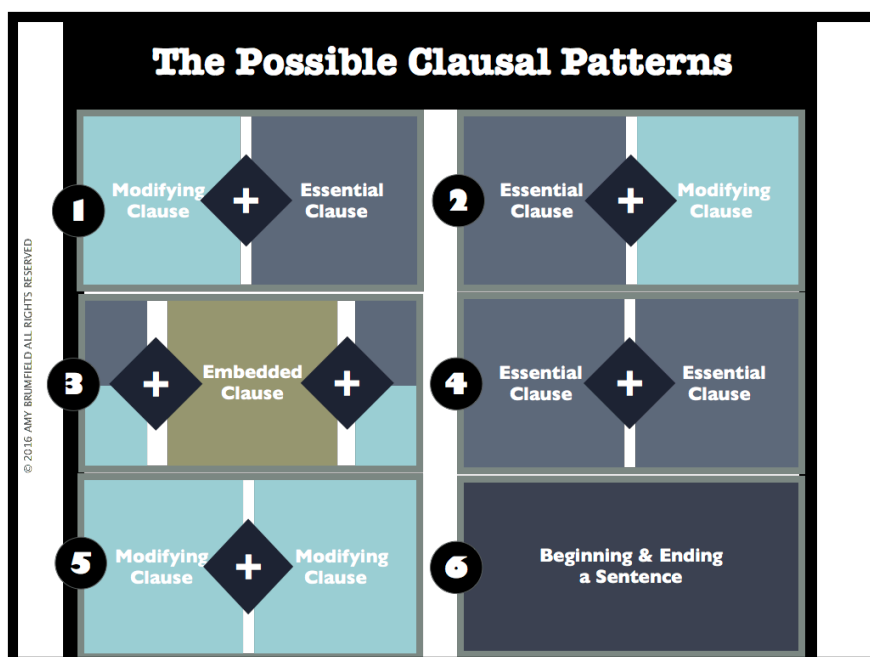
Fig. 102 The key to the punctuation handouts

For example, in Fig. 103, they have a modifying and an essential clause, so they would use Clausal Combination sheet #1, along with its companion that has more examples and explanation.
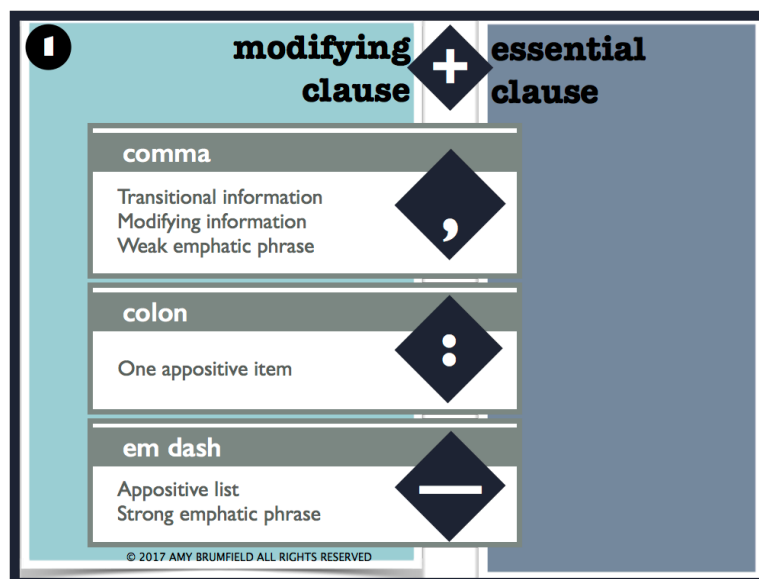
Fig. 103 The punctuation options for modifying + essential clauses

If they want more information or examples, they can look at its more detailed sheet (see Fig. 104):

Fig. 104 The extensive resource for modifying + essential clauses

Clearly, the other clausal combinations work in the same way and have similar resources. Please see Figures 105-113 for the rest of the sentence-level punctuation resources.

2 essential clause + modifying clause

**Comma**
Add emphasis and clarification, Appositive without punctuation

Em Dash
Strong emphatic phrase
Radical change of direction, Appositive with punctuation

Colon
Modifying clause explains, defines, or gives example of essential clause

Conjunction
The clauses are dependent upon each other for meaning

Comma and Conjunction
Conditional information that could be moved or removed

Fig. 105 The punctuation options for essential + modifying clauses

2 essential clause + modifying clause

The modifying clause adds emphasis and clarification to the essential clause

She loved him / She loved him — too. / to a certain extent.

The modifying clause is an appositive (restatement) of the essential clause

I miss my high school best friend / I hate sitting beside my brother — Elaine. / the messiest eater of anyone I have ever known.

The modifying clause explicitly reinforces the message of the essential clause

She stole all of the retirement funds / The reverend was charged with embezzlement — all $124 million of them. / embezzlement!

Emphasizing that the modifying clause is a radical change of direction

You might think that it will happen again / He gave his money to charity — not the slightest chance. / but only after the indictment.

Appositive with Punctuation

I hid from all my aunts / I rewatched all my favorite movies — Kathryn, Judy, and Gloria. / Fight Club, The Matrix, and The Lord of the Rings.

Modifying clause explains, defines, or gives example of the essential clause

I hid from all my aunts / I rewatched all my favorite movies : Kathryn, Judy, and Gloria. / Fight Club, The Matrix, and The Lord of the Rings.

The clauses are dependent upon each other for meaning and aren't separated with a comma; watch for the conjunctions *because, that, and or.*

I hid from all my aunts / I stole all the retirement funds — conjunction — because they always ask why I am single. / that people had relied on.

Modifying clause contains conditional information that could be moved or removed from the sentence

I hid from all my aunts / I rewatched all my favorite movies — , conjunction — which didn't matter. / even though I was out of popcorn.

Fig. 106 The extensive resource for essential + modifying clauses

Fig. 107 The punctuation options for embedded clauses

Fig. 108 The extensive resource for embedded clauses

4 essential clause + essential clause

Semicolon
Intimately connected and often balanced

Colon
The second clause explains, defines, or exemplifies the first

Comma and Quotes
Using someone else's whole sentence

Fig. 109 The punctuation options for essential + essential clauses

4 essential clause + essential clause

Two essential clauses are intimately connected in meaning, often balanced in length and form, and have no conjunction in between them.

She loved him — he loved her money.
I didn't leave him any money in my will — he simply doesn't deserve it.

The second essential clause explains, defines, or gives an example of the first

I have a motto — Seek discomfort.
She had alien hand syndrome — Her two hands had conflicting desires.

The first essential clause introduces an entire sentence from another

David Eagleman says — "Ours is an incredible story."

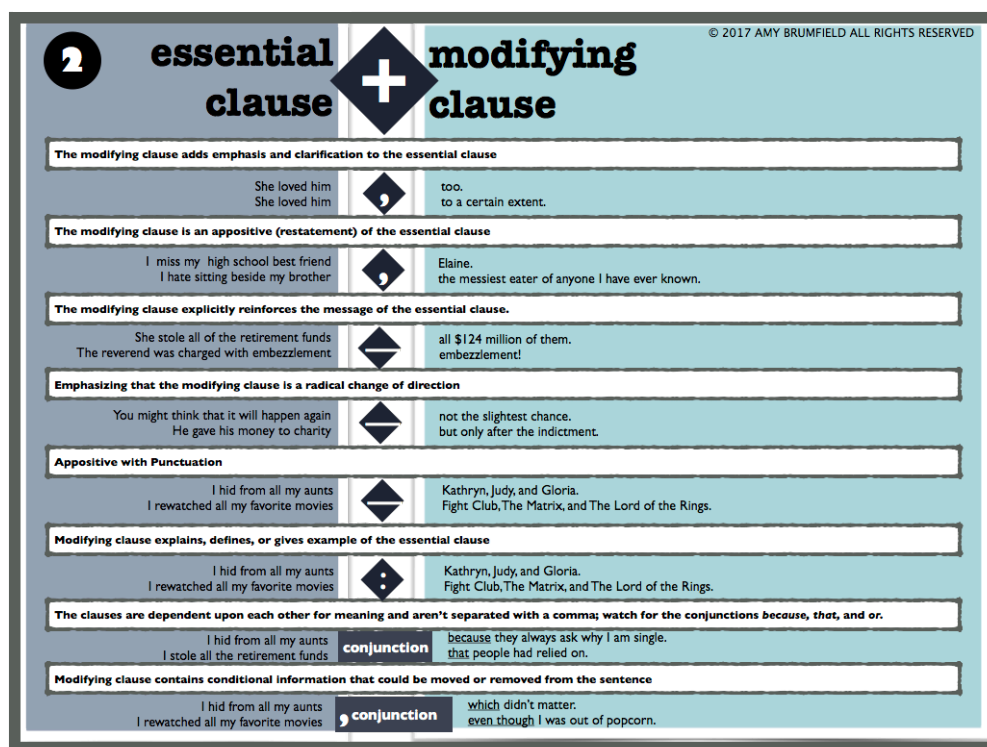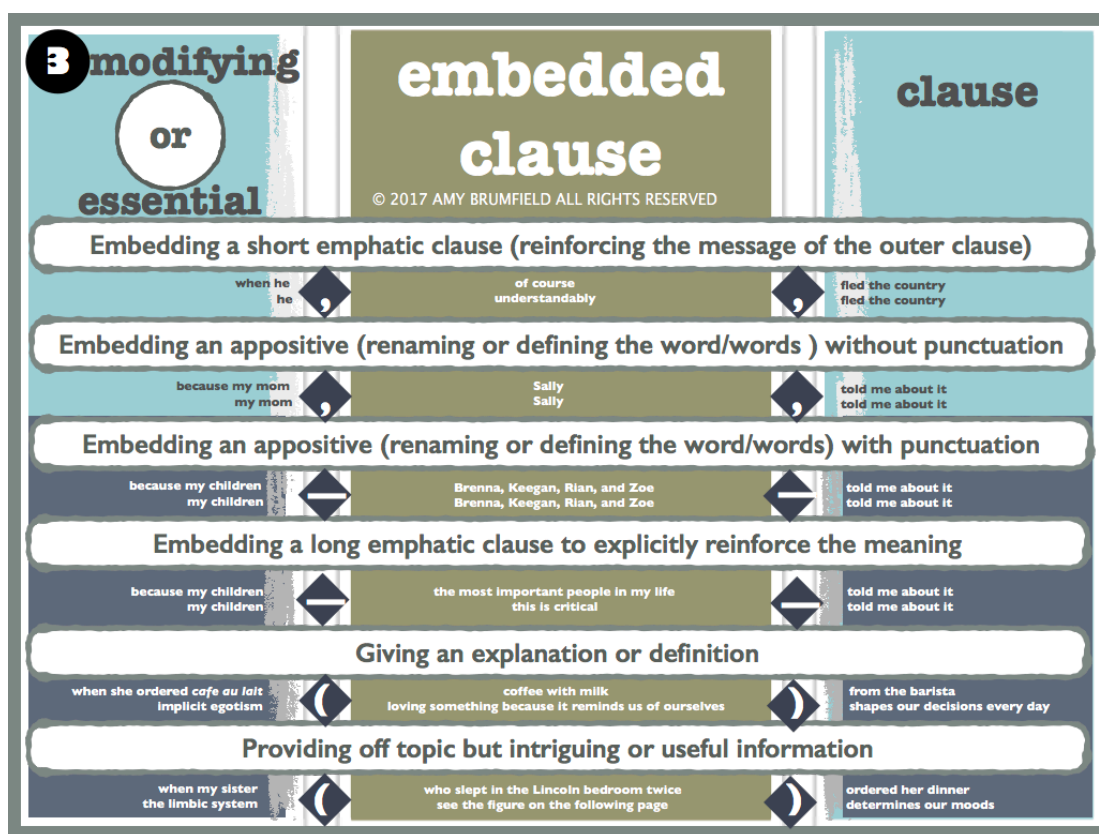*Fig. 110 The extensive resource for essential + essential clauses*

