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# The Impact Of Graphic Organizer Use On The Metacognitive Skills Of Ten Senior High School Students In An English IV British Literature Class At Seaside High School

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# THE IMPACT OF GRAPHIC ORGANIZER USE ON THE METACOGNITIVE SKILLS OF TEN SENIOR HIGH SCHOOL STUDENTS IN AN ENGLISH IV BRITISH LITERATURE CLASS AT SEASIDE HIGH SCHOOL

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# DEDICATION

This doctoral dissertation is dedicated to my loving husband, Lewis. Without his unconditional support, this would not be possible.

# ACKNOWLEDGEMENTS

To my beautiful son, Parker: you're my inspiration. Thank you for being you.

To my loving parents, John and Tammy, and my brother, Bo: thank you for your unending support.

To Dr. Kirylo: thank you for all of your guidance throughout this process.

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# ABSTRACT

The purpose of this study was to examine the impact of graphic organizer use on the metacognitive skills of 10 senior high school students in English IV British Literature at Seaside High School.

This study took place over the course of five weeks in Spring 2017 and involved one section of the teacher-researcher's English IV British Literature class at Seaside High School. Through student surveys, a pre-study interview with each student-participant, a learning styles inventory, students' use of graphic organizers, the teacher-researcher's observations and field notes, two writing assignments, and a post-study interview with each student-participant, extensive data was collected on students' use of metacognitive tools. As a result of the study, the teacher-researcher found that using metacognitive tools, specifically graphic organizers, in an English classroom is effective as these tools help students to map out their thinking, consider their own metacognition, and have greater confidence in their reading comprehension and writing abilities.



*Keywords*: metacognition, self-regulation, self-questioning, metacognitive skills, graphic organizers, reading comprehension, writing, phenomenology, scaffolding, schema, think-aloud

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# CHAPTER ONE

## INTRODUCTION

High school seniors have come a long way as they are coming to the end of their high school careers. While they have learned a great deal, and have certainly matured as learners, there are many students who are still unaware of their own thinking (Sheppard & Kanevsky, 1999). It is not that students are unable to understand these processes but just that they are unaware of the processes' existence. Joseph (2009) calls being conscious of thinking processes metacognitive awareness, which she defines as a person's "ability to reflect on their own thinking and develop and use practical problem-solving skills to resolve learning difficulties" (p. 99). Further clarifying, metacognitive awareness involves the person considering his or her own thinking processes as well as the particular task at hand and the necessary strategy for completing that task (Vrugt & Oort, 2008).

While it is certainly a challenge for teachers to cover the required contents of the courses they teach, it is equally demanding to teach students about metacognitive awareness (Sheppard & Kanevsky, 1999). Students do not learn to think metacognitively on their own; it is something that must be explicitly taught (Reeve & Brown, 1984). Joseph (2009) argues that teachers can help their students gain metacognitive awareness by teaching their students to consider what they are learning and thinking in class. That is, students must be taught to learn strategically, which "is a developmental and

instructional process influenced by teachers' methods and materials" (Joseph, 2009, p. 100).

According to Ivers (2012), in order for metacognition to be of practical use to students, a certain maturity is required. He says that metacognitive processes are complex but that they "[involve] the presentation of alternative paradigms," resulting in students experiencing "new levels of consciousness" (p. 51). With metacognition comes richer learning experiences. Students can develop a greater appreciation for what they are learning because they have a better understanding of the process of learning it. Learning about metacognition can help students to better understand themselves and their learning experiences. By identifying their own cognitive processes along with their strengths and weaknesses, people become better, more successful students.

Teachers can foster their students' development of metacognitive skills or strategies, which include planning for cognitive tasks; providing self-instructions, self-questions, and self-monitoring; self-regulating; and self-reflecting. Metacognitive skills are necessary for good reading comprehension; in fact, when learners struggle to understand what they read, it is usually because they lack the necessary metacognitive skills (Sencibaugh, 2007; Humphries, 2013; Anastasiou & Griva, 2009).

The teaching of metacognitive skills greatly improves the likelihood of students' academic success (Joseph, 2009; Loxterman & Beck, 1994; Dignath & Büttner, 2008; James & Okpala, 2010; Lan, 1996). When students learn these skills, they are more likely to challenge themselves in school, increasing their chances of seeking higher levels of education. These skills and experiences will undoubtedly carry over into other aspects of their lives. The end result is more competent, confident individuals. When students

gain metacognitive skills, they learn to think more practically and are better prepared for life after school as they are more likely to be lifelong learners (Joseph, 2009; Brenton-Haden, 1997).

According to Semerci and Elaldi (2014), metacognition encompasses "higher-order mental processes that are often involved in making plans for learning, monitoring learning rates, and predicting performance" (p. 318). It is imperative that these skills are learned because of the profound effects that they can have on academic performance. A student's ability to learn is greatly influenced by his or her experiences. A student's negative experiences, particularly negative academic experiences, could cause him or her to have an adverse perception of school and learning. This can largely dictate the student's achievement (Parsley & Corcoran, 2003; Alexander, Entwisle, & Horsey, 1997; Esposito, 1999).

If students have a good grasp on metacognition, they can use it to their advantage in any classroom environment. Metacognitive skills can help students immensely as they are learning new material. Students can use these skills to take charge of their own learning (Vrugt & Ourt, 2008; James & Okpala, 2010). Preus (2012) describes how the teacher in her study taught her students about metacognitive skills; this teacher also taught her students how to use those skills while teaching them subject-specific content. While evaluating her students' comprehension of a story they had read together, this teacher asked her students questions about the story but had the students identify the reading strategies used in order to answer her questions. In order for students to gain a solid understanding of metacognition, they must not only understand the basic concepts of metacognition but also the necessary processes of it. It is important for teachers to

foster guided practice of these processes with their students through scaffolding, as the previously mentioned teacher did, before having students conduct the processes independently. Students need to fully understand each step before attempting to use these skills on their own (Bilash, 2011; Allen & Hancock, 2008).

Metacognitive skills can help students in any subject area. In a study conducted by Bicer, Capraro, & Capraro (2013), middle school students used writing to understand their own learning of mathematical concepts. The study found that the students who used writing to follow their progress in mathematics showed greater understanding of math than their peers who did not use writing. This is largely because "the writing process has been linked to enhanced problem solving" as it allows students to "be aware of their understanding and express their confusions, beliefs, and feelings with others" (p. 364). Even though metacognitive skills are not completely necessary in order for students to understand mathematical concepts, these skills can drastically improve students' comprehension of mathematics and result in better performance.

Metacognitive skills can help students in any subject area, but they can also help students outside of the classroom in everyday life. In his classic article, Flavell (1979) argued that, among other things, metacognition is responsible for "oral comprehension…language acquisition, attention, memory, problem solving, social cognition, and various types of self-control and self-instruction" (p. 906). It is these areas of metacognition that prepare students to function in the real world. While many aspects of metacognition are too advanced for young students, educators can and should begin laying the foundations of metacognition as early as possible, building upon those

concepts and explaining them more thoroughly as students mature (Flavell, 1979; Dignath & Büttner, 2008).

There are numerous studies that explicate the benefits of teaching metacognitive skills to students (Banning, 2008; Bicer et al., 2013; Brenton-Haden, 1997; Creighton-Lacroix, 2000; Eack, 2012; Dignath & Büttner, 2008). These skills drastically affect student performance in the classroom and help students to become more successful adults. Metacognition is useful in every academic area, and the majority of studies that focus on metacognition relate to reading comprehension specifically. When students are taught how to monitor their own thinking and learning, they become more in tune with their own needs as learners (Lan, 1996; James & Okpala, 2010; Manderville, 2012). This helps them to process more easily and retain new information, which certainly comes in handy when it comes to reading. With the acquisition of metacognitive skills comes a readiness to facilitate independent learning.

While there are a number of studies centering on the helpfulness of learning the basics of metacognition for emerging readers at the elementary level (Brenton-Haden, 1997; McCown & Thomason, 2014; Coppins, 2008) as well as many studies focusing on the benefits of metacognition for college students (Çetin, 2017; Couchman, Miller, Zmuda, Feather, & Schwartzmeyer, 2016; Bol, Campbell, Perez, & Yen, 2016), there are relatively few studies relating to the advantages of metacognition in high school students, comparatively speaking. High school is the final step in many students' academic careers as they enter the workforce immediately after graduation, so it is imperative that they are as prepared as possible for what they will face as adults. Even though students who are

college bound do not enter the workforce as young, they, too, need to be given solid foundations so that they can be successful at the collegiate level.

High school English teachers are not given the task of teaching students how to read, but it is their responsibility to ensure that students are able to comprehend and analyze what they read more and more effectively. One of the greatest responsibilities of high school teachers is to make sure that students are as prepared as possible for their futures. This can be done by making sure that students can think for themselves and help themselves. One way that students can help themselves is by learning how they think and learn as individuals. When students understand this, they gain a greater understanding of their own needs as learners and can more effectively articulate those needs to others. This has clear academic and social benefits. As discussed previously, when students understand metacognition, they are able to better learn information because they improve on the process. If students can learn metacognitive strategies within the context of English literature, then they will be prepared better for what they will face in the future, whether it is college or the workforce.

The present study focuses on the implementation of metacognition teaching in a regular level, high school English classroom and the extent to which the knowledge of metacognition impacts student achievement. When students have a solid grasp on metacognitive skills, they are more successful; therefore, teaching metacognition should become part of high school English curriculum. Because these skills put students in charge of their own learning, what better way to prepare them for the future? In knowing and understanding their own thinking, students perform better in school as well as in the workplace. They are more successful academically because they have a better

understanding of what they learn and can more adequately articulate it. This enhances students' communication skills, and as a result, their social skills improve. When students' social skills improve, their self-esteem increases and encourages the development of leadership qualities. All of these things carry over into every aspect of students' lives.

## Statement of the Problem of Practice

The teacher-researcher is wondering about what impact metacognitive strategies will have on the thinking skills and achievement of her students. The present study focuses on how teaching metacognitive strategies (using graphic organizers) to high school students can benefit the students' academic performance in an English class.

The teacher-researcher has noticed over the years that students have difficulty in putting their thoughts on paper. They struggle to begin the writing process, and once they do begin the process, they struggle with the organization of their writing. At the same time, many of the teacher-researcher's students have difficulty with reading comprehension. Most of her students can read the words of the texts they are given, but they struggle to make meaning of what they read. For the most part, the teacher-researcher's students are demonstrating infrequent use of metacognitive strategies in the classroom.

In the present study, the teacher-researcher will utilize multiple methods to ensure that the results of the study are valid. She will include the use of student surveys given at the beginning and end of the study in order to gain information about students' perspectives of their own learning. She will implement multiple graphic organizers in different contexts in order to gain further data about the impact of students learning

metacognitive strategies and how those strategies help students in their reading and writing. Student-participants will utilize the same graphic organizers several times in order for the teacher-researcher to assess students' understanding and use of the tools in various situations. Since the study focuses on the teacher-researcher's students, she will be able to see firsthand their daily progress. Because she will see them each day, she will have the opportunity to conduct countless informal observations (as well as formal observations, with field notes) as the student-participants work in her classroom. The teacher-researcher will be available to her students whenever they have questions, and she will be able to make any necessary modifications and clarifications. All of these things together will ensure that the study has triangulation and that the data is valid.

## Research Question

What impact will graphic organizer use have on the metacognitive skills of 10 senior high school students in English IV British Literature at Seaside High School as demonstrated through their writing?

## Purpose of the Study

The purpose of this study is to examine the impact of graphic organizer use on the metacognitive skills of 10 senior high school students in English IV British Literature at Seaside High School.

## Brief Overview of the Methodology

The student-participants in this study are students in the teacher-researcher's College Preparatory English IV class, which focuses on British literature. These students are twelfth grade students who expect to graduate at the end of the semester.

Two of the student-participants in the study have Individualized Education Programs (IEPs) that have been written for them because they have a particular circumstance that may hinder their learning. Both of these students have documented learning disabilities. Often students with learning disabilities have low self-esteem because they have struggled academically (Kumar & Raja, 2009). The teacher-researcher believes that these students in particular will benefit from learning to use metacognitive tools as it will boost their performance and thus their self-esteem (Anastasiou & Griva, 2009; Allen & Hancock, 2008).

The present study takes place in a school district in the Lowcountry region of South Carolina. This school district is responsible for nearly 50,000 students in 85 schools. The district is extraordinarily diverse in regards to educational options available to students as it is home to multiple magnet, Montessori, and charter schools of varying size. Comparatively speaking, this is the second-largest school district in the state. Enrollment district-wide has steadily increased over the past several years.

Seaside High School is one of fourteen high schools in its school district. There are roughly 1700 students enrolled in grades 9-12. The school has a 1:25 teacher-student ratio and has received an absolute school rating of excellent for more than six years straight. 89 percent of students at Seaside High graduate in four years.

Data will be collected via a learning styles inventory, two surveys (one given before the research collection and one given after the collection), two interviews with each student-participant (one conducted before the research collection and one conducted after the collection), various graphic organizers completed by the student-participants (that will serve as artifacts), and the teacher-researcher's field notes.

## Significance of the Study

The significance of the present study is one where it is important for teachers to foster an environment where students are aware of their own thinking, and thus the study provides examples of how to do this. The study's significance is also one that impresses on educators the importance of fostering critical thinking in their students as this is a skill that will impact them for life.