Fig. 111 The punctuation options for modifying + modifying clauses
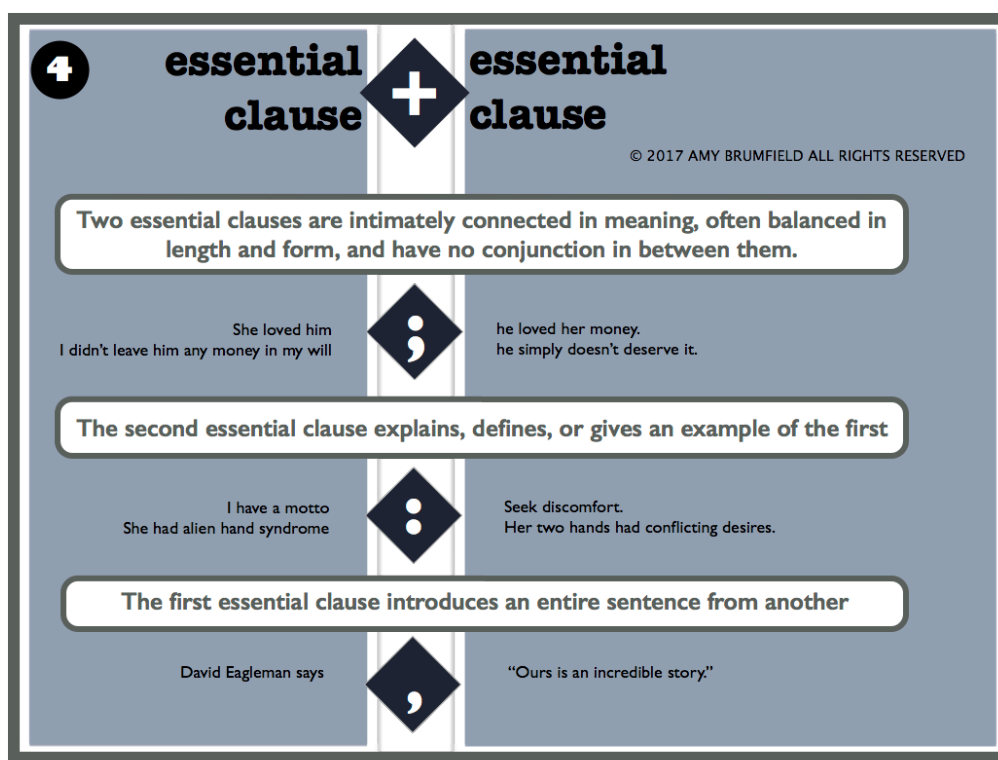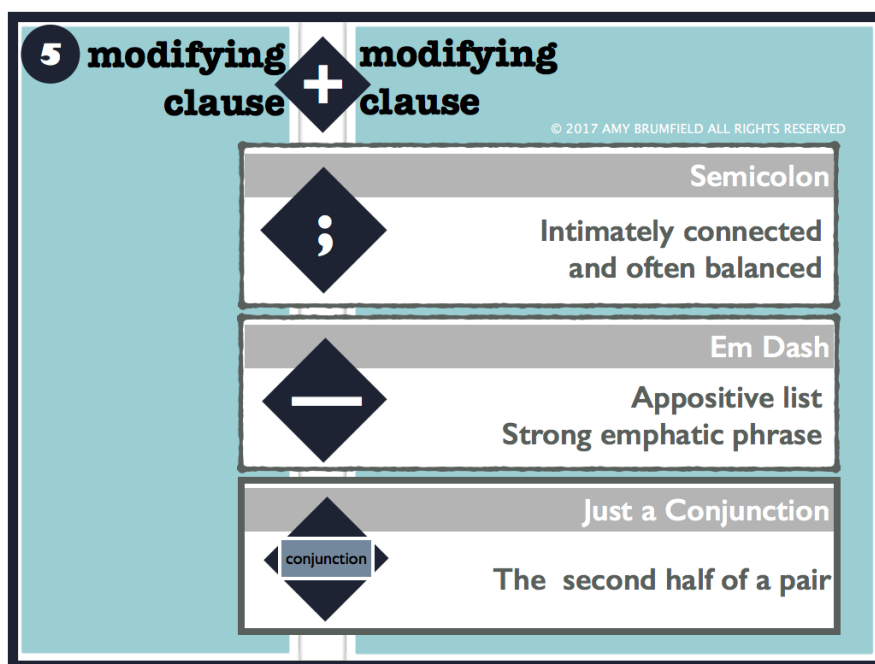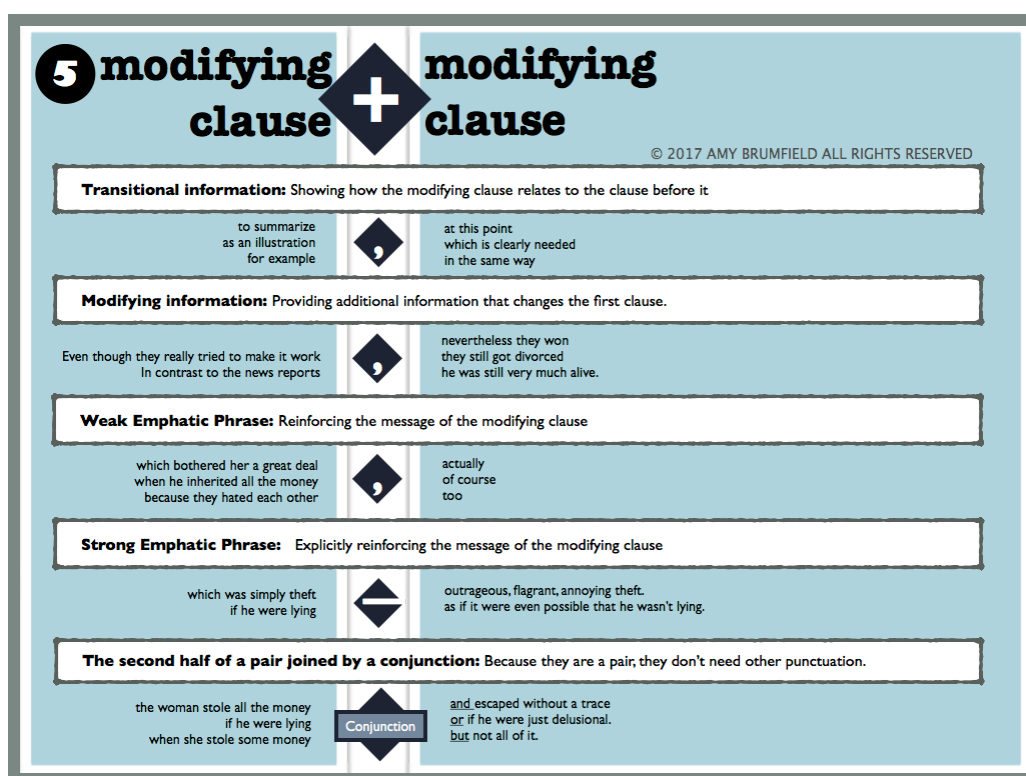

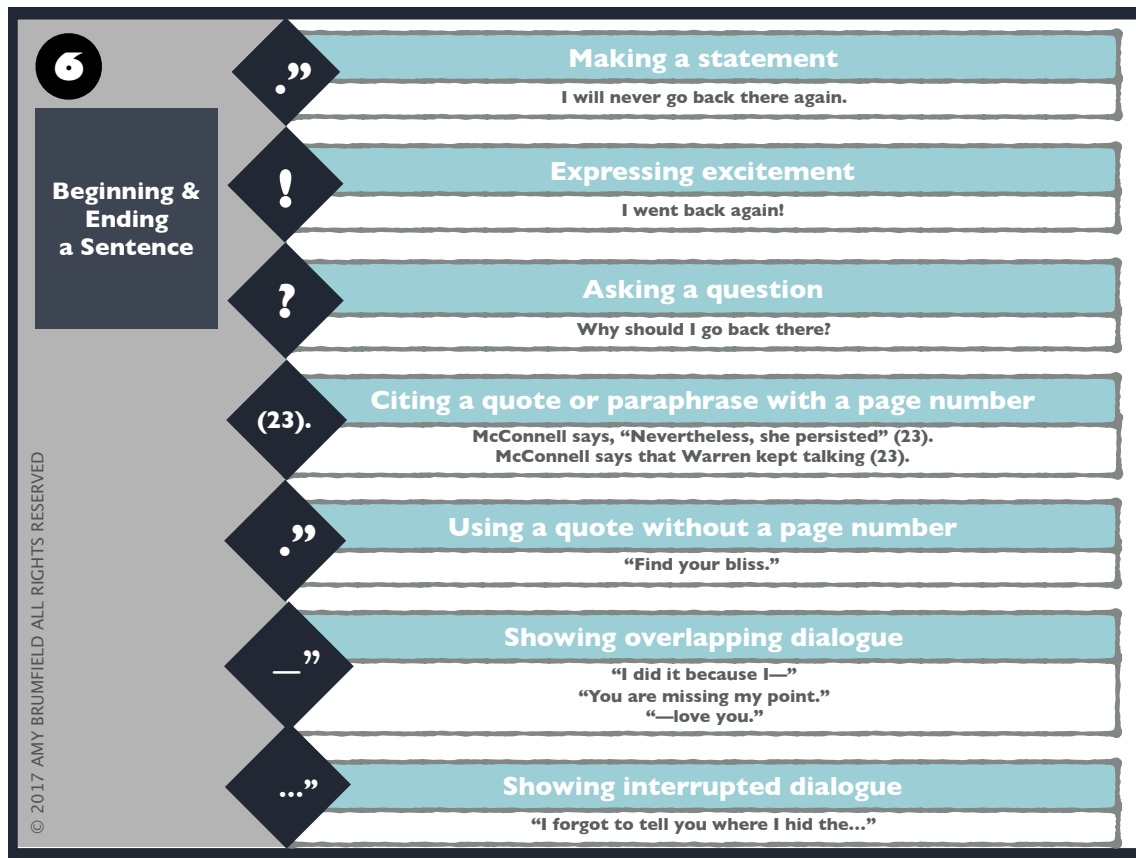*Fig. 112 The extensive resource for modifying + modifying clauses*

Fig. 113 The punctuation options to end a sentence

Students are not encouraged to memorize these sheets. Instead, they get lots of practice using them. They will naturally memorize the patterns that they write often, and they will have the resources available when they want to write something more unusual. Again, U-shaped learning curves are expected. Students will naturally make more mistakes as they experiment with more ways to express themselves. I encourage experimentation over safe and repetitive sentence structures. As I remind them, this may be the last class that has the time to dedicate to this level of writing, so it's worth taking some risk with a person who can help gauge if the experiment succeeded. At most, they lose a few points on an essay, but they can see how to perfect those skills in the future.

Rhetorical Value of This System

Though this dissertation's focus is on helping students to create a well-structured, conventionally punctuated sentence, but it is worth offering a short section on how this system can help with rhetorical function as well. A good composer doesn't just know where things are; they know how to manipulate the pieces effectively, too. Once students can reliably find their linguistic structures, the class can intelligently discuss why different composition techniques are rhetorically valuable.

Students often compose very complex subjects, for instance, but linguists Futrell et al., explain that speakers from 37 languages, including English, show a marked preference for expressions with a short dependency length between their elements (10336). In other words, speakers prefer versions with the fewest number of words between the start of the SG and the end of the VPG, for example. Students often write extensive subjects with multiple embedded restrictive and non-restrictive clauses, and they often use serial verbs that stretch over dozens of words. This linguistic complexity becomes apparent as they try to map such difficult grammatical constructions. They can literally count the words to see the challenges that they are creating for their reader. Sometimes, that complexity is desirable. It gets a reader to slow down and pay attention. Most of the time, it is just frustrating reading.

Students can scan the map to see how long their subjects are and make decisions about which are worthwhile. For the most part, they are encouraged to move the details from the SG into the OCG. Then, the details describe the whole process rather than just the subject. In another example, students often use multiple not-VPGs in their subjects,

like this previously discussed sentence by Student J. The not-VPGs are placed in bold (see Fig. 114):

Clause	C&QG	Subject Group	Verbal Process Group	Objects & Circumstance Group	E or M	Mark
1		How we **use** our brain and how we **think** we **use** our brain	is	the main idea I **get** from **reading** the book by David Eagleman	E	,
2				*Incognito*	M	.

Fig. 114 Seeing how not-VPGs distract the reader from the overall pattern

We can discuss why that many verb-like words hide the sentence's constituent pattern, but she was right to use active words. So, I challenged her to rewrite the sentence by moving the not-VPG into the actual VPG spot. By doing that, she could see different ways to use more active verbs and make the sentence much clearer.

In the opposite direction, Student N could look at her constituent map and see that she had way too many simple sentences with the same pattern, as the sample in Figure 115 makes apparent. In her case, she was challenged to move information out of the OCG and make her SGs more concrete and her VPGs more active.

In another example, the reader is always looking for that essential SG/VPG relationship, so good authors often embed a clause in between a SG and VPG where

29		I
30	And	The dot
31	When	I
		A few of my classmates
32		I
33	If	I
34	Or if	I
35		I
36		In these chapters
37		I
38		I
39	But	I
40		I'm sure that
41	Or	He
42		I
43		I

Fig. 115 The map can make repetition apparent, too

it will be the most cognitively disturbing and get the most notice. An embedded and restrictive clause in the SG will get more attention than the same information moved to the OCG, for example:

- The man who murdered my mother never apologized.

- The man never apologized, even though he murdered my mother.

Students can play with embedding non-restrictive clauses to see how vivid breaks can change how the sentence will read. These punctuation strategies allow the writer a lot of creativity in how the reader finds information, what it valued, and what isn't.

- The man—this is crucial—never apologized even though he murdered my mother.

- The man who murdered my mother, unbelievably, never apologized.

- The man (who owned 67 heavy metal albums) never apologized, even though he murdered my mother.

Once students have a solid grasp on all the elements involved, they become far easier to rearrange, and the rhetorical results become more predictable. Writers can take more risks with a safety net to help them maintain convention.

Every linguistic rank works essentially the same. Playing with the sentence elements is just a different scale than playing with paragraphs or the essay structure. Once students see how the sentence elements fit together, they can transfer those skills to the larger ranks. Altogether, they see that they can change the impact of their texts by editing them effectively, and editing becomes far more efficient and worthwhile.

CHAPTER 8: THE RESULTS

Where I Am and Where It is All Going Next

I have been researching this project unofficially for eight years and officially for six. At every opportunity, I have tried to bring my research into the classroom to test its efficacy. This has been an invaluable learning process, as my students made it abundantly clear where I often went completely wrong, occasionally showed that I was on the right track, and rarely got it most of it right.

I had hoped to perform an empirical study of the efficacy of this material. By the Fall 2017, the resources were generally developed as this dissertation describes them, though the teaching order was different. I taught an online section of English 1101 in the Fall 2017, but it had a total enrollment of four students with only two participating students after week three. While this material was well received by both students, the sample size was too small to provide significant data. I am studying the results of my current class, but the results will not be available until after the defense has taken place. I do plan to refine my testing measures as I continue teaching this material. As discussed at the comprehensive exam defense, this dissertation will just present the ways that I will test this material in the future, rather than present the finished research. The results section is broken into two major groups: a reflection on what the research has shown so far and a more rigorous plan to show what I will do next.

What I Have Learned So Far

The following sections follow Weimer's requirements for wisdom-of-practice scholarship, rather than empirically tested results. Wisdom-of-practice scholarship is a way for teachers to use their own experience to help guide other teachers. It is seen as a

valuable addition to more empirically based research, largely because it is highly practical and applied in the classroom (40). It is a way to provide insight into the teaching process that may be difficult or impossible to empirically verify. Because teaching requires so many varied factors, some results resist empirical classification, but the experience of teaching the overall practices is still valuable to others who may experiment with similar concepts (97, 40).

The following sections follow Weimer's research approaches entitled "personal accounts of change," "recommended-practice reports", and "recommended-content reports" (40-41). To offer a personal account of change, an instructor describes their experiences as they implemented a new teaching strategy, tool, or approach (40). This dissertation offers my perspective as I introduced sentence-level construction by using the linguistic structure as a pedagogical framework through tools like the constituent map and SLIM, and an overall approach that focuses on editing existing sentences to convention. A recommended-practices report, like the term implies, makes recommendations that change teaching practice. It should be based on experience and/or comprehensive literature review of existing practices (Weimer 41). This dissertation offers a combination of the two. The literature review should show why this area is due for more research scrutiny, and my extensive classroom experimentations will be offered to show both their positive and negative lessons. A recommended-content report focuses on giving advice about what teaching devices can be used to "explain, illustrate, demonstrate, and otherwise support the acquisition of course content" (Weimer 41). This dissertation offers a number of tools to help teachers to improve the results of their sentence-level instruction.

All three approaches will be used in the following sections as I will discuss the students' prior knowledge about punctuation and sentence structure, as well as their expectations for the FYC course. Then, I will outline teaching methods that I tried.

The remainder of this chapter is broken into four subsections. The first subsection, "Seeing Where They Start," describes how I evaluate a student's existing knowledge as they enter a FYC course. The second section outlines the pleasant conclusions that this research has given. The third section outlines typical instructor concerns, as they have repeatedly arisen from conversations with peers. The fourth section is entitled "Painful Conclusions," as it is designed to prevent painful repetitions, rather than offering empirically tested results. The fifth section will outline future testing plans to judge this system's efficacy. Finally, I will offer a conclusion.

Seeing Where They Start

In order to measure any efficacy of a teaching principle, it is important to gauge the students' prior knowledge before the intervention. Students are asked to fill out a few different pre-learning surveys to gauge what explicit knowledge the students have about their language structure when they begin English 1101. The results in this section are from my Spring 2018 1101P course, but the results and student mix are similar to other semesters. The class has 4 college-ready students and 11 P-students, or student whose standardized test scores are either absent (usually because of a long gap in their education) or below the college-readiness benchmark. Study enrollment is essentially random as 79% of ISU students are required to take 1101 or 1101P before attempting general education requirement, and students can choose any section. According to IRB protocol, the students filled out a consent form regarding the study on the first day of

class (see Appendix A for IRB approval). Thirteen out of fifteen students opted to be

included in the study; interestingly, the two Hispanic students both opted out.

On the first day of class, I have students fill out a punctuation survey. It asks them

to identify a punctuation mark by name, give its purpose, and use it in an example. Like

previous semesters, the survey shows that students have a broad understanding of the

punctuation system. They can name most marks, and they can give a (usually vague)

purpose for less marks than they can name. Students can often use conventionally use

some marks in a sample sentences, but they often fail to repeat that feat in their essays or

even at different places in the same survey. Like in previous semesters, all students can

identify all the traits of some of punctuation, and no student is fully fluent in all of them.

(The em dash is the most consistently missed; no one has ever identified it, though one

creative student argued that it was the dash that made the other dashes feel badly about

themselves.)

When I first gave the survey, I thought it would show me which marks needed a

lot of class focus and which only needed a light reminder. The survey made it clear that

that approach would not work. Student punctuation knowledge is quite eccentric, which

is why this information is quite vague. Beyond the terminal punctuation, quotation marks,

and capital letters, there isn't a consistent pattern of correct/incorrect identification of

marks, purposes, or examples. Sometimes, students can name a mark, but not express a

purpose or vice versa. Sometimes, they can create conventional examples for some marks

even though they didn't express a name or a purpose for it, and sometimes list a name

and purpose without attempting an example. The survey made it apparent that each

student has a unique collection of knowledge, so it would not be possible to focus just on one aspect of the punctuation system.

As the research focus shifted away from the marks and to the sentence structure, I kept offering the survey as a tool to show students that they can easily read and often use marks that they do not recognize, and they can even guess which sentences use them in unconventional ways, which we examine as a short class activity. It becomes a touchpoint for students' unconscious processing of text, which allows them to recognize patterns that they cannot replicate. It also shows students that published writers have a wider range of tools at their disposal, which makes it easier to build understandable, complex structures. By expanding a student's available writing tools, they can create increasingly sophisticated structures, too.

Meeting Student Expectations

As part of the first homework assignment, students perform a short survey about their expectations for this composition course. Like previous semesters, students' descriptions of themselves vary from positive to neutral to negative (see Fig. 116). When asked to rank their confidence in their writing, three have little confidence that their writing will represent them well, eight have some confidence (it represents them well sometimes but not others), and two expressed a lot of confidence (their writing represents them well often). When asked what writing skills they wanted to work on
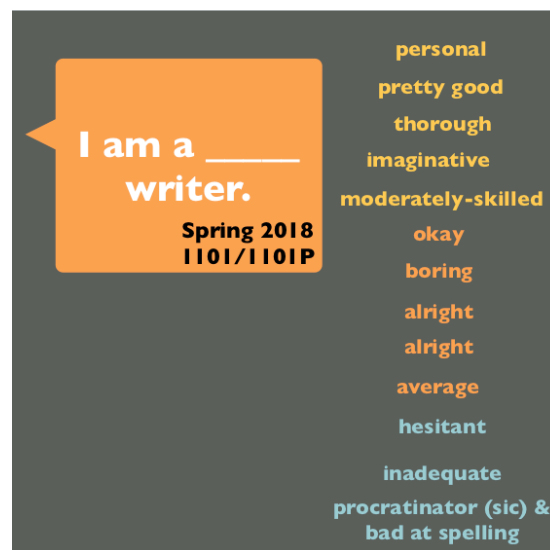
Fig. 116 Student self-descriptions

during this course, six chose punctuation, grammar, and/or sentence structure, including "where to use comma's and other marks [sic]." Three chose transitions, and four chose more general things like *proficiency* and *all of it*. When asked to rate their confidence in using punctuation, three had little confidence, four had a lot of confidence, and six had some confidence.