## Summary of the Findings

The findings of the study revealed that while the quality of student-participants' writing was largely unimproved by adding the use of graphic organizers, the student-participants did become more comfortable with the writing process, reading comprehension, and with using graphic organizers. In addition, the student-participants found that they now consider their metacognition more often as a result of the study. The findings support using metacognitive tools such as graphic organizers in the high school English classroom in order to help students consider their own thinking processes and, as a result, become more comfortable with the writing process and with reading comprehension.

## Limitations of the Study

The present study was limited due to the small sample size and relatively short period of data collection. The conclusions drawn from the data collected would have been more strongly supported with more in-depth information from a larger sample size and a longer period of data collection.

## Dissertation Overview

In Chapter Two, readers will find a literature review which primarily focuses on the concept of metacognition and other related concepts, how metacognition can be fostered in the classroom, and why it is critically important.

Chapter Three will provide readers with a discussion of the methodology used in the present study. This section will include the statement of the problem of practice, purpose, and problems; the research question; detailed information about the study itself, including the setting and time frame of the study, descriptions of the variables in the study, and the study's student-participants; information about the research methods and procedure; a description of how the data will be analyzed; a plan for reflecting with student-participants on the data; and a plan for devising an action plan.

Chapter Four will primarily focus on the findings of the study, themes that emerged, and changes that were made as the study progressed. Specific methods used to analyze the collected data will be discussed in this section as well as the results of the study.

Chapter Five will give readers a summary of the study, including a restatement of the research question and purpose of the study. In this section, readers will find a detailed discussion of the study findings along with limitations of the study, conclusions about results, implications of the study, an action plan, and suggestions for future research topics.

## Definitions of Terms

The following is a short list of keywords relating to the study along with their definitions.

*Action research* seeks to explain the effects of a particular treatment on groups of students and the extent of those effects. It should improve education in practical, cyclical ways through educator collaboration (Mertler, 2014).

*Cognition* is a process where students respond to information and gain knowledge (Cognition). Knowledge of cognition means that "the learner is aware of personal strengths and weaknesses as well as the requirements of the learning situation" (Schmitt, 1986, pp. 3-4).

*Epistemology* is the study of what we know and how we know it. Epistemology is used in metacognitive processes (Steup, 2005).

*Graphic organizers* are information mapping tools that enable students to generate thoughts and see those thoughts planned out before actually putting them into paragraph form (Graphic Organizers for Writing, 2017).

*Metacognition* is thinking about thinking and is the method by which students consider their own thinking and learning processes (Flavell, 1979; Schmit, 1986; Ivers, 2012; Vrugt & Ourt, 2008).

*Metacognitive skills* include planning for cognitive tasks; providing self-instructions, self-questions, and self-monitoring; self-regulating; and self-reflecting. Metacognitive skills are necessary for good reading comprehension (Sencibaugh, 2007; Humphries, 2013; Anastasiou & Griva, 2009).

*Modeling* refers to the step-by-step demonstration of a particular action. This is typically done by a teacher when he or she is walking students through a new activity (Schoenbach, Greenleaf, Cziko, & Hurwitz, 1999; Sencibaugh, 2007).

*Neurocognition* encompasses all that is involved with reasoning and processing. The area of neurocognition embodies countless processes that work together simultaneously (Eack, 2012; Schmitt, 1986). Learners' past experiences deeply affect their neurocognition (McKenzie, Robinson, Herrera, Churchill, & Eichenbaum, 2013).

*Phenomenology* is used when metacognition is practiced. It is "the study of consciousness as experienced from the first-person point of view" (Smith, 2013, p. 1). The concept of phenomenology explains why understanding is so subjective (Schmitt, 1986; Pinar, Reynolds, Slattery, & Taubman, 1995).

*Scaffolding* is the teaching method used to support students as they learn, offering students more independence and less guidance from the teacher as they progress in their learning. There are multiple ways to utilize scaffolding in the classroom, but it is crucial that teachers pair the steps of scaffolding with those of metacognition so that students are able to manage and take charge of their own learning eventually (Hannafin, McCarthy, Hannafin, & Radtke, 2001; Anastasiou & Griva, 2009).

*Schema* refers to frameworks or clusters of knowledge in the minds of learners. When students learn, they add new information to schemas that they already have (Bartlett, 1932; Piaget, 1959).

*Self-questioning* is the act of asking oneself questions as a task is being performed. It is beneficial for learners to practice self-questioning because it helps them to more carefully consider their own thinking processes, thus supporting the development of metacognition. At the same time, it is beneficial for a teacher to model this action for learners so that the learners can better understand the thought processes of the teacher (Sencibaugh, 2007; Taboada & Guthrie, 2006).

*Self-regulation* is the act of setting goals, monitoring oneself, and ensuring the use of particular learning strategies in order to accomplish a task. This is an action that strongly supports learners' metacognitive thinking (Reynolds & Perin, 2009; Pintrich & de Groot, 1990; Dignath & Büttner, 2008).

*Think-aloud* requires that students verbalize what they are thinking as they are participating in a particular activity as a way of ensuring critical thinking and demonstrating metacognition (Banning, 2008; Loxterman & Beck, 1994; Reeve & Brown, 1984).

# CHAPTER TWO

## REVIEW OF LITERATURE

One of the many ways that we can teach our students to be independent and advocate for themselves, particularly in an educational environment, is to help them to discover who they are as learners. This can be done through learning about metacognition, using metacognitive tools, and reflection (Dignath & Büttner, 2008; Ben-Eliyahu & Linnenbrink-Garcia, 2015). Metacognition is a process that must be fostered in order for students to ensure that their learning needs are met. When their needs are met, academic achievement improves drastically. Students become more confident and capable, and they are even more prepared for adulthood.

Students often struggle academically because they do not know how to "decode" the information they are given. For example, if a student is a primarily visual learner, then she may perform poorly in a lecture-based class. If that same student was to make what she learns in that class more visual, however, then her needs would be met, she would undoubtedly perform better, and as a result of better performance, she would have greater self-esteem. If students understand what they need as learners, then they are capable of doing this very thing for themselves. Until relatively recently, educators and educational researchers widely supported learning styles theory. While many researchers now argue that learning styles do not make much difference in how well students learn (Parslow, 2012; Li, Medwell, Wray, Wang, & Liu, 2016), it is still helpful for students to

have an understanding of their learning preferences and biases so that they can better help themselves to be successful academically (Jensen, 2000).

Students sometimes struggle to decode the information they are given because they experience information overload. When this happens, they do not know what to do with all of the information that is coming at them at once, and they become overwhelmed easily. Metacognitive tools can help with this significantly (Humphries, 2013; Allen & Hancock, 2008).

Understanding and being able to use metacognitive tools can significantly improve students' performance in the classroom (Ben-Eliyahu & Linnenbrink-Garcia, 2015; Pintrich & de Groot, 1990; Humphries, 2013; Allen & Hancock, 2008; James & Okpala, 2010). Metacognitive tools help students to break down information into manageable chunks. They also help students with information processing because they provide a means of organization. Having metacognitive skills and tools can be immensely useful in reading comprehension, the writing process, and problem solving. These skills can help students to have a greater understanding of who they are as learners, which can in turn lead them to be abler to support their own learning (Dignath & Büttner, 2008; Reeve & Brown, 1984; Humphries, 2013). In order to use these tools, students need to "acquire knowledge about how, when, why, and where to apply these strategies" (Dignath & Büttner, 2008, p. 236). That being said, students must be willing to use these metacognitive skills in order to reap their benefits (Pintrich & de Groot, 1990; Anastasiou & Griva, 2009). While students may be aware of their own thinking, if they do not use the metacognitive tools that they have, those tools are of no use to them.

Using these metacognitive tools likely results in greater academic achievement, which is why metacognitive instruction results in greater self-esteem. There is also a great deal of research that supports the notion of student self-efficacy. When students (and people in general) believe that they are able to complete a task and believe that they will have success, they are more likely to do both because they are motivated (Brenton-Haden, 1997). When students have healthy self-esteem, their self-efficacy is more likely to benefit them as opposed to students with unhealthy self-esteem (Reeve & Brown, 1984; Creighton-Lacroix, 2000). When students believe that they are capable, they perform better, and they also "engage in more metacognition, use more cognitive strategies, and are more likely to persist at a task than students who do not believe they can perform the task" (Pintrich & de Groot, 1990, p. 34). Students' self-esteem directly impacts their self-efficacy, which in turn boosts their motivation, but this is cyclical. When students are motivated, they have good self-esteem, which again impacts their self-efficacy (Brenton-Haden, 1997).

Using metacognitive tools also results in increased self-esteem because through using these tools, students become more independent (Brenton-Haden, 1997). Reeve and Brown (1984) found that through metacognitive instruction, students learned to model the behaviors of the teacher. As the students became better at using metacognitive tools, the teacher allowed the students to have greater independence. When the students experienced independent success, they were even more motivated to work without the help of the teacher. The students experienced success, and as a result, their confidence soared. When students have the necessary metacognitive tools, they have greater reading comprehension as well as greater self-esteem.

There are ample research studies that focus on metacognition and teaching metacognitive tools to students; however, many of those focus on language acquisition, students with learning disabilities, or older students (Assiri, 2014; Banning, 2008; Kumar & Raja, 2009; McCown & Thomason, 2014; Sundeen, 2014). The lack of research on metacognition in secondary classrooms, particularly English classes, is probably in part due to the pressures placed on teachers to make sure that all students meet the benchmarks listed on the long list of ever-changing language standards. Teachers have a massive responsibility in this and must do all that they can to prepare students for high-stakes tests, the scores on which students, schools, and teachers are heavily evaluated. In addition, teachers have countless other responsibilities. Research is time consuming, and many classes have strict curricula to which teachers must adhere with no extra time built in. While there is ample research that focuses on metacognition and teaching metacognition to students, particularly elementary school students, students with disabilities, and college students, there is, however, scarce research when it comes to secondary students.

In a study conducted in a middle school English classroom, teacher-researcher Oshar (1997) taught her students metacognitive strategies in order to improve their test preparation skills. Oshar's students were divided into three groups, the control group, the "passive" group, and the "active" group. The study began with a pretest to gauge students' knowledge and perceptions about school. The pretest asked students questions about their attitudes towards school as well as study habits and time management. After giving students the pretest, Oshar used two interventions on her groups of students. The "passive" group was shown a video on time management, test-taking techniques, and

learning styles, and was then given a pamphlet outlining similar ideas. The "active" group of students was shown the same video, given the same pamphlet, and then participated in four interactive lessons on the material. The control group did not watch the video, did not receive the pamphlet, and they did not participate in the interactive lessons. At the end of the study, the video and pamphlet were reviewed with the active and passive groups, and two posttests were given to all three groups of students.

The results of Oshar's (1997) study were that regarding time management, the students in the passive and active groups did not score higher on the posttests than the students in the control group. In the study skills category, the results were the same, but Oshar found that the female students in all three groups performed significantly higher than the males. In her discussion at the end of her paper, Oshar said that she felt that "the treatment in [her] study was not nearly as intense" (p. 48) as other studies involving teaching metacognition that achieved greater results. She also said that based on the findings of other studies, "more consistent and meaningful follow-through and reinforcement of the skills covered in the video may have been necessary in order to improve the results of students in the treatment groups" (p. 49).

A study conducted by MacMonagle (2012) that focused on adults using metacognitive skills to improve reading comprehension and writing found that students as a whole "do not always use or need to use, all the strategies at their disposal" (p. 146) when reading. Even when students, regardless of their ability, have been instructed in the use of metacognitive strategies, they do not choose to use those strategies every time they encounter a piece of text. MacMonagle says that this is due to the fact that the process of reading is so complex that even the best readers are unlikely to read a text through once

and gain a perfect and complete understanding of it. He adds that students find it difficult to choose any one particular strategy to use when reading in order to better understand a text; he says that "skills and strategies are called into play automatically and fluently by proficient readers or selectively as they are needed" (p. 146).

For his study, MacMonagle (2012) focused on students in his adult basic skills class at a community college. MacMonagle gave his students two different surveys to evaluate their knowledge of metacognition. With the results of those surveys, he was able to glean specific information about his students' ability to use metacognitive strategies before they received metacognitive instruction as part of the study. He also gave the students a short passage to read and asked them to respond to the passage in writing. (He did not give the students any guidelines as to what to write.) After finishing the writing, he had the students reread the passage and compose a second response, detailing whether their understanding of the reading had changed since the first read and first response. He also had the students draw illustrations to show their understanding of what they read. All of this took place without any metacognitive instruction.

Over the course of the study, MacMonagle (2012) asked his students to write two essays and had multiple in-class conversations about metacognitive strategies. He also retested his students using the same surveys that he used at the beginning of the study. After the study, MacMonagle concluded that most of the students he observed read on such a low reading level that they were more or less unable to comprehend anything other than the surface level meanings of the words they read. He said that many of these students had great difficulty in reading but managed to function at a high level in the workplace. He said that his students had learned to use any available resources in order

to understand written instructions or guidelines that they were given at work and, therefore, were able to do their jobs well.

As a result of his study, MacMonagle (2012) said that his students "believed themselves to be both aware of and capable of using appropriate strategies during their reading" (p. 125), even when they were not actually using those strategies or were not using them effectively. While time constraints were a major issue, MacMonagle found that with his students, "what they could not write they could picture" and "what they could picture had a direct bearing on their understanding despite marginal reading and writing abilities" (p. 152). He said that his efforts to teach his students metacognitive strategies to use in writing were unsuccessful because his students' writing skills in general were so poor, but he added that having his students illustrate their understanding of text and then write about their drawings was beneficial in that it added to their overall comprehension.