Comparing Their Prior Knowledge

At the beginning of the semester, I surveyed the students' prior knowledge of sentence structure by determining if students could identify the subjects and verbs of their sentences. I chose the terms *subject* and *verb* because they are commonly known to students and because nearly every set of grammar rules uses these terms. Further, the subject and verb are key principles in determining many more advanced concepts, like deciding if a sentence has an essential clause, if an essay has a consistent point of view, etc. If a student cannot reliably identify these sentence elements, they will have a difficult time identifying any others, as well as getting any kind of help from a grammar guide.

Using their first edited essay of the semester, students were asked to define the terms *subject* and *verb*, as well as circle/underline each instance of them. (see Fig. 117 for the results). The essay prompt is a short letter asking their employer for a raise. In theory, finding the subjects and verbs of this essay should be fairly simple. A letter tends to be fairly conversational in its tone, and because of that, students rarely create the complex subjects that can be problematic in more academic essays. Despite a drafting session that tries to get students to consider their audience and use any subject besides *I*, a great many of their sentences still start with that popular pronoun.

Student * indicates college-ready student	total number of sentences	identified any word of the subject	identified any word of the verb	definition of subject	definition of verb
1	16	0	1	describe	action
2	14	0	0	person, place, or thing	the, and, a
opted out					
3	17	20	16	the topic within the sentence	the description of the subject
4	16	3	9	the main idea of a sentence or main thought	shows action within a sentence
opted out					
*5	absent				
6	23	0	7	what the sentence is about	any action
7	19	8	0	what the sentence is about	person, place, or thing
8	17	2	4	what the topic is	action
9	16	picked every 1	5	any noun placed in a sentence	an action word
*10	15	10	5	topic or thing you are talking about	the action or what is being done
*11	20	25	27	the thing that is doing the verb	action that the subject is carrying out
*12	absent				
13	14	1	3	the priority word	description

Fig. 117 Gauging the student's prior structural knowledge

I did a simple calculation of their scores. I counted the number of sentences, and then I counted whether students correctly identified any word of the subject or verb. The score just includes positive identifications; I did not subtract for mistakes. Because sentences could have multiple clauses, students could find more subjects and verbs than the total number of sentences.

As Figure 116 shows, Student 3 and Student 11 both scored quite well, correctly labeling nearly all of their subjects and verbs. (It should be noted that these two were the only college-ready students in attendance that day.) The rest of class—all P section students—did not fare as well. In fact, the prevalent pattern was to ignore the subject (often the word *I*) and underline prominent words in the predicate. From their definitions of the subject, this makes sense to me. They generally think of the subject as what the

sentence is about, rather than who might be participating in the process. (There were

some creative approaches, like Student 9 who used the charmingly narcissistic strategy of

picking every *I* no matter where it was in the sentence and nothing else. Student 2

underlined everything that was not circled as a verb.)

Students usually missed the main verb, too, generally choosing not-VPGs like

infinitives, gerunds, and words in a relative clause. This choice is in line with their

overall concept of a verb as an action. Quite often, students circled vivid action words

that aren't being used as the VPG of the sentence, ignoring the anemic *is* that was usually

the actual VPG, like the example from Student Z shown in Figure 118.

Clause	Conjunction or Question Group	Subject Group	Verbal Process Group	Objects & Circumstances Group	E or M	Mark
I		One reason he **gives**	is	that the brain **works** unconsciously	E	.

Fig. 118 Seeing the vivid not-VPGs

The bolded words in the sample sentence convey a much stronger sense of action than the

actual VPG, even though the sentence isn't describing either process. That is a subtle

distinction. It is easy to see why students often accidentally create sentence fragments

from sentences with a lot of action-filled, VPG-like words.

But students' confusion over the verb was not limited to such easy explanations.

Nominalizations (the noun-form of a word that is often a verb) confused some students

(e.g., requirement, accomplishment). These choices seem somewhat logical to me since

students generally define verbs as something to do with action, and those part of the word

can often describe action (e.g., require, accomplish.) Students also identified many words

as verbs that do not seem logical (to me) since they don't fit the students' own definition of a word that shows action (e.g., into, clientele, convenience, steadily, tool.)

The Encouraging Knowledge Gaps

This gap of knowledge is encouraging. It explains why many students have a difficult time applying grammatical concepts even with pointed instruction and ample grammatical resources. Quite often, students are missing the foundational vocabulary that make the discussions applicable and the lessons accessible. So, when the rough drafting session had students to replace the subject *I* in their letters, students may very well have replaced an *I* somewhere; it just wasn't functioning as the subject in that sentence. Because students recognize the terms *subject* and *verb* and have a workable definition for these terms, the students assume that their usage and the instructor's usage are the same, where a completely unknown term would trigger more recognition of the dissonance on both sides.

To remedy this mismatch, an instructor should remember that this vocabulary has been in place for a very long time, likely since elementary school. Up until now, this knowledge gap has not impeded the students' communicative function, so it may have received little challenge. Obviously, until now, it has been sufficient to define a subject as *who* or *what*, even though a subject may be a complex grammatical construction that looks nothing like the traditional *person, place,* or *thing* descriptor. Before college writing, it had been sufficient to define a verb as an action, even though linking VPGs are far more common in SEAE.

As I frame it, writing is constructed of lots of component parts, just like nearly everything else. It is easy to use something that is well-constructed, even if the user has

no clear idea of what pieces are present or how the pieces work. For example, everyone uses a cell phone in many ways every day, and almost no one can reconstruct one or even give an intelligent explanation for how a cell phone works. That expertise isn't required or even desirable for most people, but an engineer has to know all the pieces and be able to test each component individually to build a phone. They also need to be able to predict where problems will occur and engineer around trouble areas. Writing is the same. To build a text, a writer needs have more explicit knowledge and more reliable testing mechanisms than a reader. It is time to gain those testing mechanisms.

Like the pedagogical section asserts, this underdeveloped knowledge cannot be remedied with just new definitions, though those should be provided, too. Like any second language acquisition, a learner can be helped by having a dictionary definition to reference, but true language learning takes place as the learner sees the concept (not just the term) used in its many contexts. It is the hunt for their own subjects that helps students learn how their constituents are functioning; redefinition is just a starting point.

Pleasant Conclusions

The dissertation asks if students can write more conventional, grammatically conventional sentences if they are offered explicit grammar instruction that helps them to gain the skills listed, once again, in Fig. 119. The short answer is an observational and qualified yes, students can both develop all of these skills and can write clearer, more conventional sentences as a result. While I cannot empirically document this progress yet, I can say that every participating student in my current class can use the constituent map to draft their own essay. Because of this, each student can reliably find their clauses, identify the constituents, determine if they have essential or modifying clauses, and determine if they have restrictive or non-restrictive clauses. They make occasional mistakes, but on the whole, each can reliably see the patterns of their sentences.

CRITICAL SENTENCE-BUILDING SKILLS

1 FIND THE CLAUSES

Clauses are grammatically complete groups of signs. To know if you found the right clausal boundaries, hide it and look at the remaining words. They should sound grammatical and complete.

2 IDENTIFY THE CONSTITUENTS

Each clause may have four different constituents that perform different functions. Use the constituent map to help you see what constituents you have. If the constituents are hard to find, the sentence is hard to read. Consider rewriting it!

3 ESSENTIAL OR MODIFYING CLAUSE?

An **essential** clause has a subject group, verbal process group, and doesn't start with a conjunction/question group.

A **modifying** clause has a no verbal process group or starts with a conjunction/question group.

4 RESTRICTIVE OR NON-RESTRICTIVE?

Restrictive: Two clauses that give one elaborate idea. No punctuation marks separate them.

Non-Restrictive: Two clauses that give two separate ideas. Separate with punctuation marks.

5 GATHER THE PROCESS + ALL MODIFICATIONS

Each sentence should contain one essential clause and all its modifications. Look at how the clauses are related to see if they should stay in one sentence or move to another.

6 USE PUNCTUATION TO SHOW CLAUSAL RELATIONSHIPS

Choose conventional punctuation strategies by using the visual resources. Every mark and space has meaning. Choose the right one!

by Amy Brumfield

Fig. 119 The essential skills of SEAE sentence-building

They can intelligently discuss why some patterns are harder to read than others and

discuss how to improve them. Observationally, Essay 3 shows sentence-level improvement from Essays 1 and 2.

This class will begin a deeper exploration of the punctuation after this writing, so I cannot effectively comment on their ability to choose better punctuation strategies, but I can say that some students have done better at removing excess punctuation between essay 1 and 3. (Other students had little to improve on in this regard.) It is probably more accurate to say that the improving students have simplified many of the confusing structures that caused the errant punctuation, rather than claiming that their punctuation choices have become more sophisticated. Either way, the sentences in the most current batch of essays seem easier to read. This observation will need more rigorous study, and I have outlined a plan for that later in this chapter.

To be clear, I have yet to have students turn in a batch of perfect papers. I have observed multiple incidents where students identified mistakes on their maps, but they still did not transfer that knowledge to their final drafts. I am trying some new strategies to encourage the transfer process. While papers do not become perfect, students generally acknowledge that the system gives them the tools to write effective, conventional sentences even if their life didn't give them enough time or incentive to perfect the assignment itself. Class discussions show that this system is far more understandable and applicable than the grammar rules, which almost none of my students try to use. In previous semesters, students found the punctuation resources easy to use once they could find their clauses with the map. Even when the resources were much less developed, students appreciated the simple visual nature of the resources over the intense verbal descriptions of the grammar rules.

Catching Grammar Mistakes

I observe and students affirm through discussions that they catch more of their grammar mistakes as they examine their words more carefully. They can intelligently discuss the elements of their sentences and describe why some constructions are less effective/harder to read than others.

The biggest counterargument to the efficacy of this teaching system is that students may improve their sentences just because they are given grade incentive to improve them. As Student D memorably said, "Your class is the first one that cares what my sentences say." Students are grade-motivated. While they may not complete an assignment early enough to use campus resources like the writing lab, grade incentive can at least encourage them to read more slowly and carefully to catch their mistakes, though they may not find errors.

As another counterargument, my course offers designated time to look at sentence-level construction. It may be that the dedicated class editing time may help students more than the explicit teaching. In my course, each edited essay has a larger structural editing session where the class has dedicated time to developing the thesis, organizing the evidence, etc. Each essay also has a sentence-editing day where the class has dedicated time to studying their sentences, citation, and other form-related topics. With more dedicated editing time to spend on sentence, the papers seem likely to improve, regardless of the explicit teaching of sentence-level construction.

Still, I believe that explicit teaching in this way is beneficial to students. Many of my students cannot effectively edit their sentences, even with a lot of time to work on them. They change the sentences, but those changes are not always better. Student A, for

example, reported that she spent more than 10 hours editing a 300-word essay, but her efforts were not apparent. While she vocally did not enjoy mapping her sentences, she did appreciate having a concrete system that could show her which sentences were likely to represent her well. Altogether, all of my students report that they would rather work on their grammar and punctuation than continue to fail in other classes.

Answering Instructor Concerns

When I began teaching sentence-level construction in a more concerted fashion, I had several big concerns, beyond the obvious one that I didn't know how to accomplish this task. I was concerned that I would lose student attention in lectures, increase course attrition overall, and decrease the students' abilities to perform the other learning objectives. I was also worried that experimenting requires failure, and that I would lose credibility to teach any area if I failed in one.