Creighton-Lacroix (2000) led a study on the impact of metacognitive strategy instruction on regulating test anxiety. According to Creighton-Lacroix, students with test anxiety are sometimes "deficient in study and test-taking skills" and "experience difficulties in encoding, storing and retrieving information" (p. 13). Others simply have problems with recalling the learned information during the testing situation. Some students with test anxiety struggle academically and are resigned to the idea that they will fail regardless of what they do to prepare. Creighton-Lacroix believed that by giving these students metacognitive tools, they could learn to work through these difficulties.

For her study, Creighton-Lacroix (2000) focused on 105 eighth grade math students, not all of whom exhibited test anxiety issues. At the beginning of the study, all

of the students were evaluated using the State-Trait Anxiety Inventory. Once the results were calculated, the students were put into one of three groups. There were 43 students identified as having high test anxiety.

Over the course of the study, two main interventions were put into place in an effort to use metacognitive instruction to reduce test anxiety in the subjects. The first strategy was called Road Signs and was used to help students with problem solving. The second strategy, SCORER, was used to help students with test taking. The Road Signs strategy was a guide for students to use to help them remember all of the steps of problem solving; SCORER was simply an acronym of tips to use while taking tests. Both of these strategies encouraged students to stay calm during tests, consider their own thinking processes, and make logical plans in order to perform well on tests.

To assess student progress at the end of the study, students were given a teacher-created math test, and the State-Trait Anxiety Inventory was administered again. Creighton-Lacroix (2000) concluded that test anxiety "decreased significantly over time, but it appeared unaffected by strategy instruction" (p. 66). She found that "the largest decrease [in test anxiety] was in the no strategy instruction group" (p. 66). In her discussion of the results, she speculated that the metacognitive strategies used in the study may not have contributed to the lowering of test anxiety in the students because of the difficulty of the math test used to evaluate the students' progress or because of the specific metacognitive strategies used. She did point out that the test anxiety in the students did not increase as a result of the study. The levels of anxiety for the students either stayed the same or decreased, which in itself is reason enough to consider using metacognitive strategies in the classroom. She suggested that teachers utilize such

instruction from the beginning of the school year so that students have a chance to get used to the strategies and can get in the habit of using them. She added that greater emphasis should be placed on educating students about "their own psychological processes such as information processing, memory, and the structure and functions of the brain" as this might make the metacognitive strategies "more meaningful to students," which would "[increase] not only their skill but their will to use the strategies" (p. 102).

Brenton-Haden (1997) conducted a study on using metacognition in the classroom for a different purpose. She sought to discover if using metacognitive strategies could help students with attention difficulties. In her discussion, she said that such children often "appear to exhibit a weakness in metacognitive processes" and "do not employ the strategic behaviours necessary to process information as efficiently as do children who do not have such attentional problems" (p. 31). She added that students of this nature commonly lack the motivation necessary to consider their own metacognitive processes but can learn to use those processes to their advantage once motivation is gained.

Brenton-Haden's (1997) study focused on nine students with identified attention problems. These students were first evaluated using the Conners Teacher Rating Scale-39 in order to get a perception of where the students were behaviorally and how they compared with each other as well as with their peers. The students were given also the Stroop Color and Word Test at the beginning of the study in order to have documentation of learning differences as well as the Selective Auditory Attention Test and the vocabulary portion of the Wechsler Intelligence Scale for Children. Over the course of the study, the teachers involved implemented the Skills for Thinking and Research (STAR) program with the subjects. The goal was for this program to "facilitate feelings

of ownership" (p. 66). Students were taught metacognitive and cognitive strategies for success in the classroom and were encouraged to become active participants in their learning. In order to monitor the students' use of the strategies, the students were observed and their verbalized thoughts were recorded. The study utilized the Learning Process Questionnaire as a pretest and posttest in order to document changes in student behavior, for which students evaluated their perceptions of school as well as their use of particular strategies in the classroom.

At the conclusion of the study, Brenton-Haden (1997) found that as a result of the interventions put into place with the students, there were major increases in the use of metacognitive strategies by the students. The students became more cognizant of their own metacognition, which increased their attention and allowed them to focus better on the task at hand, resulting in greater achievement.

## Historical Context

Since the early 1900s, metacognition has been a significant topic of discussion in education, even though the term itself was not used until renowned psychologist John Flavell (1979) coined it. As researchers began finding out more about metacognition, its implications for education became more and more apparent, especially in the area of reading comprehension. Mid-twentieth century research focused heavily on approaches used in reading, but it was not until the 1970s that researchers began looking at the cognitive processes used while reading. It was at this point that psychologists started considering the neurocognition and phenomenology involved in learning (Schmitt, 1986).

William James wrote extensively about stream of consciousness and its importance. He believed that our thoughts are never-ending and are all connected to one

another. Thus, everything that we experience and all of our reflections on those experiences are interconnected (James, 1890).

The field of metacognition as it is today has a great deal in common with the beliefs of John Dewey (1910), who first came up with the idea that as people read, they monitor and question their own thinking continually. Dewey spent much of his career arguing the importance of reflective thought. He believed it immensely helpful for learners to "retrace the processes gone through and to state to oneself how much and how little of the material previously thought about really bears on the conclusion reached and how it bears" (p. 75).

Jean Piaget believed in the importance of being able to understand and explain one's own thinking processes. He felt that people begin to consider their own thinking processes at a very young age and without realizing it. He felt that metacognition and self-regulation were directly related (Piaget, 1964/1968).

Lev Vygotsky believed in the importance of being aware of and in control of one's thinking processes. Like Piaget, Vygotsky felt that this begins at a young age and increases with maturity. He believed that people have a constant inner monologue and subconsciously talk themselves through daily activities and processes (Vygotsky, 1986).

Schmitt (1986) presents a detailed review of changes in metacognitive teaching over the past century. She says that the first references to thinking about thinking in education occurred around the turn of the twentieth century. French psychologist Alfred Binet was one of the first researchers to document a subject's thought processes while problem solving. He first wrote about these findings in 1903. In the same decade, James

Baldwin conducted a study for which he gave students a questionnaire about their studying and learning strategies.

In the 1980s, research revolving around metacognition became drastically more defined as the term came to encompass "two separate but somewhat interdependent phenomena: *knowledge* about cognition and *regulation* of cognition" [emphasis in the original] (Schmitt, 1986, p. 3). Knowledge of cognition means that "the learner is aware of personal strengths and weaknesses as well as the requirements of the learning situation" (pp. 3-4), and regulation of it "refers to the self-regulatory functions of planning, monitoring, and revising if breakdowns in comprehension or retention occur" (p. 4). As metacognition research evolved, researchers began to see just how difficult the observation of metacognition is. The processes involved in metacognition obviously occur internally, and there are often multiple processes occurring simultaneously, many of them subconscious (Brenton-Haden, 1997).

According to Wagoner (1983), soon after Flavell coined the term metacognition, the term became synonymous with comprehension monitoring, especially when being used to describe the reading process. Metacognition was also referred to commonly as cognitive monitoring, as it often is today. In order to evaluate the use of metacognitive strategies, researchers employed frequently the use of interviews and surveys, and they found that older students were able to consider the notion of epistemology better, describe their thinking processes more clearly, and articulate more effectively the steps they took to reach a conclusion as compared with younger students (Wagoner, 1983).

The field of metacognition continued to evolve throughout the 1970s and 1980s, as described by Walczyk (2000), who discusses some of the key emerging theories about

reading in that period. These theories changed the way that people regarded metacognition as it relates to reading comprehension.

One such theory, the Reading Automaticity Theory, was developed in 1974 and states that as students become more adept at reading, the processes required in reading become more automatic for them. As students get better at reading, they think less about the mechanics of the reading process because it becomes second nature to them. The metacognitive processes involved in reading happen on their own and without the student having to concentrate on them, which frees up the student's working memory to concentrate more on the deeper meaning of the text (LaBerge & Samuels, 1974; Walczyk, 2000).

The Verbal Efficiency Theory (Walczyk, 2000), which came about in the mid-1980s, expands on the Reading Automaticity Theory (Perfetti, 1988). It says that not only does the act of reading and comprehending individual words and phrases become automatic for experienced readers, but so does the "activation of relevant background knowledge from memory" (Walczyk, 2000, p. 557). All of these processes happening together are known as verbal efficiency. As students become better readers, verbal efficiency happens more quickly and "transmits a superior quality of information to higher level subcomponents in the reading system" (Walzyck, 2000, p. 557).

The Metacognitive Theory, first referenced in 1985, says that unlike what the Reading Automaticity Theory and Verbal Efficiency Theory say, the processes specifically involved in metacognition are not fully automatic. Even though experienced readers use metacognitive strategies effectively and with ease, and the selection of these strategies is often instinctive, these are still conscious decisions that the readers must

make. Metacognitive Theory says that efficient readers read with a goal in mind and reread a text until the goal is reached using whatever metacognitive strategy is necessary and most effective (Baker & Brown, 1984; Walzyck, 2000).

Current knowledge of metacognition also has roots in the beliefs of several early psychologists, especially William James, Jean Piaget, and Lev Vygotsky, as discussed previously. While knowledge about metacognition and support for it in educational settings has certainly grown and changed over time, the fact that its basic principles trace back to so long ago truly adds to its overall significance and value.

## Theoretical Base

Renowned psychologists William James, Jean Piaget, and Lev Vygotsky supported metacognition and what it can do for students, as described in the writings of Fox and Riconscente (2008). Fox and Riconscente describe the similarities in the psychologists' beliefs and research findings and those held today about metacognition.

A significant portion of William James's work focused on the concept of stream of consciousness. Much of metacognitive instruction today involves teaching students to verbalize their thoughts as they have them in an effort to analyze learning processes. James believed that focusing on thought processes was crucial for metacognition and being able to understand the Self more clearly. He felt that being able to understand one's own thinking processes was part of becoming an adult (James, 1890; Fox & Riconscente, 2008).

Jean Piaget believed that metacognition is a combination of being aware of one's thinking processes and being able to explain those processes. He felt that both were necessary "for the understanding of other people as well as for the understanding of the

outside world" (Fox & Riconscente, 2008, p. 378) and that this could only happen once people began reasoning as adults do (Piaget, 1959; Fox & Riconscente, 2008).

Fox & Riconscente (2008) state that researchers today still reference Lev Vygotsky's findings on metacognition from the 1920s and 1930s because of their continued relevance. Vygotsky discussed heavily the importance of being aware of cognitive processes and how to control them. Vygotsky believed that metacognition and self-regulation could not be separated because "the intentionality implied by self-regulation requires consciousness and the control required for consciousness implies self-regulation" (p. 383). He believed that only those reasoning as adults were capable of truly thinking about their own thinking; this aligned with the beliefs of Piaget. Vygotsky also believed in the importance of social interaction. He felt that this inspired greater metacognition in individuals because interaction with others raises questions that would not have been raised otherwise (Vygotsky, 1978).

There is a direct correlation between metacognition and phenomenology; it is difficult to discuss metacognition without also discussing phenomenology to some degree. Pinar et al. (1995) support the idea that the concept of understanding is subjective. What a person is taught is subjected to his or her own interpretation before it is actually learned and committed to memory; this concept is supported by the Verbal Efficiency Theory (Walczyk, 2000). It is no surprise, then, that when students are taught the same information, that information is received, processed, and stored differently by every student. Phenomenology seeks to explain why this is. The purpose of phenomenology, according to Pinar et al. (1995), is to understand experience, to "[seek] a transcending theoretical understanding that goes beyond lived experience to situate it,

judge it, to comprehend it, endowing lived experience with new meaning" (p. 408). People receive, process, and store information in the way that they do because of their "lifeworld[s]" (p. 406) or experiences. People are generally unaware of their lifeworlds and, therefore, must be made aware of them.

If students can understand the impact that their experiences and lifeworlds have on their learning, then they can more easily understand their own metacognitive processes. By having a more thorough insight into how their pasts impact their current psychological states, students will learn ways to tailor information presented to them so that it can be taken in and stored more effectively.

One way that students' lifeworlds affect their learning is through preconceived notions that they have prior to learning (Pinar et al., 1995; MacMonagle, 2012; Kucan & Beck, 1997). Friesen (2009) says that hermeneutic phenomenology "takes as its starting point our inescapable involvement in practical everyday concerns and activities" (p. 123). We are a product of our experiences, and to a great extent, we cannot control what we experience. We make assumptions and create preunderstandings based on those experiences. That being said, when we have assumptions about a topic, those assumptions have tremendous bearing on any new information that we learn about that topic. For example, if a student has a traumatic experience with a dog as a child, then everything she learns from that point on about dogs will be affected by her traumatic experience, even if only at the subconscious level.

Friesen (2009) argues that people benefit more from allowing their lifeworlds to impact their understanding of their surroundings instead of attempting to separate the two. Because our lifeworlds are part of who we are, it is truly impossible to have our

lifeworlds not influence our understandings of the world. In fact, we are incapable of understanding our surroundings without employing what we know to be true, which manifests itself in our lifeworlds.

The concept of our lifeworlds impacting our learning goes hand in hand with the concept of schema theory, which was first described by Frederic Bartlett (1932), though the word schema was not used until it was coined by Jean Piaget (1959). Schema theory is the concept that in order to understand anything, people must first use what they already know and have experienced. When people learn new information, they build upon and expand their existing schemas, which act as organizers for the new information. These schemas must exist, to some degree, in order for the learner to be able to comprehend the new information (Bowman, Frame, & Kennette, 2013; MacMonagle, 2012; Humphries, 2013). At the same time, in order for new information to truly take root in one's mind, the existing schemas must first be called to consciousness and activated (Guthrie & Klauda, 2014; Scott, 2001; Richgels, 1982). Therefore, it is in teachers' best interests to help their students call to mind the appropriate schema at the beginning of each lesson, thus ensuring the lesson's effectiveness (Janseen, 2002; Humphries, 2013; Taboada & Guthrie, 2006).