My fears seemed well grounded. Classroom discussions on intriguing topics are certainly more invigorating and easier to maintain that discussions on grammatical structure. It was already difficult to get the entire class to complete the course, even with a more interactive and conversational course; on average, about 20% of my students didn't complete the course. I found this trend highly disturbing, and I was worried that more sentence-level focus would increase attrition. Obviously, the department and university were equally interested in all the learning objectives, so students couldn't just master one at the expense of the others. Further, my own ego is as present as my students' language ego; it is hard to try new things that might not work and could diminish my credibility.

Since I have heard these same concerns echoed in many conversations with peers, I thought it was worth addressing them directly. Like Weimer expresses, wisdom-of-practice is valuable, even though it may not be empirically replicable.

Concern #1: Can I Keep Student Attention in Class if We Focus on the Sentence?

To my pleasant surprise, I saw no distinct difference in classroom involvement when students worked on their sentence-level structure instead of having a classroom discussion of a text, for example. Students seemed content to participate in many kinds of learning, and in line with cognitive learning theory altogether, a range of activity keeps them engaged better than extensive explorations of any one area.

With a shared technical vocabulary, classroom discussions about writing can become more much precise and engaged. Many discussions about sentence-level revision can be as involved as discussing the readings themselves. Students like having concrete and sophisticated ways to express their input. For example, we often look at anonymous student sentences as a group and discuss how to improve them. We chart the sentence's constituents and then start playing with the pieces. They can offer concrete suggestions to the anonymous author, like revising to decrease dependency length between two constituents, recommend using the not-VPG as the actual VPG of the sentence, and suggest other things to make the constituent pattern more apparent. Altogether, students see that the language is flexible, but it still has constraints that can be labeled, understood, and leveraged. They also can express opinions that change writing for the better.

While this is an overgeneralization, ineffective freshmen writers tend to fall into two general categories. Some students write perfectly punctuated, vague, and vacuous sentences. They certainly have the patterns of sentence writing down, but their sentences

often show lots of repetition and a general lack of engagement with the reading. They can summarize and often continue to just summarize even when the assignments ask them to develop independent thoughts. At the other end of the spectrum, many students write incredibly complex thoughts, trying to pack as many ideas into a single constituent as they can. They, quite naturally, struggle with punctuation, but they are highly engaged with the ideas in the text. They offer a lot of interesting insights that their less-engaged peers do not see. (There are students who fall into the middle of both categories, too.) The classes work well when we bounce between the critical reading and sentence-level structure. Each group can help and be helped by the other.

Concern #2: Will More Students Drop Out?

Observationally, my overall retention has improved since dedicating more focus to sentence-level construction, and attendance is strong. The average attrition is closer to 10%, rather than 20%. This semester, only one student is no longer participating (he stopped attending after week 3,) and the class consistently has high attendance. That retention and attendance could be credited to many other factors, so I can't argue that teaching sentence-level construction increases attendance and retention. I certainly hope that I have become a better teacher with years of practice, and the students deserve the credit for persisting to the end of a difficult set of tasks. It seems safer to argue that teaching sentence-level structure does not decrease student motivation to complete this course.

Student discussions certainly support that contention. In my initial teaching semester, I taught multiple sections of first-year composition course. My courses included all college-ready students who either placed directly into our introductory

credit-bearing course or had successfully completed remedial coursework. I followed my mentor's example and taught almost nothing about grammar and punctuation. I believed that students will master such skills through the extensive reading of entire college curriculum.

While my students' reviews for that semester were generally positive, the same comment came up over and over: The course didn't teach writing. I was bewildered. I had taught writing, as I defined it, every single day. We read challenging essays, discussed the author's rhetorical choices, talked about their impact, and modeled them (with various levels of success) in multiple essays. When I ran into several of my former students, I asked them about how my course failed to meet students' expectations.

They expected a composition course to help them to critically read and to sculpt the larger pieces of argument, but several of their other courses did that, too. They needed a course that helped them to sculpt their sentences, which no other field attempted. They were deeply frustrated by their inability to effectively place punctuation marks or use citation information, with "effectively" being loosely defined as "avoiding an English teacher's corrections." The frustration was earned; mistaken conventions are usually the most prominent kind of mistakes simply because there are so many of them. A writer may create only one flawed thesis in a paper, but they can misplace dozens of punctuation marks that can all be circled in scarlet. Students logically expect a composition course to help them with skills that are specific to writing and present in no other mode.

It struck me that the teaching evaluations showed that I had failed to meet the expectations of the students who succeeded in finishing this course. I certainly failed

more vividly to meet the expectations of the students who decided not to finish the course, which might have been for the same reasons. Granted, student attrition happens for many reasons, and I certainly do not narcissistically believe that my course or anything else is a sole factor in choosing to stay enrolled. Nevertheless, it did prompt me to start asking more questions about what skills the students wanted to improve in this course, and every semester, at least a third say that improving their mechanics is their top priority. Since it is already an established learning objective, I changed my view and began to rigorously research ways to improve this area.

Concern #3: Does It Bore the High Achievers?

On a different note, many instructors have asked me if my proficient students are bored while their struggling peers take longer to master the material. Having a separate P section does help with this, but overall, the mapping constituents is easier for college-ready students who tend to write more clear sentences and use punctuation to mark clauses already. I highly recommend using small groups that distribute more proficient students to help their struggling peers. Everyone needs a place where they feel strong and smart, and strong writers seem highly engaged if their expertise is useful and appreciated.

Here is something to ponder: Stereotypical good students are good students in many ways beyond how to structure a sentence. They know how to fulfill assignments, even if they aren't thrilled about them. They come/drag themselves to class, even if they don't wish to attend. Good students understand how the system works, and they know how to work to get their desired results, which includes completing at least most of assignments, especially the easy ones. They also rarely complain that the work is too easy, especially when they see their classmates' struggle. Further, high performing

students rarely drop out, while low performing students do at a far higher rate. In my experience, I've never had an A or B student fail to complete the class, but many marginal and failing students have given up on it.

Concern #4: Does It Frustrate the Struggling Writers?

On the other overly stereotypical hand, struggling students start this course assuming that they will either fail this course or receive mediocre grades in it, regardless of their efforts, because their past history has experimentally proven that result. The placement tests reaffirm that belief. If students aren't given constructive ways to change their past behavior, they will understandably become less engaged in the class as a whole. Even with constructive tactics, struggling students need more help than a college-ready student. In multiple semesters, my most struggling students do the least homework as they begin this set of ideas. In discussions with them, it isn't because they are unwilling to do the work; it is because they hate displaying their learning failures. They see other students easily grasp these concepts, they assume that they are too dumb to grasp these ideas, and they are naturally angry/resentful/hurt at such an idea. In line with SLA scholarship, students will naturally become less willing to communicate when their language ego is threatened, and this process puts all their errors on display (Brown 73).

It takes concerted effort to show such students that their learning failures are usually due to their linguistic sophistication. They often write such complex sentences that they are hard to map, while more proficient writers write simpler sentences. Those simple sentences may very well be as rhetorically dysfunctional as the complex ones, but they are certainly easy to map. As I explain to my struggling students, it is easier to teach someone to map complexity than to teach people to think complex and curious thoughts.

In the long run, their complexity serves them well. In the short run, it needs refinement. That comes with practice and guided help from an instructor, which is exactly why the class is offered and why nearly all students are required to take it.

Students are also deeply frustrated when they are judged on factors that their courses do not actively improve. When I can show them how specific tasks can improve the quality of their writing, they seem content to do the work. Granted, they don't do it perfectly or turn in every assignment; they are still college students, after all. But in my semesters of experimentation, I have yet to encounter a student who wasn't willing to try any learning strategy that would make this opaque system at all clearer.

Overall, it is better to go slower and allow more proficient students to gain an easier A than it is to speed through or skip sentence construction and leave struggling students behind. FYC has the luxurious affordance of time to focus on the entire range of the writing experience, including its sentences. Further, a writing instructor can create the most change in a student's writing by improving the quality of their sentences. Granted, this is an audacious claim, but its basis is mathematical: Every writing task will require sentences, while many do not require fully developed arguments, especially in the general education courses. If FYC can improve every sentence, then students have a better chance of feeling successful across the disciplines. Success fuels retention.

Concern #5: Does This Decrease the Development of the Other Learning Objectives?

Observationally, I haven't noticed any decrease in a student's ability to perform the other course objectives. I try to teach all the learning objectives in every class, constantly blending the sentence-level pedagogy into the other objectives. The class is designed to spend a lot of time on editing, so each essay has a full rough drafting session

for the larger organizational pieces and another session on sentence structure, citation, etc. Students should have lots of opportunities in class and in homework to build all the essential pieces of writing.

That said, this process isn't magical. Students still turn in some fairly unpleasant essays or fail to turn them in at all. They may remember a thesis in one paper and forget it in the next or use perfect citation style in paper 2 and forget it by paper 3. They might focus on getting an essential clause into every sentence on one paper, and then forget to check that in the next. Part of this may be attributed to U-shaped learning, a normal developmental phase where students show proficiency, regress as they experiment, and return to proficiency again (Ellis 23). Part of this may be attributed to the fact that they are students who are overwhelmed by their busy lives that are often beyond their control.

My learning system doesn't cure basic student problems, but it does help with basic sentence structure. My pedagogical goal aims to make sure that every student can sculpt a conventional sentence whenever they need to, rather than trying to guarantee that they will always write them. This is the same for the other learning objectives. I want to be sure they leave my class with all those skills intact and strengthened. I prefer to see that through exam, homework, and essays, rather than putting all the pressure on a single testing mechanism.

Still, I am concerned that too much focus in one area defeats the others and that my course meets the university's expectations as well as the students. In the future testing section, I will outline a more rigorous way to test this area that uses the departmental assessment measure.

Concern #6: How Much Time Does the Mapping Take?

Instructors are no doubt curious about how much time it takes students to create these maps. In my course, students map a lot of small free writes (about 200 words) in their homework assignments, as well as their rough drafts for every essay after this is introduced (which range from 650-1200 words). I created a template in Microsoft Word that allows them to type infinite words into each box, and they can add infinite lines if they need them. On average, students report takes a student about half an hour to map a 200-word free write in homework when they first start. By the end of the course, students report that they can map an entire 1000-word essay in less than an hour.

Mapping constituents is hard at the beginning, especially for struggling writers. They have a much more difficult task than proficient writers. To help with this, I use a variety of class presentations where we map difficult student sentences together. Struggling students see that proficient writers aren't any better at mapping the overly complicated sentences; they are just better at writing simpler patterns more often. Still, all students write some really difficult sentences, and all students can use help to simplify their ideas.

A majority of students can create a map most of their sentences within a week or two of classroom practice. Others take a few weeks of class and practice in the P section to get all these concepts. For a few, they need a session where I help them individually to see their own sentence patterns. While I don't think my resources are strong enough to teach a student these concepts on their own yet, I have been able to get every student to be able to perform this set of tasks on their own writing. They may not always get them perfect, but they can grasp their basic purposes and use them to clarify their sentences.

On the whole, I get surprisingly few complaints about the work of mapping their sentences after students understand its basic patterns. (My more vocal students complain while they are still confused, but they are much happier when they get the concepts down.) No one likes work, especially hard work with new ideas, but they generally hate failing more than they hate work. If the mapping assignments are paced well and achievable, then students seem to perform them at the same rate that they perform other kinds of tasks.