When students recall existing schemas before reading, they are abler to make connections to the text. This is because recalling schemas allows the students to activate prior knowledge in order to make meaning of the text they are reading so that they can do something with it. This process causes the existing schemas to grow and become intertwined, creating a stronger network of schemas (Bowman et al., 2013; Taboada & Guthrie, 2006).

Dysfunctional schemas negatively impact students' learning (Van Vlierberghe, Braet, Bosmans, Rosseel, & Bögels, 2010). These are created early in life when people have negative experiences. Dysfunctional schemas adversely affect the way that people see the world around them. Because of their negative past experiences, people see their surroundings through that lens, which negatively affects their neurocognition. Consequently, when learners have dysfunctional schemas, their learning is negatively affected. Regardless, schemas are constantly changing, and it is possible for dysfunctional schemas to improve over time as the information within them is reorganized (McKenzie et al., 2013).

Students can essentially relearn the skills necessary for reading comprehension through the use of metacognitive tools. Through metacognition, students practice monitoring, summarizing, questioning, clarifying, and self-regulation, skills that can be used while reading. As these skills are employed, students relearn effective reading techniques through learning what to look for while reading in order to make meaning of the text (Reeve & Brown, 1984; Brenton-Haden, 1997).

People are only able to make meaning of text based on what they already know (Wittrock, 2010; Taboada & Guthrie, 2006). This is because all learning is tied to existing schemas. Learners must find a way for any new information to relate to the schemas that are already in place. This concept is supported by the information processing theories of cognitive psychology (Bowman et al., 2013; Brenton-Haden, 1997). These theories explain the processes of taking in information, making meaning of it, and storing it. Learning can be made easier if information is divided into chunks. Chunking makes the information more manageable and retainable because of the way

that short- and long-term memory work; this is known as the depth-of-processing effect. Since a major objective of teaching is to foster deep understanding in students, chunking is a popular strategy used in the classroom (Bowman et al., 2013).

Bilash (2011) provides tips for how to use scaffolding in the classroom and modify it for any subject area or age group. Scaffolding "provides an ideal opportunity to use the students' prior knowledge" to help build "support for the new material" (Bilash, 2011) that is being taught in class. Scaffolding, Bilash adds, "[provides] students with the supports needed to complete a task or…[learn] new concepts" (Bilash, 2011). Teachers need to provide their students with lots of guidance every time that a new topic is introduced or a new strategy is used, as supported by the Metacognitive Theory (Walczyk, 2000). Scaffolding is a good way for teachers to provide their students with this support. It allows students to be challenged without too much risk involved because the teacher is providing close guidance (Humphries, 2013). Scaffolding is one of the methods that the teacher-researcher plans to use with her students to help them learn the metacognitive strategies used in the study.

The present study will begin with the student-participants taking a learning styles inventory (Appendix E), which will lead to class discussions on multiple intelligences, different types of learners and personalities, and the concept of schemas. These introductory activities will give the teacher-researcher some insight into her students' natures and predispositions and will also serve as icebreakers to help the students get to know one another as the study takes place at the beginning of the semester. The learning styles inventory will be a good place to start in the ongoing class discussion about metacognition and epistemology. The class discussion on multiple intelligences will

expand on the discussion of learning styles and will give the student-participants more insight into who they are as learners. The teacher-researcher will reintroduce the concept of schemas with the essay assignment (Appendix I) and the GOLD graphic organizer (Appendix J), emphasizing how people can interpret the same text differently.

When students learn about multiple intelligences, they learn more about their strengths as learners (Büen, 2007; "Multiple Intelligences," 2015). When students understand the basics of multiple intelligences, they also understand that even if they have weaknesses as learners, they no doubt have strengths as well (Gardner & Hatch, 1989). The knowledge of multiple intelligences "[provides] students with multiple ways to access content [which] improves learning" ("Multiple Intelligences," 2015). It also allows students a variety of ways to showcase their knowledge and skills which can help them to become more engaged ("Multiple Intelligences," 2015). This method is an effective way to begin an ongoing discussion with students about metacognition. The teacher-researcher will discuss this following the discussion on learning styles and schemas in order to further explain to her students how people can interpret the same text differently.

Price-Mitchell (2015) provides tips for teachers who want to foster metacognition in class, and she also discusses the non-academic implications of such instruction. She says that when students learn about their own thinking processes, they become more effective learners, and they use that knowledge in other areas of their lives. With this, they reflect on the goals they have for their futures, which also allows them to relate to other people more effectively. Metacognition, Price-Mitchell says, is a "tool for monitoring and controlling our behavior and adjusting our beliefs of the world, not only

within ourselves, but, importantly, between individuals" (Price-Mitchell, 2015). She adds that this "actually changes the structure of the brain, making it more flexible and open to even greater learning" (Price-Mitchell, 2015) through the changing of schemas. Metacognition helps learners to maximize their skills and knowledge they already have (Creighton-Lacroix, 2000; Anastasiou & Griva, 2009; Kucan & Beck, 1997).

## Graphic Organizers

Metacognitive skills are employed in the use of graphic organizers and are very useful in the writing process. Tracy, Reid, and Graham (2009) say that students' writing can be significantly improved by using such tools. In order for this to happen, however, students must have a thorough understanding of the purpose and importance of each tool as well as how each tool can be applied (Brenton-Haden, 1997; Humphries, 2013). In a study involving middle school students, Tracy et al. (2009) found that when students were given metacognitive tools to help them plan their writing, those students' stories "were longer, schematically stronger (in terms of inclusion and quality of story parts), and qualitatively better" (p. 330) than those of the students in the control group. Graphic organizers, such as the ones stemming from Self-Regulated Strategy Development (SRSD), help students in the planning stages of writing as they can help students to monitor their thinking and see their ideas mapped out on paper even before the construction of the first paragraph (Reynolds & Perin, 2009). This allows students to plan their writing more effectively, resulting in more efficient and better-quality writing. Graphic organizers positively impact students' neurocognition.

Graphic organizers can also help students to read more effectively as they can assist students in knowing what to look for when reading, help them to better understand

how text is structured, and help students to activate existing schemas (Reynolds & Perin, 2009; Allen & Hancock, 2008). This is because of the Reading Automaticity Theory (Walczyk, 2000); when learners are not naturally strong readers, they can benefit tremendously from the use of graphic organizers. Schoenbach et al. (1999) say that a good way to facilitate efficient reading in students is to help them learn to build on schemas. They state that one of the most effective ways to do this is to teach students to think metacognitively about what they already know by teaching them "how they can activate relevant knowledge…from other reading, from past discussions, and from experience" to show them "how they can further develop this existing knowledge in preparation for reading a new text" (p. 100). They found that students were most successful with this when it was done through the use of graphic organizers.

In the GOLD organizer (Appendix J), students fill in the first two sections on what they already know and what they need to learn about a topic before ever reading the text. This helps to give students a frame for what they will read before actually reading anything because it calls to mind what they already know about the subject. As they read the text (or just after they finish reading), students complete the remaining two sections of the organizer. (The teacher provides scaffolding throughout this process and also utilizes the think-aloud method.) The students are left with a visual representation of the cognitive connections they have made between prior knowledge and new knowledge gained from reading a text. Organizers such as this one can significantly help struggling readers (Allen & Hancock, 2008).

Students who struggle with reading comprehension can be taught methods to help them better understand what they read so that they can more effectively process the

information as it is presented to them and also retain the information. The GOLD organizer will be used in class by the teacher-researcher in an effort to help her students understand what they read. This graphic organizer was created by the teacher-researcher but is based on Collaborative Strategic Reading (CSR), the use of which is heavily discussed by McCown and Thomason (2014). This particular organizer will serve as a way for students to categorize what they know about a particular subject before reading an informational piece, decide what they need to find out while reading, organize what they learn while reading, and decide what they still need to find out (or want to find out) after reading. This organizer, in conjunction with other tools that will be used over the course of the study, will help students to not only think about their own thinking and learning, but will also provide students with a way to visualize what they already know, organize what they learn as they learn it, and keep track of what they need to find out.

The National Reading Panel (2000) published a list of the most effective reading comprehension strategies. The list includes comprehension monitoring, creating and answering questions, cooperative learning, summarizing, and story structure, all of which can easily be used via graphic organizers. Graphic organizers can help students to make more meaning of the text they encounter by helping them with schema building (Bowman et al., 2013). They can also help students with chunking, which can make information easier to digest, as mentioned previously (Bowman et al., 2013).

Graphic organizers are great tools to use to get students to think about their own thinking processes. Not only do they help students stay organized, but they also provide an easy way for students to make connections and "see" what is going on in their minds. Additionally, these organizers can help students with problem solving. They can assist

students in visualizing the causes of a problem as well as potential solutions to the problem. Teachers can further help in the process by talking through it and modeling the process for students. Schoenbach et al. (1999) discuss how one particular teacher verbalizes her own thinking processes for students. She displays a section of text, reads it aloud, and then talks through the text as she would if she were analyzing it on her own. After her demonstration, she asks her students to practice. As they practice, she monitors them and asks them questions about the deductions they make as they read, causing the students to think metacognitively.

The think-aloud strategy is a widely supported metacognitive tool (Loxterman & Beck, 1994; Reeve & Brown, 1984; Mandeville, 2012; Brenton-Haden, 1997). It requires simply that thinking processes are narrated in order to demonstrate the processes to an audience. This strategy positively impacts learners' self-regulation because it forces them to truly consider the various thought processes that take place when performing a set task.

Loxterman and Beck (1994) discuss the benefits of using the think-aloud method. They say that in order to boost comprehension, students can identify the specific areas where they are struggling and reread that part of the text while practicing think-aloud and self-questioning. When students use the think-aloud method, it allows their teachers to further help them because it "[exposes] how their processes function" (p. 354). This approach helps students to build connections with the text through reflection, but "the value of thinking aloud needs to be considered in conjunction with the nature of the text being read" (p. 364).

Humphries (2013) and Kucan and Beck (1997) add that when using the think-aloud method in group settings, learners not only share their thoughts with their peers and teacher but also the questions they have, connections they make to and within the text, and predictions they make about the text. It is through this think-aloud process that the learners' peers and teacher can watch the learners make meaning of the text. Using this method in group settings can spark ideas and expand schematic structures. Others' thinking can be further (and sometimes more clearly) demonstrated through the use of graphic organizers (Bowman et al., 2013).

The think-aloud strategy, among others, promotes active reading; active reading supports self-regulation. Another strategy that supports self-regulation is self-questioning, which was heavily supported by Dewey (1910). Self-questioning is a strategy that the teacher-researcher wants to use with her students as it is one that has proven to be immensely beneficial (Manderville, 2012; Ness, 2016; Sencibaugh, 2007). Mark Pennington (2009) provides a great step-by-step guide for teachers to use with students to help them learn the method of self-questioning. Self-questioning is something that students probably already do without even thinking about it, but by having their attention called to it and with some coaching, students can use it for their benefit. As with all of the strategies that the teacher-researcher will use with her students in the study, she plans to model the self-questioning strategy so that the students are painted a clear picture of what they are being asked to do.

As a whole, graphic organizers help students with active reading and self-regulation (Humphries, 2013; National Reading Panel, 2000; Creighton-Lacroix, 2000; Brenton-Haden, 1997; Mandeville, 2012; Sencibaugh, 2007). Graphic organizers help

learners to consider their own thinking and learning processes. As a result, learners are taught which metacognitive tools work best for them. When metacognition increases, so does self-regulation. Sometimes students struggle with self-regulation but can be given tools that promote self-regulation, such as graphic organizers (Brenton-Haden, 1997).

Reeve and Brown (1984) describe the benefits of using the think-aloud approach in the writing process as well. Inexperienced or struggling writers are encouraged to utilize this tool as they write in order to "externalize the cognitive procedures involved in writing" (p. 16). Reeve and Brown found this approach to be especially effective when used by the instructor as well as the students; this allows the instructor to model good thinking processes used while writing, and it also allows the instructor to better help students who are struggling as he or she can hear exactly what those students are thinking. The result of using think-aloud in the writing process is "an increased ability to reflect on ideas and better structured compositions" (p. 17).

The resources described influenced the direction taken by the present research and helped the teacher-researcher to structure her study. The teacher-researcher's findings encouraged her because they made her feel as though her plans for the study (and for her students) are valid and even more worthwhile than she originally imagined. Her research on other studies led her to some great assessments that will be used in the study. The teacher-researcher also benefitted from using the sources that were referenced in these studies as they helped her in her own research.

## Conclusion

This literature review discussed the findings of a few studies involving metacognitive instruction and its impact on academic achievement. Overall, regardless

of students' ability level or prior knowledge of metacognition, adding metacognitive instruction to any curriculum can only benefit students. These benefits can carry over into nearly every aspect of students' lives and help them immensely in their future endeavors.

Metacognition is a broad concept that encompasses countless processes. While teachers can certainly observe the results of metacognition, and students can attempt to describe their own metacognition to teachers, the actual act of metacognition is purely internal and cannot actually be seen.

While metacognitive instruction has plenty of implications for English classes, it can also be helpful in any other subject area. There is a plethora of research available supporting the inclusion of metacognitive instruction in math and science classes, although that research is not discussed in the current literature review. While the focus of the current study is on using metacognitive strategies with high school English students, many teachers have focused their work on special needs students, elementary-age students, and college students.

Having knowledge of metacognitive strategies and practice in using them helps students to achieve more in the classroom. This allows them to benefit more from their education and simultaneously boosts their self-esteem due to academic success, increasing their chances of assuming leadership roles both in and out of the classroom. This carries over into other areas of their lives. Students can carry these skills with them and use them in their future academic experiences and future careers.

Teachers have an obligation to give their students every tool possible to boost their chances of success in school and in life. Adding metacognitive instruction can only

increase these chances. When done correctly, instruction of metacognitive strategies complements any curriculum and, in the end, makes any class more of a success.

# CHAPTER THREE

## METHODOLOGY

The present study focused on how teaching metacognitive strategies (using graphic organizers) to high school students can benefit the students' academic performance in an English class, specifically through reading comprehension and writing skills. The teacher-researcher was wondering about what impact metacognitive strategies would have on the thinking skills and achievement of her students.

In the present study, the teacher-researcher utilized multiple methods to ensure the validation of the results of her study. She included the use of student surveys given at the beginning and end of the study in order to gain information about students' perspectives of their own learning. She implemented multiple graphic organizers in different contexts in order to gain further data about the impact of students learning metacognitive strategies and how those strategies help students in their reading and writing. The students utilized the same graphic organizers several times in order for the teacher-researcher to assess students' progress of understanding and use of the tools. Since the study focused on the teacher-researcher's students, she was able to see firsthand their daily progress. Because she saw them each day, she had the opportunity to conduct countless informal observations (as well as formal observations, with field notes) as the students worked in her classroom. The teacher-researcher was available to her students whenever they had questions, and she was able to make any necessary modifications and

clarifications. All of these things together ensured that the study had triangulation and that the data was valid.

## Research Question

What impact will graphic organizer use have on the metacognitive skills of 10 senior high school students in English IV British Literature at Seaside High School as demonstrated through their writing?

## Purpose of the Study

The purpose of this study was to examine the impact of graphic organizer use on the metacognitive skills of 10 senior high school students in English IV British Literature at Seaside High School.

The first objective of the present study was to describe in detail the implementation of metacognitive teaching in a high school English classroom as well as the impact of such implementation. The specific teaching methods and information taught regarding metacognition is also described. The second objective of the study was to describe the effects of teaching students about metacognition on student academic performance. This is shown via student artifacts (various graphic organizers) collected throughout the study, student surveys given at the beginning and end of the study, student interviews conducted at the beginning and end of the study, and field notes collected throughout the study. The third objective of the study was to explain the effects of metacognitive tools specifically on students' reading comprehension and writing abilities.

## Action Research Design

In the present study, a qualitative research design is the most appropriate in order to answer the research question and address the problem of practice. Such a research

design fits the study best because the purpose of the study is to explain the effects of a particular treatment on groups of students and explain the extent of those effects (Mertler, 2014).

**Setting and Time Frame of the Study**

The study took place at Seaside High School in Spring 2017 over the course of five weeks. In order to protect the identity of the student-participants and setting, pseudonyms are used throughout the study.

**Student-Participants in the Study**

The student-participants in the present study were students in the teacher-researcher's English IV British Literature class at Seaside High School in the Lowcountry region of South Carolina. The study focuses on 10 randomly chosen students, who are described here:

- Amanda appears to be a bright young woman, but she has had some attendance issues in the past. She says that she is easily frustrated when it comes to writing essays, even though she says that she "can get [her] point across well." Amanda says that she often uses graphic organizers because she is comfortable with them. She says that she is good with details but sometimes has difficulty "seeing the big picture" and feels like she often falls prey to overthinking.
- Anthony appears to be a bright young man who is engaged in his academic work and is eager to graduate from high school. He is usually reserved and appears to lack confidence as he typically keeps his head down and mumbles responses when asked a question. He says that when it comes to writing essays, he is typically "very frustrated" because he has difficulty getting started. Anthony says that his greatest

writing strengths are brainstorming and being willing to work on a piece of writing until it is just right. He considers himself to be a hands-on learner because that type of learning helps keep him engaged.

- Emme does not turn in all of her assignments even though she appears to be focused in class. She seems to be more motivated to work when she finds the assignments interesting. She considers herself to be "very comfortable" with writing essays as she is good at expressing her ideas in depth and loves English class. She says that she never chooses to use graphic organizers even though she says that she is "very comfortable" with them. She considers herself to be an independent learner but says that she sometimes struggles with meeting all of the requirements of an essay as she becomes overwhelmed easily.
- Ethan completes most of his in-class assignments, but he appears to struggle with organization. As a result, he has difficulty keeping up with assignments and their due dates, so his work is often turned in late. He typically neglects to turn in his homework assignments, saying that his priority is his after-school job because he needs to earn money in order to make his car payment. In class, Ethan frequently appears to have difficulty getting started on his assignments, particularly writing assignments. He says that he struggles with "getting [the] right words to use" and says that he usually gets "stuck and stressed out," but he adds that graphic organizers often help him to organize his ideas. Ethan was diagnosed with a learning disability in reading at a young age. He has an Individual Education Plan (IEP) in place that allows him one extra day to work on major assignments and extended testing time.

He says he is easily frustrated with reading as he has a hard time understanding what he reads.

- George has a great deal of potential but seems to have difficulty staying on task and completing all of his assignments. When asked to rate his comfort level with writing essays, he says that he is "neutral" but adds that "it depends on the topic." He says that he never uses graphic organizers but frequently thinks about his own thinking processes and considers himself to be a good reader. He says that he sometimes struggles to express his ideas through writing. Two years ago, George was diagnosed with a learning disability that makes it difficult for him to stay on task in class. He has an IEP on file and has a resource class each day in which he gets extra help with assignments and general organization.
- Kaitlin is a very good student who completes every assignment as well as she can. She seems to be consistently focused in class. She considers herself a hands-on learner and says that she often thinks metacognitively. Kaitlin says that when it comes to writing, she prefers to utilize drafting and feels "pretty confident" about her writing. She says that one of her weaknesses in writing is putting "too much voice" into what she says, which causes her writing to "sometimes sound childish."
- Mikey typically does well on his assignments but often seems disengaged in class. He says that he is easily frustrated when writing because he has difficulty expanding on his ideas and explaining himself. Mikey says that he struggles with grammar but feels confident about organizing his ideas and is comfortable with graphic organizers. He says that he is completely unfamiliar with the concept of metacognition and has never really considered his own thinking processes.

- Sarah appears to be highly motivated and eager to please. She completes all of her assignments to the best of her ability. She is never afraid to ask a question and is willing to work on an assignment as long as necessary in order for it to meet her standard. She says that her habit of staying organized is one of her greatest strengths but says that she struggles to elaborate on her ideas in essays. Sarah says that she benefits from using graphic organizers.
- Sydney, a precocious and quiet student, seems to care a great deal about her academic performance. She says that she is "very comfortable" with writing essays because she is good at helping her reader to see what she is describing and is good at using detail in her writing. She says that she enjoys using graphic organizers and uses them often. Sydney says that she frequently considers her own thinking processes and says that graphic organizers help her to do that.
- Takymah appears to be highly motivated and curious, and she clearly has high expectations set for herself. That being said, Takymah says that she is "not at all comfortable" with writing essays and typically becomes "very frustrated" during the writing process. She says that one of the things that she struggles with the most in her writing is structure. She says that she feels better about structure when she has a guide to use, such as a graphic organizer. She says that one of her strengths in writing is her ability to stay focused.

## Research Methods

The student-participants were given a learning styles inventory and a survey at the beginning of the study to determine their existing knowledge of metacognition and their own learning styles. Students were given a similar survey at the end of the study to

document metacognition knowledge gained through metacognition instruction given over the course of the study. Student-participants were interviewed individually at the beginning and end of the study in order to allow the student-participants to expand on their answers given on the surveys. Over the course of the study, the student-participants utilized multiple graphic organizers in order to visualize their thinking processes. These organizers were used to complete a series of writing assignments. The teacher-researcher observed the student-participants throughout the study and documented her observations using field notes.

These tools are appropriate because they adequately and clearly showed the student-participants' prior knowledge of metacognition as well as knowledge after receiving instruction. The tools are different in nature. The learning styles inventory served as a way to start an ongoing class conversation about learning styles and metacognition. The surveys and interviews showed student-participants' actual knowledge as well as their perceived knowledge (and gave the student-participants a chance to elaborate on their perceptions). The graphic organizers, in conjunction with the writing assignments, provided evidence of student-participants' progressing understanding of metacognition. They also helped improve the student-participants' reading comprehension and writing skills. The teacher-researcher's field notes provided insight into her observations of what happened in the classroom throughout the study; they documented the specific processes that occurred on the research collection days as well as inferences that she made upon observing the student-participants. The tools used in the present study also demonstrated the student-participants' comfort with graphic organizers, reading comprehension, and writing.

The surveys given at the beginning and end of the study included nominal and ordinal questions so as to best demonstrate students' knowledge of metacognition. The ordinal questions asked that students gauge their own knowledge, rating various aspects of it on provided scales.

The teacher-researcher ensured that the data collection methods were ethical. Student-participants participated at will; the students were not pressured to participate in any way, nor were they penalized for not participating. In addition, student-participants were allowed to drop out of the study at any time. They were encouraged to express any concerns or ask any questions that arose throughout the study.

## Procedure

Over the course of this five-week study, research was conducted two or three days per week. The study took place in the midst of an instructional unit on the epic poem *Beowulf* and related elements of Anglo-Saxon culture.

### Week 1

Prior to Week 1, the student-participants submitted their signed consent and assent forms. In Week 1, research was conducted on Monday, January 23 from 8:00 to 9:00; Wednesday, January 25 from 8:00 to 9:00; and Thursday, January 26 from 8:00 to 9:30.

On Monday, the teacher-researcher gathered biographical information from the student-participants using the biographical information form (Appendix C). The student-participants also completed the pre-research survey (Appendix D) and the learning styles inventory (Appendix E). The pre-research survey functioned to help the teacher-researcher to gauge the student-participants' knowledge and perceptions of

metacognition. The purpose of using the learning styles inventory was to start the ongoing class discussion about learning styles and metacognition.

On Wednesday, the teacher-researcher began a whole-class discussion about metacognition. She discussed the idea of thinking about thinking and asked students as a whole to gauge their knowledge of the concept. She asked students to consider how the practice of thinking about one's own thinking processes could be helpful. She also introduced the concept of schemas, explaining how it is schemas that are responsible for people interpreting the same text differently. The teacher-researcher then asked the student-participants to write a paragraph on one of two topics using the body paragraph organizer (Appendix G). (Topic 1: What makes you a good friend? Topic 2: What are your goals for the semester?) Before allowing the student-participants to start work on the body paragraph organizer, the teacher-researcher explained the function of the organizer as a whole as well as the individual parts of the organizer. She used scaffolding in her instruction as well as the think-aloud approach. The teacher-researcher explained to the student-participants that the objective of the body paragraph organizer was to develop a paragraph with good structure. She also explained to the student-participants that they would be using different graphic organizers over the course of the study and that the graphic organizers would be collected to serve as artifacts. While the student-participants worked on the organizer, the teacher-researcher observed them and took field notes (Appendix H). The teacher-researcher later began conducting one-on-one interviews with the student-participants using the pre-research interview form (Appendix F) in order to gain further understanding of student-participants' perceptions

and knowledge of metacognitive tools before receiving explicit instruction on the use of these tools.

On Thursday, the teacher-researcher completed the pre-research interviews.

**Week 2**

In Week 2, research was conducted on Monday, January 30 from 8:00 to 9:30; Wednesday, February 1 from 8:00 to 9:30; and Friday, February 3 from 8:30 to 9:30.

On Monday, the teacher-researcher assigned an essay to the student-participants (Appendix I). The student-participants were told that they would have time to work on the essay in class on Monday, Tuesday, and Wednesday. The essay would be due on Friday. In addition to writing the essay, the student-participants would also be required to complete another body paragraph organizer, this time for one of the paragraphs in the essay. While the student-participants worked on the body paragraph organizer and their essays on Monday, the teacher-researcher observed them and took field notes.

On Wednesday, the teacher-researcher asked the student-participants to recall what they had learned so far in the instructional unit on *Beowulf* and the Anglo-Saxon people. She reintroduced the concept of schemas, initiating a brief whole-class discussion. She then explained the use of the GOLD organizer (Appendix J) and told the student-participants that they would be using it with Article 1 (Appendix K). While the student-participants read the article and worked with a partner to complete the GOLD organizer, the teacher-researcher observed them and took field notes. The student-participants were instructed to continue working on the essay once they completed the organizer.

On Friday, the teacher-researcher instructed the student-participants to read Article 2 (Appendix M) and paraphrase it in chunks. She explained to the student-participants that chunking is a proven reading comprehension strategy and demonstrated the strategy for them.

**Week 3**

Just before Week 3 began, the teacher-researcher gave birth to her son. Because of extenuating circumstances, the teacher-researcher's substitute teacher took over as the research assistant and finished the data collection. This teacher was well aware of the ins and outs of the study and the tools and procedures used by the teacher-researcher, and she was able to maintain continuity in the data collection. The teacher-researcher kept in close contact with the assistant throughout the remainder of the study.

This week, research was conducted on Tuesday, February 7 from 8:00 to 9:30 and Wednesday, February 8 from 8:00 to 9:00.

On Tuesday, the teacher-researcher's assistant instructed the student-participants to read Article 3 (Appendix O) and annotate it. She reminded the student-participants about the previously disseminated annotation guidelines and instructed them to write a minimum of 15 quality annotations for the article.