Concern #7: I'm No Grammar Expert. Will I Lose Credibility if I Try to Teach This?

I have been experimenting with ways to teach sentence-level construction for years. These experiments are not simply theoretical; I took every researched concept and every handout directly into the classroom to test them out. Like any experiment, the results are positive occasionally and negative far more often. The failures are also obvious. To everyone.

This series of public failures has been a positive part of my learning process. Not only did I learn quickly if an idea was effective or not, it invited my students to engage with the entire experimental process. I explained what my research was trying to do and asked for their input. They gave it, usually kindly and appreciatively. I have had many students who express appreciation for any way to approach this writing skill, even when the way that we had just tried didn't help them yet. Some would give advice, but most would just give encouragement that the project was worthwhile. They wanted to do better and hoped I figured out how to make that happen.

If students found me less credible because of my mistakes, they didn't show it. I include this section because many instructors have told me that they don't teach any

grammar or punctuation skills because students ask questions that they cannot answer. I share that fear, but it didn't serve anyone to protect my ego over learning something interesting. Instead, I learned to answer many questions with "I don't know that yet, but I'll research it by the next class." Students seem content with that strategy. I hope that this dissertation strengthens an instructor's knowledge base so that they have the answers, but I also hope this section points out that students would prefer that an instructor tries to help develop these skills over someone who knows all the answers to other questions.

With those pleasant conclusions, I will now outline my less pleasant/more painful learning aspects. They are offered in the hopes that other instructors can advance this material faster by skipping some tested and failed strategies.

Painful Conclusions

Painful Conclusion #1: Yes, they have to retype the essay into the map

As I have introduced this method to students in class and discussed it with other instructors, they often ask about skipping the retyping of the essay into the constituent map and just coding the same categories onto the essay itself. I wondered that myself, and after multiple trials, my answer is sadly no. Granted, students are not thrilled with the constituent map in the beginning (or probably ever.) Students wish to avoid the work of retyping the words into an abstract grid. I agree with them that retyping is an extra and annoying step, but the map evolved because all the other ways that classify the original text were so painful to grade and failed to accomplish the intended pedagogical purposes.

To summarize the painful grading lessons, I began this process with the goal of finding a way to help students to edit their writing in its essay form. One of my primary problems with sentence diagramming is that it forces a student to remove their writing

from its context, and it requires such intricate dissection that it isn't feasible as a sentence-by-sentence editing technique. I didn't want to create the same problem in a different form. So, after I saw the constituent pattern of writing that I wanted students to find, I had them experiment with various coding methods that just used the students' original drafts. For example, students were asked to underline the SG and bold the VPG, for example. There was a color-coded version where students used actual highlighters on paper versions and another where they used different colored fonts in Microsoft Word. Students tried a system where they labeled the constituent boundaries with parentheticals like this:

The girl (SG) went (VPG) to the store (OCG).

Here is the problem: Students are infinitely creative. Even when I made very specific instructions about how to classify each constituent, they came up with their own color coding or they traded underline and bold or they put the parentheticals before the constituent instead of after it. Their systems would sometimes change sentence by sentence. Occasionally, students tried completely different strategies, like using different fonts for each constituent or creative numbering systems. While I appreciate ingenuity, it was nearly impossible to grade such a wide range of inconsistent strategies, and it wasted a few different drafts before I could get students to (mostly) follow the same system.

You Can't Edit What You Can't See

From a pedagogical perspective, marking the constituents directly into the draft didn't work either. Students just skipped over the words that didn't fit the pattern, leaving the highlighting vague. They still missed completely ungrammatical word combinations that any native speaker should have caught if they had read it slowly enough. Staying

within their own drafts didn't encourage students to stop and analyze what they were marking. Altogether, their brains seemed to just fill missing pieces or glide over extra pieces as students skipped happily along with a highlighter or its equivalent.

Further, these strategies didn't allow effective comparison in class. The students still spent a lot of time trying to locate their own subjects, for example, even though they had already found them in theory. (They were often defeated by their own strange classification systems.) A large block of text is still a large block of text, and all the strange classifications made the essay less accessible than it had been before the strange editing. Altogether, students could use the categories to see the patterns in an individual sentence, but it didn't allow them to see the larger patterns that are essential, too.

Ultimately, I realized that the pattern needed to be far more visible for any kind of efficient comparison. The constituent map was developed to give students a visual framework that forced them to study each word that they had written and try to determine its place. (Again, I owe a debt to Butt et al., for developing a similar model that helped me to develop this one.) By retyping each word, students cannot simply ignore the ones that don't fit well.

Unlike the essay draft, the constituent map allows similar constituents to all be compared in rapid fashion. Altogether, it allows students to see what complications they are creating for the reader by seeing where all the information is in each clause. Rewriting becomes easier as the target becomes far more focused, like in the following student example in Figure 120. The OCG in clause #2 is obviously outsized, providing a lot of cognitive reading challenge. So, the student could look at that and focus their attention on how to thin that section down into a more manageable distribution.

Clause	Conjunction or Question Group	Subject Group	Verbal Process Group	Objects & Circumstance Group	E or M	Mark
1				**Afterwards**	**M**	**,**
2		**Eagleman**	**gives**	**examples of how authors have accessed the subconscious to write novels they never knew they had thought of**	**E**	**.**

Fig. 120 Seeing the oversized constituents

Students occasionally complain about the map, and they still offer new strategies that might spare them from retyping all the words. The nice thing is that they discuss these strategies, rather than turn in their strategies. Simply choosing their own colors for each constituent still felt like they were following the general assignment, so they tended to ask for apologize after rather than ask for permission before. Completely refusing to fill in the chart seems like a much more heretical gesture. Students may come ask to be allowed a different strategy, but they ask rather than just execute it. After students get used to the map, though, they stop complaining and start seeing that the map makes a lot of strange things apparent.

Painful Lesson #2: Starting with the Hardest Parts

I have taught this information in a number of semesters. In the beginning, I taught students to see the smallest ranks first, along with all of the punctuation that they conventionally use (see Fig. 121). So, for example, the beginning of the course focused on signifiers, offering instruction and experimentation with all the ways that writers use font to distinguish different meanings, and then we moved onto signs. It seemed logical to start at the beginning of the scale, and I thought it would help students to start where they are confident and work their way to more complex structures which follow the same logic.

Fig. 121 The failed teaching order

This approach was problematic. First, it spent too much course time focused on the writing problems that have a smaller relative impact on the text. To give an example, failing to properly punctuate the difference between a book and article title is unlikely to greatly slow down reading time largely because there just aren't that many of them in an average text, especially outside of academia. Getting this perfect level of writing skill perfect doesn't change much about writing's reception/the grade, especially at the freshmen level, so students had little reason to invest much effort.

More importantly, there is very little rhetorical debate at the sign and signifier level. Granting that authors can always make any choice, very few authors choose to spend their effort creating new ways to display a book title, for example, but they may

debate heavily about which punctuation mark should be inside a sentence and where exactly it should go. So, I distinguished between the consistent linguistic structures that could be learned through rote practice (like citation information) and those that needed significant classroom instruction to understand (like clausal structure.)

Painful Lesson #2.5: Divide and Conquer

For skills that are largely rote practice, most of this information at these ranks is better developed through homework, adopting Casey Boyle's concept serial encounters that help students to build the *Framework's* desired habits of mind (533, 534). To give a brief example, citation seems so simple to fluent SEAE writers, but the punctuation strategies are actually quite complex. To conventionally cite a single quote requires multiple strategies for required signs, marks, phrasing, and font choices.

It was my participation in the iPad Pilot Program that gave me the opportunity to see how complex this process actually is. I taught lessons on adding citations to a text, and I had the students create their own examples in an app called Socrative. It allowed me to gather all the students' examples in real time and project them anonymously, so we could discuss each one. Students would get some of the pieces right, but they almost always missed a few elements or placed them in the wrong spot. It would take multiples times to get this right in class, and students often still made the same mistakes later in their essays. From a class perspective, it took too much time to perfect this concept even once. Since the learning didn't transfer to the writing, it wasn't worth doing at all, at least like that. From a cognitive perspective, the failure is hardly surprising. One random lesson in mid-essay cycle is just not going to create permanent change.

Rather than using class time, I teach citation style by embedding it into the critical reading assignments. Each reading is broken into small sections, and the students are asked to look for five of its main points. In the first section, students use those points to provide five properly punctuated quotations. The next section asks for five paraphrases, and the last is summarized. I vary the requirements throughout the semester, giving slightly different challenges to the basic structure like adding in the book title or the chapter title so that students eventually practice a wide range of punctuation choices at both the signifier and sign ranks. Because students do these tasks dozens of times on very low stakes assignments, they have lots of opportunity for feedback, and their punctuation strategies become automatic and conventional.

I do not explicitly teach almost any word-level punctuation, beyond highlighting the font and punctuation changes included in citation material. At this level, student performance is so eccentric that no unified lessons seem helpful. Instead, I address any pattern of word-level mistakes in homework and in essays, using SLIM. Unlike citation information, clauses cannot be learned through rote activities. Neither can paragraph development, but since paragraph development has ample resources, I won't discuss those methods here. That leads me to Painful Lesson #3.

Painful Lesson #3: Integrate All the Learning Objectives

I also experimented with a class where I taught an intensive grammar section for the first four weeks. My reasoning was that I could introduce all of the grammatical concepts, and the students could have all of them available when they began writing more extensive texts. Then, I would still have lots of time left in the semester to reinforce the problem areas as we took on more challenging reading. In theory, I thought this would

lessen the cognitive load. Students would develop the structure and then take on content. To accomplish this, students did a lot of short writing assignments and used those texts in class to practice the sentence-level structure.

This strategy just didn't work, as nearly every second language acquisition scholar and experienced teacher probably could have predicted. Like composition studies, SLA realizes that language acquisition is a social process, and language output matters as much as language input. In other words, Ellis explains that learning information is important, but producing that information for some meaningful purpose is equally important to the learning process. By producing texts, writers/speakers can notice their own knowledge gaps because "by trying to write or speak in the L2, they realize that they lack the grammatical knowledge of some feature that is important for what they want to say." Then, they can test hypotheses to see if they get positive or negative feedback, and lastly, they can discuss their output to see what they should experiment with in the future (49).

An intense grammar section presents several pedagogical challenges. First, the exercises aren't meaningful enough to inspire students to push their grammatical boundaries. In these kinds of exercises, students create safe sentences that could pass any test. The problem is that this doesn't transfer well to actual student writing. When they actually care about the topic, they actually do take grammatical risks, but they haven't had much opportunity to practice or get meaningful feedback. The goal should be to give enough challenging assignments and readings that students want to push their grammatical limits.

Second, the transfer is often too abstract. Like many examples have shown, the pattern of a sentence can be quite hard to see. For many of my students, they found it easy (or at least possible) to construct a structure by my specifications. They found it difficult to recognize the same structure within their own writing, which often did not contain the same clear constituents that the examples have. Advanced learners don't learn a sentence structure and then look for ways to use it. Instead, they find a complex idea that they want to write and try to make their existing information express it.