On Wednesday, the teacher-researcher's assistant described the parts of the web organizer (Appendix L) to the student-participants. She then instructed the student-participants to complete the web organizer on Anglo-Saxon values as demonstrated in *Beowulf*. As the student-participants worked, she observed them and took field notes.

**Week 4**

In Week 4, research was conducted on Monday, February 13 from 8:00 to 9:30; Wednesday, February 15 from 8:00 to 9:30; and Friday, February 17 from 8:30 to 9:30.

On Monday, the teacher-researcher's assistant gave the student-participants their graded essay rough drafts. She instructed the student-participants to use their rough drafts to create an outline using the outline organizer (Appendix N) in order to analyze their essay's structure and improve it before writing the final draft. While the student-participants worked to complete this task, the teacher-researcher's assistant observed the student-participants and took field notes.

On Wednesday, the teacher-researcher's assistant told the student-participants that they would be researching a topic (see Appendix P for the research assignment) in order to create another outline. The student-participants were told that they would have the rest of class to work on the assignment and would also have time to work in class on Friday. While the student-participants worked, the teacher-researcher's assistant observed and took field notes.

On Friday, the student-participants continued working on the research outline, and the teacher-researcher's assistant observed and took field notes.

**Week 5**

This week, research was conducted on Wednesday, February 22 from 8:00 to 8:30; Thursday, February 23 from 8:00 to 9:30; and on Friday, February 24 from 8:30 to 9:30.

On Wednesday, the teacher-researcher's assistant gave the student-participants the post-research survey (Appendix Q).

On Thursday, the teacher-researcher's assistant interviewed the student-participants using the post-research interview form (Appendix R).

On Friday, the teacher-researcher's assistant finished interviewing the student-participants.

## Data Analysis

The teacher-researcher analyzed the various types of data in different ways. The surveys, interviews, and student-participant artifacts (graphic organizers) served as forms of qualitative data. The teacher-researcher analyzed the observations and field notes by considering noted changes throughout the research process. Each type of data was analyzed individually. The teacher-researcher also analyzed each student-participant's data as a whole. Finally, she analyzed all of the data collectively.

## Plan for Reflecting with Student-Participants on Data

Because the number of student-participants was relatively small, the teacher-researcher and her assistant had the opportunity to reflect on the data collected from each of the student-participants. Since the teacher-researcher was on maternity leave, her assistant discussed the data with the student-participants at the conclusion of the study (during the post-study interviews). She asked each student-participant to consider the progress that he or she made over the course of the study as well as the impact of the study on the student-participants individually.

Now that the study is complete, the teacher-researcher would like to discuss the results of the research with the student-participants as a group. She would like to work with the student-participants to draw conclusions about the research, the progress that the student-participants made, and the implications of that progress for others outside of the

study. The teacher-researcher would like to work with the student-participants, her assistant, and her colleagues to develop a collaborative action plan based on the findings of the study.

## Plan for Devising an Action Plan

The idea of action research is that some action will take place as a result of the study (Mertler, 2014). The present action research study was conducted by a classroom teacher with the goal of helping the student-participants to use metacognitive tools to improve reading comprehension and writing skills. The action plan devised by the teacher-researcher of this present study is based on the results of the study as well as implications of the impact of using metacognitive tools in the classroom. An action plan will be discussed in Chapter Five based on the results of what was learned in the present study.

# CHAPTER FOUR

## FINDINGS FROM THE DATA ANALYSIS

In the present study, 10 high school seniors enrolled in CP English IV at Seaside High School were given various graphic organizers to discern what kind of impact the organizers would have on the students' metacognition as demonstrated through their reading comprehension and writing skills. The student-participants were given one graphic organizer at a time; the teacher-researcher introduced each organizer, carefully explaining the use and purpose of each part of the tool, allowed the student-participants time for guided practice, and allowed the student-participants time for independent practice. The student-participants' independent practices were collected and functioned as artifacts for the study. Through those artifacts, the student-participants demonstrated their understanding of metacognitive tools. The study began and ended with student-participant surveys and interviews. Throughout the study, the teacher-researcher conducted observations of the student-participants and recorded those observations using field notes.

### Research Question

What impact will graphic organizer use have on the metacognitive skills of 10 senior high school students in English IV British Literature at Seaside High School as demonstrated through their writing?

## Purpose of the Study

The purpose of this study was to examine the impact of graphic organizer use on the metacognitive skills of 10 senior high school students in English IV British Literature at Seaside High School.

## Findings of the Study

From the teacher-researcher's analysis of the data, four themes emerged: (a) student-participants' comfort level was raised concerning graphic organizer use, (b) student-participants' writing appeared to be largely unimproved by graphic organizer use, (c) student-participants more often consider metacognition, and (d) student-participants gained confidence in reading due to graphic organizer use. The following will discuss those themes. Each theme is organized sequentially by the data collection tools used.

### Theme 1: Student-participants' comfort level raised concerning graphic organizer use

**Pre-research data collected.** The first theme that emerged upon the teacher-researcher's analysis of the data collected was that the student-participants' comfort level was raised concerning graphic organizer use. Based on the pre-research survey (Appendix D) given to student-participants before the data collection began, the teacher-researcher gathered that eight of the student-participants had used graphic organizers before the study, but two had not. Two of the student-participants stated that they had routinely used graphic organizers before the study. Sydney said, "I would always do an outline for my projects," and Emme said that because she is such a visual learner, she constantly looks for ways to see her thinking processes demonstrated on paper. As a

whole, the student-participants had had little exposure to graphic organizers before the study began.

**First body paragraph organizer.** The body paragraph organizer (Appendix G) was part of one of the first assignments of the semester, so the student-participants were just starting to become accustomed to the class and to the teacher-researcher. The teacher-researcher chose to use this particular graphic organizer first because it is fairly straightforward and simple. Even so, she made sure to carefully explain to the student-participants the purpose of the organizer itself as well as the function of each of its parts. When the student-participants first began working to complete the graphic organizer, some of them experienced difficulty. Ethan, in particular, said, "I don't know how to start. I'm no good at coming up with topic sentences." The teacher-researcher then explained to the student-participants that the body paragraph organizer's boxes did not need to be completed in any particular order, as noted in the field notes. This seemed to alleviate some stress for the student-participants. As the teacher-researcher's main objective in using this tool was to get student-participants thinking and allow them to practice using the tool as they would use it again with another assignment, she graded these graphic organizers holistically based on the student-participants' structure of ideas and level of detail. As a whole, the student-participants seemed mostly comfortable with this graphic organizer and performed adequately.

**Essay and second body paragraph organizer.** The student-participants completed the body paragraph organizer (Appendix G) a second time in order to plan for their essays (Appendix I). Two student-participants performed better the second time they completed the body paragraph organizer. Seven student-participants performed

about the same on the two body paragraph organizers. Once again, the teacher-researcher evaluated the body paragraph organizers holistically based on the student-participants' structure of ideas and level of detail. As a whole, the student-participants had a good understanding of the body paragraph organizer and did well both times it was used, so there was not much room for improvement. The student-participants did, however, seem more comfortable using the body paragraph organizer the second time, which was the reason why the teacher-researcher decided to use the same organizer twice. When they were presented with the task of completing the body paragraph organizer the second time, the student-participants knew what was expected of them and were able to start immediately and work more efficiently. The second body paragraph organizer clearly helped the student-participants in the development of their essays. The essay paragraphs that correlated with the body paragraph organizer were stronger in both structure and content.

**GOLD organizer.** For the GOLD organizer (Appendix J), six student-participants produced organizers that were average, three were excellent, and one was poor. The GOLD organizer was graded holistically based on the student-participants' structure of ideas and the level of detail. The student-participants seemed even more comfortable during this activity, likely because they had become more accustomed to using graphic organizers. Even so, the teacher-researcher made sure to carefully explain to the student-participants the purpose of the organizer itself as well as the function of each of its parts. She utilized scaffolding, think-aloud, and guided practice for the first two sections of the GOLD organizer before allowing the student-participants to work independently. At that point, the student-participants seemed to have a solid

understanding of what was expected of them and were able to start work on the last two sections of the GOLD organizer quickly and work more efficiently, as noted in the field notes. The purpose of the GOLD organizer was to help student-participants to utilize metacognitive skills to aid in their reading comprehension.

**Outline research assignment.** For the outline research assignment (Appendix P), student-participants were asked to conduct research on a given topic relating to the British literature curriculum and create an outline on the researched information using the outline organizer (Appendix N). The teacher-researcher's purpose in using this metacognitive tool (the outline organizer) for this assignment was to help the student-participants with structuring their ideas. Her hope was that they would be able to focus more on the content rather than the structure of their outlines since the structure was provided for them via the organizer. The teacher-researcher evaluated this assignment for content and structure. As a whole, the student-participants seemed relatively comfortable using the outline organizer for this assignment; the student-participants had completed an outline in the previous week, and most of the student-participants had done similar activities in the past. That being said, there were a wide range of scores earned on this assignment. The student-participants performed well regarding the structure of the outline organizer, but many of them did not follow instructions for the research component, losing points for a lack of research, insufficient or incorrect citations for research, and neglecting to address all parts of the topic, as described in the field notes.

**Post-research data collected.** Based on the post-research interviews (Appendix R) and surveys (Appendix Q), most of the student-participants became more comfortable with graphic organizer use. By the end of the study, student-participants found

themselves better able to employ the use of graphic organizers. Over the course of the study, the graphic organizers became more meaningful to the student-participants. The student-participants becoming more comfortable with graphic organizers is consistent with the findings of Loxterman and Beck (1994). Of the five who said they are now more comfortable, four of them said they will choose to do outlines before writing essays in the future because they find them helpful in the organization of ideas, as indicated on the post-research survey. Amanda stated that she will now begin her essays with outlines because they help her to stay focused. Takymah said that the outline research assignment in particular "helped [her] to understand the format of an essay."

**To summarize.** The student-participants gradually became more comfortable with graphic organizers over the course of the study. Even though many of them indicated that they had used graphic organizers in the past, most of the student-participants appeared to be very uncomfortable when presented with the first body paragraph organizer. Over the course of the five-week study, however, the student-participants learned to see the value of graphic organizers, specifically how the tools could be used to help them read and write more effectively. The student-participants became so comfortable with using graphic organizers that several of them stated that they would choose to use graphic organizers on their own in the future.

**Theme 2: Student-participants' writing appeared to be largely unimproved by graphic organizer use**

**Pre-research data collected.** The second theme that emerged was that the student-participants' writing appeared to be largely unimproved by the use of graphic organizers. At the beginning of the study, the student-participants provided information

regarding their thoughts about essay writing. Based on the biographical information form (Appendix C), pre-research survey (Appendix D), and pre-research interview form (Appendix F), five of the student-participants said that they are typically frustrated or very frustrated with essay writing, four rated themselves as neutral, and Emme said that she was not at all frustrated with essay writing. Anthony stated that he is typically very frustrated when it comes to writing essays but said that rough drafts help him tremendously. Sydney said that even though she sometimes makes silly mistakes in her writing, it helps that she is naturally creative and is able to write descriptively.

**First body paragraph organizer.** As mentioned previously, the teacher-researcher's purpose in using the body paragraph organizer (Appendix G) was to get student-participants accustomed to using graphic organizers (as they had had limited exposure to them before the study). The teacher-researcher felt that the body paragraph organizer would be an effective way for the student-participants to see their ideas mapped out on paper before actually writing a paragraph. She felt that this organizer would help students to consider more carefully the way that they structure their paragraphs. The teacher-researcher found that all of the student-participants performed well on this organizer, which she evaluated holistically for structure and detail. Following the implementation of this tool, the teacher-researcher found that a few of the student-participants more thoughtfully considered their paragraph construction on other assignments.

**Essay and second body paragraph organizer.** Regarding the student-participants' writing, on the essay assignment (Appendix I), seven student-participants scored 80 or better on the final draft. This assignment was graded using a rubric and was

evaluated for structure, content, grammar, and mechanics. The use of the body paragraph organizer (Appendix G) in conjunction with the essay assignment seemed to help the student-participants with the construction of the correlating paragraph. (The student-participants were only asked to complete the body paragraph organizer for one of their paragraphs in their essays. Those paragraphs, as a whole, were the strongest in content and in structure, as mentioned in the discussion on Theme 1.)

**GOLD organizer.** The GOLD organizer (Appendix J) dealt with helping student-participants to structure their ideas but pertained to reading comprehension more than writing.

**Outline research assignment.** On the outline research assignment (Appendix P), six student-participants scored 80 or better. This assignment was graded using a rubric and was evaluated for structure and content. It was not evaluated for grammar or mechanics, it included no rough draft, and it included research while the essay did not. On the outline, which was created using the outline organizer (Appendix N), six of the student-participants included insufficient research citations, but two of the outlines were excellent. Some of the outlines included citations from the sources given in class but included no outside research (which was a requirement of the assignment). The teacher-researcher was hoping to evaluate the student-participants' progress in writing by comparing their scores on this assignment with their scores on the essay, but she realized later that the two assignments were too different in nature to be able to be compared. Thus, she was unable to evaluate the student-participants' progress in writing quality in the way that she had planned.

**Post-research data collected.** Although the teacher-researcher found that student-participant writing appeared to be largely unimproved by the present study, this contradicts the findings of Ben-Eliyahu and Linnenbrink-Garcia (2015), Pintrich and de Groot (1990), Humphries (2013), Allen and Hancock (2008), and James and Okpala (2010). Regardless of the unimproved writing, three of the student-participants in the present study found themselves more comfortable with essay writing as a result of the study, as indicated on the post-research survey (Appendix Q) and post-research interview form (Appendix R). This is consistent with the findings of Creighton-Lacroix (2000), Dignath and Büttner (2008), Reeve and Brown (1984), and Humphries (2013). Five of the student-participants said that they feel the same that they did at the beginning of the study regarding essay writing. Of those, two said that they are still uncomfortable with essay writing but feel less frustrated than they did before the study. Two say that they are less comfortable with essay writing now compared with how they felt at the beginning of the study. George stated that the study caused him stress and made him question his writing more than ever.

**To summarize.** At the beginning of the study, the majority of the student-participants revealed that they often feel frustrated or overwhelmed when it comes to essay writing. Over the course of the study, the student-participants became more comfortable with and learned to see the value of graphic organizers. Even so, the quality of the student-participants' writing did not seem to improve, contrary to the findings of Ben-Eliyahu and Linnenbrink-Garcia (2015), Pintrich and de Groot (1990), Humphries (2013), Allen and Hancock (2008), and James and Okpala (2010).

**Theme 3: Student-participants more often consider metacognition**

**Pre-research data collected.** The third theme that emerged was that the student-participants more often consider metacognition as a result of the study. At the beginning of the study, the student-participants provided information regarding how often they consider metacognition. Based on the pre-research survey (Appendix D) and pre-research interview form (Appendix F), six students indicated that they sometimes consider their metacognitive processes while four indicated that they often consider those processes. The student-participants grew to consider their metacognition more over the course of the study, as indicated in the post-research data collected.

**First body paragraph organizer.** Before asking the student-participants to complete the body paragraph organizer (Appendix G), the teacher-researcher led a brief whole-class discussion about metacognition, how the practice of thinking about one's own thinking processes could be helpful, and the concept of schemas. The teacher-researcher then asked the student-participants to write a paragraph on one of two topics using the body paragraph organizer. Following the completion of the body paragraph organizer, the teacher-researcher led another brief class discussion about metacognition. During the completion of this first graphic organizer, it appeared that the student-participants were starting to consider their metacognitive processes.

**Essay and second body paragraph organizer.** Before asking the student-participants to complete a second body paragraph organizer (Appendix G) in conjunction with the essay assignment (Appendix I), the teacher-researcher reintroduced the concepts of metacognition and schemas to refresh the memories of the student-participants. As mentioned previously, the second body paragraph organizer helped student-participants

to write essay paragraphs with greater structure and content. The teacher-researcher talked with the student-participants continually about metacognition during this activity, and it seemed that the student-participants considered their metacognitive processes more in the completion of this activity.

**GOLD organizer.** As mentioned previously, the GOLD organizer (Appendix J) functioned to help student-participants structure their ideas but dealt with reading comprehension more than writing skills. Before allowing the student-participants to start on the GOLD organizer, the teacher-researcher made sure to carefully explain to the student-participants the purpose of the organizer itself as well as the function of each of its parts. She utilized guided practice for the first two sections of the GOLD organizer before allowing the student-participants to work independently. At that point, the student-participants seemed to have a solid understanding of what was expected of them and were able to start work on the last two sections of the GOLD organizer quickly and work more efficiently. The student-participants seemed very comfortable during this activity, likely because they had become more accustomed to using graphic organizers. Throughout the completion of this organizer, the teacher-researcher made sure to call the student-participants' attention to the metacognitive processes taking place, mostly through questioning. As she did this, it became clear that the student-participants were already considering those processes without her prodding.

**Outline research assignment.** For the outline research assignment (Appendix P), as mentioned previously, student-participants were asked to conduct research on a given topic relating to the British literature curriculum and create an outline on the researched information using the outline organizer (Appendix N). The teacher-

researcher's purpose in using this metacognitive tool (the outline organizer) for this assignment was to help the student-participants map out their thinking. As the student-participants completed this activity, it was unclear to the teacher-researcher how much they considered their metacognitive processes. The student-participants got so caught up in the process of researching their topics that it seemed as though they were unable to consider much of anything else.

**Post-research data collected.** Most of the student-participants said that they often consider their own thinking processes as a result of the study, as indicated on the post-research survey (Appendix Q) and post-research interview form (Appendix R). The concept of students more often considering metacognitive processes as a result of using graphic organizers is supported by the findings of Schoenbach et al. (1999), Loxterman and Beck (1994), Reeve and Brown (1984), Bowman et al. (2013), and the National Reading Panel (2000). Regarding the remaining student-participants in the present study, three of them said they now sometimes consider their own thinking processes, and Ethan said he rarely considers them. Of the student-participants, five said that this increased for them, four stayed the same, and Sydney experienced a decrease.

**To summarize.** Before data collection began for the present study, the student-participants revealed that they at least sometimes considered their metacognitive processes. Over the course of the study, the student-participants had multiple opportunities to work with graphic organizers in various contexts; the teacher-researcher hoped that the graphic organizers and ongoing class conversation about metacognition would cause the student-participants to more often consider their metacognition. As the study progressed, through informal observations and interviews, the teacher-researcher

noticed that the student-participants gradually began to consider their metacognition more often. By the end of the study, most of the student-participants found that they more often consider their metacognition as a result of graphic organizer use.

**Theme 4: Student-participants gained confidence in reading due to graphic organizer use**

The fourth theme that emerged from the present study is that the graphic organizers used helped the student-participants to gain confidence in reading comprehension. This finding is consistent with those of Ben-Eliyahu and Linnenbrink-Garcia (2015), Pintrich and de Groot (1990), James and Okpala (2010), Dignath and Büttner (2008), Reeve and Brown (1984), and Friesen (2009). These tools helped the student-participants to stay organized and focused while reading and also helped them to activate existing schemas.

**Pre-research data collected.** On the biographical information form (Appendix C) student-participants indicated that their greatest stressors in English classes relate to writing. Even so, Ethan and Mikey said that they often struggle with reading, so much that they refuse to read aloud if asked by the teacher. In a follow-up informal interview, Ethan said that he feels overwhelmed instantly when he is presented with a text. He said that he has trouble understanding what he reads and knowing which parts of a text are the most important. Mikey said that he feels overwhelmed when reading in class because he knows that he will struggle to understand what he reads and will also struggle to do any follow-up assignments pertaining to the reading.

**First body paragraph organizer.** The first time that the student-participants completed the body paragraph organizer (Appendix G), they did so in order to understand

paragraph structure and then compose a quality paragraph; therefore, the student-participants completed the organizer the first time in order to help with the quality of their writing. This graphic organizer did not function to help the student-participants with reading comprehension.

**Essay and second body paragraph organizer.** The body paragraph organizer (Appendix G) was completed the second time to help the student-participants plan for their essay assignment (Appendix I). In order to successfully complete this organizer the second time along with the essay assignment, the student-participants had to find and use supportive textual evidence from *Beowulf,* a text that is relatively complex, especially for struggling readers. This assignment required the student-participants to sift through the text on their own, even though *Beowulf* had been read as a class, in an effort to find quotations to use as evidence in their essays. While many of the student-participants struggled with this assignment, it appeared to the teacher-researcher that the body paragraph organizer helped the students to sift through the *Beowulf* text and organize their thoughts before actually composing their essays.

**GOLD organizer.** When the student-participants completed the GOLD organizer (Appendix J), the main objective was to increase reading comprehension. In this activity, the student-participants used their existing schemas to better understand the informational article on Anglo-Saxons (Appendix K) and pull the important information from it. While the teacher-researcher provided some scaffolding to start this activity, the student-participants read the article and gleaned information from it with a peer. The teacher-researcher felt that the GOLD organizer helped the student-participants to feel more confident about their reading comprehension because it helped them to stay organized as

they read the Anglo-Saxon article. The teacher-researcher has found that many struggling readers are easily overwhelmed when presented with a text. With the GOLD organizer, she felt that even her students who struggle the most with reading felt confident about effectively navigating the article.

**Outline research assignment.** The research outline assignment (Appendix P) required that the student-participants conduct research on a given topic, find their own informational sources, and sift through those sources in order to develop their own argument with textual support in the form of an outline (Appendix N). In many ways, this assignment was more complex than the essay that the student-participants wrote earlier in the study (Appendix I) because the outline required that the student-participants organize a great deal of information from various sources; therefore, it required a much higher degree of reading comprehension. The student-participants also had less guidance (by design) from the teacher-researcher on the outline assignment. At this point in the study, the student-participants as a whole were much more confident in their reading comprehension abilities. They felt better about getting through various texts without much help from the teacher-researcher. While the student-participants did express some concern with this assignment regarding finding informational sources and meeting the requirements of the assignment, they seemed mostly confident about being able to understand what they were reading.

**Post-research data collected.** Over the course of the study, the teacher-researcher felt that the student-participants gained confidence in reading as a result of graphic organizer use. Even though only two student-participants actually stated that they were stressed by reading, the teacher-researcher felt that all of the student-

participants benefitted from using graphic organizers to organize what they learned as they read through texts.

Regarding the study as a whole, five of the student-participants said that the study helped them, as indicated on the post-research interview form (Appendix R). Of those, two said that the study helped them to identify their own strengths and weaknesses as students, and one said she found the study motivating. Two of the student-participants were neutral. Of those, Sydney said that she was unaffected because she has always used graphic organizers. George said that the study negatively affected him because it placed stress on him. Takymah said that the outline research assignment "helped [her] understand the format of an essay," and Sarah said that the study "made [her] want to get things done."

**To summarize.** When the study began, Ethan and Mikey said that they struggle with reading and feel stressed about having to read in class. Over the course of the study, the student-participants had several opportunities to work with graphic organizers that could make reading easier through providing methods of organizing information gleaned from text. The teacher-researcher noticed that many of the student-participants seemed to gain confidence in reading through using the graphic organizers, as noted in the field notes. By the end of the study, the student-participants seemed more confident in their reading abilities than they were at the beginning of the study. Ethan and Mikey, in particular, seemed less stressed about having to work through texts whenever they were given graphic organizers to help them organize their ideas.

## Interpretation of Results of the Study

### Theme 1: Student-participants' comfort level raised concerning graphic organizer use

Most of the student-participants found the graphic organizers (Appendices G, J, L, and N) helpful, and most student-participants identified as visual learners on the learning styles inventory (Appendix E). The teacher-researcher believes that there is a connection between students who identify as visual learners and their positive feelings about graphic organizers. Visual learners likely benefit from using a tool to help them see the organization of their ideas (Jensen, 2000).

The student-participants became more comfortable with using graphic organizers as the study progressed. With each graphic organizer that was introduced, the student-participants' confidence grew; they grew to need less guidance from the teacher-researcher and were more willing to work independently. As the student-participants became accustomed to graphic organizer use, they were better able to see the value of using such tools. They began to see that graphic organizers can be helpful in both reading comprehension and writing (Tracy et al., 2009; Reynolds & Perin, 2009; Allen & Hancock, 2008).

### Theme 2: Student-participants' writing appeared to be largely unimproved by graphic organizer use

In hindsight, the teacher-researcher believes that the student-participants might have benefitted more from using a different graphic organizer instead of using the body paragraph organizer (Appendix G) twice, as noted in the field notes. They also might have benefitted more from using an organizer that functioned for their entire essay

(Appendix I) and not just one paragraph of it. In addition, they might have benefitted from using the body paragraph organizer once and then using a separate organizer for the essay as a whole. Some of the student-participants even tried to plan more than one paragraph on the second body paragraph organizer, so it probably would have been helpful for them to have an organizer that encompassed more of the essay. This likely would have resulted in better quality writing from the student-participants on the essay assignment.

As a whole, student-participants did not perform better on the second body paragraph organizer (that accompanied the essay) because they were likely overwhelmed with handling everything they had been asked to do. They did not focus on completing the body paragraph organizer because they were preoccupied with what they were being asked to do on the accompanying essay assignment. As a result, most of the student-participants performed the same on the second body paragraph organizer as they did on the first. That being said, the student-participants were clearly more comfortable using the body paragraph organizer the second time.

The teacher-researcher sought to compare the essay assignment with the outline research assignment (Appendix P), but in hindsight, the two are probably too different in content and form. The teacher-researcher planned for the student-participants to complete the two writing assignments, regardless of their differences, because she did not want to repeat the same assignment. In other words, she did not want the student-participants to complete two similar essays because she knew that they would not take the assignment seriously the second time. She planned for the student-participants to complete the outline as the second writing assignment because the student-participants

were still working on their final drafts of the essay assignment at the time the outline assignment was taking place. It takes so long to grade student essays that it is difficult to have a quick turnaround. This becomes even harder if the students are doing rough and final drafts because this means that their essays must be graded twice.

The student-participants had better structure on their outlines (Appendix N) than they did on their essays, probably because they had a visual guide of what was expected and not just a list of requirements (as on the essay assignment). For the essay, the student-participants only had a graphic organizer for one paragraph of the essay, not the essay as a whole. For some student-participants, the body paragraph organizer enabled them to have great structure for one paragraph, but they struggled with the organization of their essays as a whole.

While the student-participants' outlines had good structure overall, most of the student-participants struggled immensely with the research component of the assignment (Appendix P). While the essay did not have a research component, research was a major part of the outline assignment. The student-participants struggled from the beginning with the concept of including research citations in their writing. The teacher-researcher wonders to what extent the student-participants have been required to include research citations in their writing in past courses. That being said, the teacher-researcher was pleased to find that the student-participants seemed much more confident in their abilities to comprehend the informational texts involved in the outline assignment.

The research outline was the second outline that the student-participants completed over the course of the study. The first outline was completed in conjunction with the essay final draft and was not collected as an artifact. Perhaps the student-

participants performed better on this second outline because they were already comfortable with the outline format. As a whole, the student-participants did very well on the various graphic organizers themselves, regardless of the organizers' impact on the student-participants' writing.