The biggest problem is that this assumes that students do not know how to write a sentence, and my material (or other sentence-combining strategies) can teach them to write a conventional one. This is certainly ludicrous. My students have been writing complex sentences for years, if not decades. Like SLA explains, every language learner has fossilized errors, or errors that have become so embedded in their automatic processing that they seem nearly impossible to uproot (Ellis 29). If there isn't significant social pressure (and often with it), the brain simply relies on its past patterns rather than building new ones.

From a grading perspective, a grammar-focused section was a disaster, too. Because it seems unethical to grade them on ideas we haven't covered yet (like thesis development,) the grading was just painful and ineffective for us all. By focusing so closely on sentence structure, the course lost sight of the bigger rhetorical picture, which is essential to all language learning.

Now, I teach all of the course objectives together throughout the whole course. I try to create homework and in class assignments that blend the larger structure and

smaller structures together. In essence, we are always looking at why authors use strategies at every linguistic level. This has been much more successful.

Future Testing Plans

I am hoping to perform more rigorous testing of the efficacy of this method. The rest of this section will show the different experiments that I am either performing now or will perform in the future.

Qualitative Experiment #1: Gauging Student Confidence

I hypothesize that students will increase their confidence in their writing skills as their knowledge of writing conventions increases. To determine that, students will be asked to fill out a short qualitative student on the first and last day of the semester to see if or how their answers differ. The initial questions are as follows. All questions are required except Question 7, which is optional.

1. **Describe yourself: I am a _____ writer.**

2. **Rate your enthusiasm for taking English Composition**

    (0) I would rather be thrust into the darkest bowels of hell than take this course
    (1) Maybe just the semi-dark bowels of hell...
    (2) Losing one limb sounds better
    (3) This class will probably be about the same sensation as ripping off a bandaid from a hairy back
    (4) This class will probably be moderately unpleasant
    5 and 6 are not an option. You have to pick a side.
    (7) This class will probably be moderately pleasant
    (8) I assume some parts of this class will be enjoyable
    (9) I think I'll enjoy this class overall
    (10) I have dreamed of this moment my entire existence

3. **How confident are you in your writing skills overall?**
    (0) Zero confidence in my writing skills. My writing never represents how smart I really am.

(1) My writing occasionally represents how smart I really am. I have a little confidence in my writing skills.

(2) Some confidence in my writing skills. My writing sometimes represents me well and sometimes it doesn't.

(3) A lot of confidence in my writing skills. My writing represents me well most of the time.

(4) Always confident. My writing represents how smart I am.

4. **How confident are you in your punctuation skills?**

(0) I have no confidence in my punctuation knowledge at all.

(1) I can confidently use a little of it.

(2) I can confidently use some of it.

(3) I can confidently use a lot of it.

(4) I can confidently use all of it.

5. **What writing skills do you want to work on in this course? (Essay response)**

6. **How confident are you in your academic reading skills?**

(0) Not confident. I think college reading is really hard.

(1) A little confident. I struggle with college reading but I can usually get through it.

(2) Mostly confident. I may not totally love it but college reading assignments are usually ok.

(3) Confident. The reading assignments are usually easy to accomplish.

7. **(Optional question) English is my _____ language.**

a. first/native

b. second

c. third

d. fourth +

The final survey will differ slightly. Questions 1, 3, 4, and 6 are identical on both the pre- and post-test. Questions 2 and 5 will be worded slightly differently to ask how the course met their expectations, rather than how it will meet them.

The answer to Question 7 (English is my ____ language) should remain the same, but I am planning to ask it again to see if anyone changes their answer. Some of my

students choose not to disclose that they grew up speaking other languages on the initial

quiz, and I find out that they have this ability through other discussions in class. I assume

that bilingual students have had negative experiences in the past that encourage them to

keep this amazing skill private. I hope that this course shows them that all their language

fluency is valuable, and they can take pride in their entire linguistic history, whether or

not they change this answer. I assume this question answers more of my intellectual

curiosity than to provide a replicable research result.

Quantitative Experiment #2: Seeing how the sentences change

I hypothesize that explicitly teaching students to edit their sentences using the

methods and resources outlined in this dissertation can help students to write more

conventional sentences in the edited essays over the course of a semester. To test that

theory, I will first delineate what is contained in a conventional sentence and then provide

a quantitative evaluation measure.

Here are the basic principles of sentence construction in SEAE:

1.   Each sentence should contain at least one essential clause.

2.   Each sentence should contain any modifications to that essential clause.

3.   The writer should use conventional punctuation choices (including citation
        punctuation) to make the clausal relationships clear.

In other words, academic writing assumes that each sentence will give all the

necessary information to understand one complete process and its participants. The

author may wish to modify that process, and any modification should be included within

the same sentence. SEAE also expects that the clausal relationships will be punctuated so

that it is easy to find all its components. This includes citation information, which

punctuates many academic sentences. The reading brain is always looking for patterns;

clear word choices and punctuation make the patterns apparent. Because each

punctuation mark has societally agreed upon uses, a writer can use conventional marks to

help the reader to decode the patterns faster.

To test a sentence's conventionality, a writer should be able to perform the

following tasks on their own writing:

1. Find the clauses within each sentence

2. Map the constituents of each clause

3. Distinguish between an essential and a modifying clause

4. Determine if they want the reader to consider each clause as restrictive or

non-restrictive

5. Gather an essential clause with all its modifications into the same sentence

6. Use conventional punctuation strategies to show the clausal relationships,

including removing excess punctuation that disturbs the clausal structure and

adding beneficial punctuation

If a student can successfully fill out a constituent map on their own writing, then

they can prove that they can perform Tasks 1-6. Obviously, the pedagogical goal is not

to get students to create perfect maps. The map's purpose is to help students to identify

problem areas, see solutions, and successfully transfer that knowledge to an improved

final draft. By analyzing the final drafts, I should be able to see students' ability to create

conventional sentences.

To test this efficacy, I plan to evaluate each student's essays over the course of the

semester. I will

- count the total number of sentences

- determine if each sentence contains/does not contain an essential clause

- determine if the clauses are conventionally separated

  - non-restrictive clauses are separated with punctuation marks

  - restrictive clauses are not separated with punctuation marks

  - the separation occurs on the break between the clauses, rather than interrupting the clause

- determine if the clauses are separated with conventional punctuation

This count should give a quantitative measurement of a student's sentence-level proficiency with academic writing conventions over time, including before intervention, during each stage of instruction, and at the end of intervention. It should show if a student's proficiency with the sentence-level conventions increase, decrease, or remain unchanged over time.

Qualitative Experiment #3: Looking at the Larger Learning Objective Picture

I hypothesize that a greater sentence-level focus does not decrease a student's ability to achieve the other learning objectives for the course. My observational results show that students do at least as well on the other learning objectives as their sentence-level confidence increases. It is entirely possible that my observations are confirmation bias. I would like to test that observation more rigorously.

ISU's English and Philosophy Department does limited assessments of English 1101, so using the same assessment measure and strategies would allow for a comparison against other courses that do not use these same teaching strategies. I will briefly outline the testing mechanism as described in the "General Education Assessment: 5-Year

Report." For the 2016-2017 academic year, the department evaluated only dual-

enrollment sections of English 1101, and that evaluation focused specifically on

Objectives 2 and 6, which are listed below:

2. Adopt strategies and genre appropriate to the rhetorical situation.

6. Use appropriate conventions for integrating, citing, and documenting

source material as well as for surface-level language and style. (1)

To create that assessment, select essays were evaluated by members of the Early College

Program Assessment Committee. They used the following rubric criteria:

- Essay shows consideration of audience and purpose, as defined by the

  assignment or by default (e.g., the teacher).

- Essay is organized and unified.

- Thesis is present and appropriately placed or implied for the genre and is

  developed with evidence over the course of the essay.

- Claims are supported by examples and/or a variety of rhetorical strategies.

- Integrates sources (summary, paraphrase).

- Correctly documents sources (MLA or APA). (6)

Scoring followed the categories "exemplary," "proficient," "developing," and

"beginning," corresponding to the 4/3/2/1 categories used in the on-campus assessments

(6).

To do a comparison to that data, I would recruit two experienced 1101 instructors

to rate anonymous copies of my students' essays according to the established rubric's

criteria and instructions. Then, I could compare how my students performed compared to

the documented peer group who serve as a control. By using the department's rubric and outside readers, I can eliminate my bias from the testing strategies.

Empirical Experiment #4: The Larger Test

If the experiments show positive learning gains, then I plan to do a larger empirical study to test the efficacy of this teaching system when I am not the instructor. I would recruit two experienced teachers who each teach two or more sections of English 1101/1101P in the same semester. I would provide each instructor with identical resources, including instructor and student resources. For each instructor, one class would serve as the treatment group. That class would have my provided material integrated into the course. The control group would be taught as the instructor traditionally teaches the course. While it is presumed that class activities and homework would change in each section, the treatment group and the control group would have identical essay assignments.

The students in all sections would perform the same surveys and have their essays analyzed in the same ways. The instructors would each receive two anonymized batches of student results, and the treatment/control groups would not be identified. The instructors would evaluate the results and report them back to me. I would also analyze them, looking for discrepancies between our evaluations. After the semester and the analysis is complete, the data would be unmasked and compared to see if/how the results changed over the semester.

Why It All Matters

College students write so many sentences in every course in every discipline. Often, a student's sentences are their first introduction to educators and employers. Sometimes, their sentences give the only impression that a writer is allowed to make. By directly improving this level of writing, an instructor can impact nearly every written professional interaction.

Like Inoue argues, a student's ability to use SEAE's many conventions can determine their access to educational and economic achievement, privilege, and employment (27). Conventional writing has the power to negate at least a little of the insidious structural racism that pervades higher education and the larger culture (31). A lack of conventional fluency restricts access to all those same things. While the words that students choose to write matter a great deal, the form matters, too. The entire college process can help develop the former, but FYC has the luxurious affordance of being able to concentrate time and effort on the latter.

While SEAE writers may choose the most elaborate, dense, and precise language to fill their sentences, the structure that supports that complexity is a simple set of patterns that use just a few rhetorically specific marks that create the meaning of each text. While those patterns can be hard to describe, they can be far easier to implement if they are seen. Instructors can make the sentence's structure apparent by teaching a few skills that leverage a student's immense and innate grammatical knowledge of the clausal structure. By gaining these skills, it becomes possible to name what a student and an instructor already know about the language they use so well and so often. With a shared vocabulary and a few tools, instructors can help students to illuminate their sentences'

structure and see where that structure may be problematic. Then, students can revise the structure and add in the conventional symbols that can consistently transmit a clearer meaning. Students are better prepared to join the academic conversation as they develop fluency in its written form.

This dissertation offers tools to help integrate a knowledge of conventions into the larger rhetorical process. Instructors can help students to see that the symbols that they choose and the structures that they create all impact the meaning. The writing system evolved to make reading simpler, more consistent, and more accurate, and a writer can take full advantage of every technological advance if they can see why the tools work in the ways that they do. The reading brain always considers every mode of communication, and this dissertation's resources show students how their writing is likely to be perceived, at least on a structural level. Essentially, the tools make it possible for a student to critically read their own writing and the writing of others at every linguistic level. When students can see all the conventions that they want to mimic, they can do so with more confidence that their writing will represent them and their ideas as they intend. This makes composition a highly empowering process.

The teaching process is highly empowering, too. Far from being a remedial or mechanical task, this instruction can be a vital and enjoyable part of writing instruction. Looking beyond the classroom to the bigger world, it is a way to think globally while acting locally. A FYC instructor is unlikely to change the SAT's racial biases or retrain an entire academy to see dysfunctional writing as a reasonable developmental step, but they can level the playing field just a little more by helping students to create a more consistent sentence structures. Instructors can help the most linguistically, culturally, and

racially diverse students to fare better within the collegiate and professional system since they have the greatest documented deficiencies in sentence-building skills.

That said, this isn't a remedial system. It is a foundational one. Writers from the whole range of academic preparedness have room to improve, and a shared vocabulary facilitates transfer of all writing concepts. In the end, writing is its societally shared symbols, and they create and strengthen the relationships of the writers and readers. By helping a student to choose those symbols with more purpose and consistency, a FYC instructor can play a tiny role in every written relationship that the student creates. That is a lot of pedagogical power.

Grading Your Grammar & Punctuation

When I read your papers, I am *not* looking for where you break grammar rules. Instead, I am looking for places where the words, the punctuation, or (most likely) the combination of the two cause comprehension problems. A comprehension problem is when I must slow down and reread to understand what you meant.

Here are the different categories of comprehension problems, the symbols I use to mark them, and common writing mistakes that cause comprehension problems. In the last column, you can see what to do next if your paper has a lot of these mistakes so that you won't make them in the next paper, too.

COMPREHENSION PROBLEMS	EXPLANATION	COMMON TYPES	WHAT SHOULD YOU DO IF YOU HAVE A LOT OF THESE PROBLEMS?
GRAMMAR g g	Words are not in the right order or form	• Missing or extra words • Using the wrong word • Misspelled words • Subject/verb agreement (Mary run today.) • Article/noun agreement (A girls played.)	Read more carefully. If that doesn't catch your problems, then visit the writing lab and ask them to help you with your grammar. Choose a writing tutor that specializes in ESL.
SHOULD BE TOGETHER > <	One meaningful group is broken into two ungrammatical pieces	• Extra apostrophe • Punctuation breaks one big group of words into two ungrammatical chunks	You could use some help organizing your writing into grammatical groups and using punctuation to help the readers to see the groups. Separation problems are really hard to solve on your own, but a writing tutor can help you diagnose your repetitive mistakes and see how to fix them in the future. Ask them to help you to see where the clauses start and stop, especially looking for your repetitive errors and their solutions.
SHOULD BE SEPARATED < >	Two meaningful groups are combined into one group, making it difficult to read or changing the meaning	• Missing apostrophe • Two separate ideas that are written as one big chunk of words	
RIGHT PLACE, WRONG TOOL ^ ^	The punctuation is in the right place, but the wrong mark/ combination of marks was chosen	• Sentence fragment • Run-on sentence • Book title in the wrong font	You have a good grasp of language structure, but you need to refine your punctuation choices. See a writing guide or writing tutor for help.

You will notice that the symbols are doubled. That is because comprehension problems aren't usually caused by one punctuation mark or one word. Instead, they are usually caused by a group of words and marks that should be working together or aren't working together effectively. I use both marks to surround the comprehension problem. Here are a few examples:

COMPREHENSION PROBLEMS	SENTENCES WITH COMPREHENSION PROBLEMS, SHOWN WITH CORRECTION SYMBOLS	THE REPAIRED VERSION
GRAMMAR *g g*	1. *g* A girls *g* is going to the store. 2. *g* She going to the store. *g* 3. *g* Your *g* in trouble with Mom.	1. A girl is going to the store. 2. She is going to the store. 3. You're in trouble with Mom.
SHOULD BE TOGETHER > <	1. **>** My favorite foods are: sushi and cookies**<** 2. **>**The girl who hit my car, is mean.**<** 3. The **>**dog's**<** bark constantly.	1. My favorite foods are sushi and cookies. 2. The girl who hit my car is mean. 3. The dogs bark constantly.
SHOULD BE SEPARATED < >	1. Because she left me **<>** I cried for days. 2. He stole my dignity**<>**I stole his credit rating. 3. The dog**<>**s bark is so loud.	1. Because she left me**,**I cried for days. 2. He stole my dignity**;** I stole his credit rating. 3. The dog**'**s bark is so loud.
RIGHT PLACE, WRONG TOOL ∧ ∧	1. **∧**Because she left me.**∧** I cried for days. 2. He stole my dignity**,** and I stole his credit rating,**∧**and I kicked his dog,**∧** and I fled the country.**∧** 3. The book **∧**"Incognito"**∧** is great.	1. Because she left me**,** I cried for days. 2. He stole my dignity. I stole his credit rating, kicked his dog, and fled the country. 3. The book *Incognito* is great.

How does this work?
For each paper, perfect grammar and punctuation will earn you a set number of points. Each error subtracts points from your total score (see the rubric for specifics.) I'll mark the errors until they hit the maximum allowed. You can look at your paper to see the kind, number, and density of your mistakes. I hope you use this to eliminate those kinds of mistakes in future papers.

How can this help you?
Most people don't make many kinds of mistakes; they make a few mistakes over and over. If you can recognize the pattern of your mistakes, you can see how to fix and prevent them in the future.

Getting a Perfect Score on Grammar and Punctuation
- Use the ISU Writing Lab to help you edit your paper *before* you turn it in. They can find grammar and punctuation mistakes more reliably and faster than most students. They are also excellent at helping you fix them, which is the tough part.
- The ISU Writing Lab can help you face-to-face, through an online chat, or with written feedback (if you give them 48 hours). Make an appointment online at http://www2.isu.edu/success/writing/ or call 282-7925 (IF) or 282-3662 (Pocatello).

Step 1.
Try to Break the Sentence into Clauses.
(There may only be one.)

Grammatical clauses: Neither clause needs words from the other to sound complete.
If the other side were removed altogether,
the other group of words would still sound like an English speaker might say it.

I have a motto	never live a boring day
On the other hand	he was the lizard king
I love my aunts	Sarah, Emily, and Maria

***Ungrammatical clauses: One or both sides sound like they are missing words.**
If one side were removed, the other side would sound weird.
Keep both sides together and look for another break.

*what I meant to say	*is that I'm sorry for stealing your car.
the ninja who attacked us	*was actually my neighbor.
*I wonder if	she will ever forgive me

Step 2. Find the VPG
Change the timeframe to today, tomorrow or yesterday.
Identify all the words that change.

Most overlooked VPGs: is, am, are, was, were, be, being, been

Clause	Conjunction or Question Group	Subject Group	Verbal Process Group	Objects & Circumstance Group	E or M	Mark
1	Even if	the man	**is always**	a lawyer	M	,
2	Even if	the man	**was always**	a lawyer	M	,
3	Even if	the man	**will always be**	a lawyer	M	,

Found the VPG? Map the other constituents.
Didn't find it? Not sure? Move onto Step 3.

Step 3.
Ask yourself:
Does this sentence need to be this complex?
Could a simpler sentence work better?

1. **Reading is all about finding patterns.**

2. **If it is hard for you to find the constituents, it will be harder for your reader to find them.**

3. **Rewriting is free & fast.**

4. **Rewriting is lots easier than trying to regain your audience's attention or respect.**

Step 4. Looking for the VPG
Add/find the words *never* or *not*, and look for possible VPGs around any place they fit.

What you want and what you get are not the same thing.

What you **never want** and what you **never get** **are not** the same thing.

One possible VPG?
You probably found the VPG. Skip to Step 6.

More than one VPG? Weird subject? Not sure?
Hit Step 5.

Nowhere to put never or not?
You found a modifying clause.
Map it in the Objects and Circumstances Group.

Conjunction or Question Group	Subject Group	Verbal Process Group	Objects and Circumstances Group
			because of the lawyers
			on the other hand

Step 5 to Find the VPG
Narrow down the choices.

Cannot be the VPG/ Can be SG & OCG	Subject Group	Verbal Process Group	Objects & Circumstance Group
Gerunds: Words that end in -ing	**Running**	is	**walking** really fast
Infinitives: To____	**To love**	is	**to live**
Relative Clauses: the person who_____	**The woman who bought** my car	is also	**the person who hired** me
Relative Clauses: the objects that _____	**The company that built** the first submarine	created	**a speaker that plays** underwater

Step 6. Check the Subject Group
Look for a grammatical subject by asking a who/what question with the possible VPG and everything to its right.

Grammatical Question and Answer
You found the VPG and its subject.

Running **is walking really fast.**

What **is walking really fast?** Running.

The woman who bought my car **is also the person who hired me.**

Who **is also the person who hired me?**
The woman who bought my car.

*Ungrammatical question and/or answer?
Keep testing possibilities.
Remember that modifying clauses don't have a VPG.

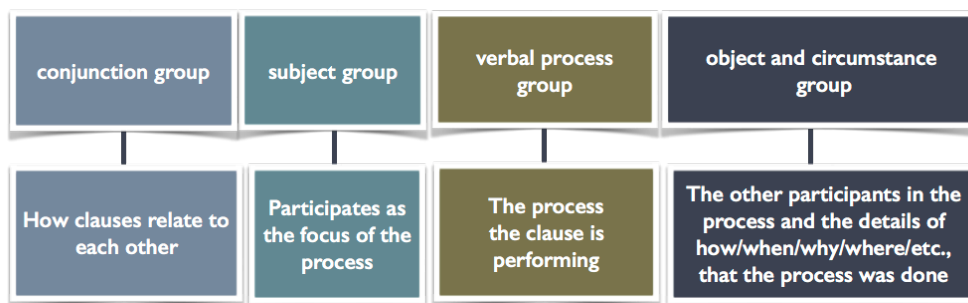The woman who **bought my car.**

Who **bought my car? ***The woman who.

The man who **sued me is a lawyer.**

*Who **sued me is a lawyer? ***The man who.

Step 7. Map the other constituents by their relationship to the VPG.

conjunction group	subject group	verbal process group	object and circumstance group
How clauses relate to each other	Participates as the focus of the process	The process the clause is performing	The other participants in the process and the details of how/when/why/where/etc., that the process was done

Unsure? Have weird constituents?
Diagnosing weird is slow.
Rewriting is fast and more effective.

Step 8. Diagnose the Clause Types.

Clause	Conjunction & Question Group	Subject Group	Verbal Process Group	Objects & Circumstance Group
Essential	**Prohibited**	**Required**	**Required**	**Optional**
	X	she	jumped	
	X	she	jumped	off the bridge
Modifying	**Optional**	**Prohibited**	**Prohibited**	**Required**
	because	X	X	of her dislike of dogs
	X	X	X	ultimately
Modifying	**Required**	**Optional**	**Optional**	**Optional**
	because	she	jumped	off the bridge
	Why did	she	jump	off the bridge?

Step 9.
Placing the punctuation.

1. Look at the conversation you want to join to see how they use punctuation, format, etc., so you can mimic as many conventions as possible.

2. Examine your sentences. Remove excess punctuation in between constituents.

3. Determine if you have an essential clause in each sentence.

4. Determine what each modifying clause is modifying and connect them.

5. Find the clausal pattern that you want to combine.

6. Look at the resources for that combination.

7. Pick the most effective mark and place it between the clauses.

8. Remember that you are the best judge of your writing. If punctuation makes it clearer, use it. If it doesn't, don't. Follow convention unless another strategy would work better.

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