**Theme 3: Student-participants more often consider metacognition**

The teacher-researcher believes that the student-participants more often consider their metacognitive processes now that the study is complete simply because the study drew their attention to those processes through the use of graphic organizers (Schoenbach et al., 1999; Brenton-Haden, 1997). She believes that the student-participants subconsciously considered those processes long before the study took place, but she is thankful that they are now fully aware of the processes and is hopeful that that knowledge will be useful to the student-participants in the future.

**Theme 4: Student-participants gained confidence in reading due to graphic organizer use**

Regardless of whether or not the student-participants' reading comprehension actually improved as a result of the study, the student-participants do have greater confidence about their ability to comprehend text. The teacher-researcher attributes this increased confidence to the use of graphic organizers (Reynolds & Perin, 2009; Bowman et al., 2013; Allen & Hancock, 2008; Schoenback et al., 1999; Walczyk, 2000). These tools helped the student-participants to glean important information from the text and organize it. The graphic organizers helped the student-participants to feel confident that they could manage the text, understand it, and be able to use the information from it.

The teacher-researcher believes that the study would have been more successful if research had been collected in the fall semester when the student-participants were not so close to graduating. By the spring semester, high school seniors are often tired of school and are apathetic about their assignments. The teacher-researcher noted that the student-participants seemed to be increasingly distracted and careless in their work as the study progressed.

In addition, the teacher-researcher believes that the study would have been more successful if she had not required the help of an assistant and could have collected all of the research herself without interruption. This would have provided greater consistency in the instructions given to the student-participants as well as in general procedures. The student-participants would have been less overwhelmed, and the study may have produced more improvement in student-participants' writing.

The teacher-researcher also feels that the student-participants who said that they are less comfortable with writing essays by the end of the study might feel that way because they have become discouraged (caused by poor grades, feeling overwhelmed, etc.). At the same time, these student-participants could have said that they feel this way because of their mood that day or because of something going on outside of class.

The teacher-researcher feels that the student-participants' lives outside of class should also be considered. After all, the student-participants are 17- and 18-year-old students, and some of them are experiencing major issues in their lives. These young people are graduating very soon and no longer see this class or school in general as a priority because they are about to move on with their lives. They realize that in the grand scheme, they have bigger things on which to focus their attention.

Lastly, the teacher-researcher believes that the student-participants would have benefitted from extended use of graphic organizers. She feels that the organizers positively impacted her students so much that she plans to utilize the tools even more in the future. The teacher-researcher has plans to implement graphic organizers in all of her curricular units. She hopes that her colleagues will also see the benefits of using graphic organizers and will choose to use them in their own classrooms. This is discussed further in the action plan described in Chapter Five.

## Conclusion

The present study did not produce the results that the teacher-researcher expected in the student-participants' writing. Nonetheless, the student-participants are now more aware of their thinking processes and now feel more comfortable with essay writing and reading comprehension. The teacher-researcher feels that the student-participants are now readier for their next phase of life because they have greater confidence as a result of this study.

# CHAPTER FIVE

## DISCUSSION, IMPLICATIONS, AND RECOMMENDATIONS

In this qualitative study, 10 high school seniors enrolled in CP English IV at Seaside High School were given various graphic organizers to discern what kind of impact the organizers would have on the students' metacognition as demonstrated through their reading comprehension and writing skills. The student-participants were given one graphic organizer at a time; the teacher-researcher introduced each organizer, carefully explaining the function and purpose of each part of the tool, allowed the student-participants time for guided practice, and allowed the student-participants time for independent practice. The student-participants' independent practices were collected and functioned as artifacts for the study, which lasted for five weeks. Through those artifacts, the student-participants demonstrated their understanding of metacognitive tools. The study began and ended with student-participant surveys and interviews. Throughout the study, the teacher-researcher conducted observations of the student-participants and recorded those observations using field notes.

### Research Question

What impact will graphic organizer use have on the metacognitive skills of 10 senior high school students in English IV British Literature at Seaside High School as demonstrated through their writing?

## Purpose of the Study

The purpose of this study was to examine the impact of graphic organizer use on the metacognitive skills of 10 senior high school students in English IV British Literature at Seaside High School. The goal of the study was to find the extent to which regular level, high school seniors could benefit in reading and writing from using learned metacognitive tools. The study sought to measure the relationship between students' use of metacognitive tools and perceived and actual academic achievement.

## Summary of the Study

Over the course of the study, the student-participants performed well on the graphic organizers. Though there was limited impact pertaining to the student-participants' reading and writing abilities, the student-participants as a whole became more comfortable with graphic organizers and reading comprehension, and most of them are now more comfortable with essay writing. The majority of the student-participants now say that they often consider metacognition, and five of them say that the study helped them.

## Implications of the Study

As a result of the study, the teacher-researcher has made several realizations. She is now more aware that she must make her teaching practice more meaningful for her students. Students check out when they are not invested in what they are doing; students are not invested when they do not see the value in what they are doing or in what they are being asked to do (Ivers, 2012; Creighton-Lacroix, 2000). The teacher-researcher believes that she must re-evaluate everything that she teaches with new priorities in mind. She can no longer merely focus on getting through her curriculum or even meeting the

course standards—if the students are not invested, the curriculum and standards do not matter.

In conducting the present study, the teacher-researcher has learned some ways to help students help themselves. She has learned ways to teach students to decode the information with which they are presented and be more aware of their own thinking processes. The teacher-researcher realizes that if she can help students to do this, then they will be more invested in what she is teaching them as well as in their academics in general (Allen & Hancock, 2008; Banning, 2008; Fox & Riconscente, 2008; Anastasiou & Griva, 2009). This will significantly help the students in the long-term and could even change their course academically. For example, if a student had not planned to go to college, he or she may choose to go as a result of becoming invested in their academics.

The teacher-researcher now understands what happens when students are made to feel more comfortable with what they are doing in the classroom. She sees the value making students feel comfortable (Brenton-Haden, 1997; Reeve & Brown, 1984) and realizes that she must now make this a major objective for each of the courses she teaches.

At the same time, the teacher-researcher has learned some strategies that do not work as well. She has learned strategies that frustrate students and decrease their comfort levels as well as strategies that do not improve students' writing or reading comprehension. Even though the teacher-researcher gathered some research before the study that contradicts some of her findings, she now understands that regardless of what the research says, she must always choose to do what works for the students that she teaches.

Every school year, the teacher-researcher has more students drop out of school. Students drop out because they are not invested in what they are doing in school (Alexander et al., 1997). The teacher-researcher now realizes more than ever that she has a huge responsibility to prevent this from happening to her students. She must do everything that she can in order to increase her students' investment in their academics.

As a result of the study, the teacher-researcher also realizes that she has a great deal of useful findings to share with other educators about what she has learned regarding which strategies work and which ones do not work for students in high school English classrooms. Teachers have a responsibility to meet students' needs. As mentioned, the focus of an academic course should not be merely plowing through a curriculum or being able to check off standards met. Instead, teachers should work to meet the needs of students, whatever those needs may be. The American education system has been failing for decades, so what has been done in the past is not working. Teachers have a responsibility to first meet their students' needs, but they also have a responsibility to better educate parents and other community members, school administrators, and lawmakers about students' needs and the fact that curricula should be structured to support those needs. As a society, we owe it to our kids (and the next generation of citizens) to give them what they need to ensure their future success.

Part of ensuring students' future success is helping them learn how to get along with others. While classroom management can be extraordinarily difficult, it is imperative that teachers remain in control of their classrooms so that students can learn. Classroom management is much easier if students' needs are being met; when their needs

are met, students do not need to misbehave. If teachers can maintain greater classroom management by better meeting their students' needs, then they must.

Students' needs cannot be met properly by effective classroom management alone. In order for the education system as a whole to be successful, people at all levels of the system have to support each other. People must support others at the same level but also at other levels. Those in schools (i.e. students, teachers, administrators, support staff) need all the support that they can get. Students need to support each other (and trust in their teachers' professional expertise); teachers need to support each other; school administration needs to support teachers; communities, lawmakers, and parents need to support teachers; and everyone needs to support students. If people at different levels of the system are at constant odds with one another, then it is difficult to make any progress, and the students are the ones who suffer the most. If there is greater harmony between the groups, then students can be the primary focus, as they should be.

We have a responsibility to take care of other people, especially those who are vulnerable and especially when we have the ability to help. Students are no exception to this. Students have a responsibility to take care of each other, but we should also take care of them. If we know that students have unmet needs, it is our responsibility to do our best to meet those needs. This is true for parents, teachers, school administrators and support staff, lawmakers, and other community members. People outside of schools, even those without school-age children, also need to do their part. Parents need to support their children's academics (and also support their children's teachers), of course; they need to take responsibility in this because the responsibility should not solely be left up to the teachers and administrators. People outside of schools should also be

supportive of students and should help in any way that they can (i.e. volunteering at schools, offering tutoring or homework help).

## Action Plan

The results of the present study show that including the use of metacognitive tools in the high school English classroom is effective. Using the results of this study, the teacher-researcher has created an action plan to (a) consistently use metacognitive tools in the British literature curriculum, (b) share the findings of the present study with colleagues at Seaside High School, and (c) conduct further research with new student-participants based on the questions raised throughout the study as well as the study's findings. Mertler (2014) says that action research should improve education in practical, cyclical ways through educator collaboration. After sharing the findings of the present study with her colleagues, the teacher-researcher hopes to collaborate with them in order to find new ways to effectively use metacognitive tools in the classroom.

### Step 1: Consistently use metacognitive tools in the British literature curriculum

In the first step of the action plan, the teacher-researcher will consistently use metacognitive tools in the British literature curriculum. In the present study, the teacher-researcher employed the use of various metacognitive tools throughout one five-week unit of instruction. As part of the action plan, the teacher-researcher hopes to include the use of metacognitive tools in her other units of instruction. This will include the adaptation of existing metacognitive tools to fit the units of instruction outside of the study, but it will also include finding new metacognitive tools to use in the other curricular units.

There are some challenges to using metacognitive tools consistently in the British literature curriculum. First and foremost, the course standards (set by the state) must be met regardless. In addition, the school district and the school have the right to implement regulations on courses at any point. This could mean, for example, adding mandatory testing or curricular units with little advance notice. Also, as anyone involved in education knows, things do not always go according to plan. Sometimes classes get behind in the curriculum, and often assignments and lessons must be delayed or canceled altogether. These challenges could be overcome by convincing the leaders at Seaside High School and in the school district that it is important to consistently include metacognitive tools in the curriculum so that the practice becomes a priority.

**Step 2: Share findings with colleagues at Seaside High School**

As the second part of the action plan, the teacher-researcher will share the findings of the present study with her colleagues at Seaside High School. She is eager to talk with her peers about the effects of using metacognitive tools in the English classroom. She is also eager to hear about her colleagues' experiences in using such tools with students. The teacher-researcher hopes to devise new ways to use these tools in other curricular units with the help of her peers, and she hopes that through collaboration, all teachers involved will come away with a multitude of resources. The teacher-researcher also hopes that this process can be cyclical; she hopes that she and her colleagues can try various metacognitive tools, reflect on using them, collaborate with the group, make any necessary changes to the tools or the methods of using them, and then use the tools again or in a different capacity. The teacher-researcher would also like to work with colleagues in other subject areas with the help of her school's administration.

She believes that the faculty would benefit from some possible professional development sessions pertaining to using metacognitive tools in the classroom. The teacher-researcher also believes that this could be expanded to include teachers from other schools in the district and maybe even teachers in other districts, especially since there is currently a major literacy initiative statewide.

Sharing the findings of the present study with her colleagues could present some challenges for the teacher-researcher. Teachers are busy individuals! At Seaside High School, teachers do not have the opportunity to share in common planning time with other teachers. That means that if they want to collaborate, teachers must find time outside of the school day. Teachers, like everyone else, have obligations outside of their jobs, so it is often difficult for them to stay at school longer than necessary. This challenge could be overcome by utilizing meeting time that has already been reserved or communicating through email.

**Step 3: Conduct further research based on questions raised and findings**

The third step of the action plan is to conduct further research with new student-participants based on the questions raised throughout the study as well as the study's findings. The teacher-researcher will use what she learned as a result of the present study in order to include the use of metacognitive tools in other curricular units and to use those tools in more meaningful ways. Through collaboration with her colleagues, the teacher-researcher believes that this process will be successful as it will include the input of expert classroom teachers.

Conducting further research with future student-participants could be a challenge because of the time it takes to conduct such research. At the same time, the Seaside High

School administration may not give permission for the teacher-researcher to conduct another research study. These challenges could be overcome by convincing school leaders that metacognitive instruction is important. In addition, school leaders could be reminded of the importance of teachers conducting research with their students in an effort to improve their teaching practice.

## Suggestions for Future Research

The teacher-researcher learned a great deal as a result of the present study. If she had the opportunity to conduct further research, she would gather her data in the fall semester of the student-participants' senior year rather than in the spring when they are approaching graduation. She would also consider conducting similar research with non-seniors in hopes of the student-participants being more invested in the study.

The teacher-researcher feels that it would be useful to conduct similar research in other subject areas. Graphic organizers work well for writing, which applies to virtually all other subject areas.

The teacher-researcher believes that it would be useful to rethink the structure of the study. If given the chance, she would like to give greater consideration to the graphic organizers and assignments chosen for research in an effort to maximize time and energy but also demonstrate real growth. In addition to the research outline, the teacher-researcher would suggest that the student-participants complete another assignment that includes a research component so that they can take what they learned from the outline assignment regarding research citations and apply that to the new assignment. She feels that this would be a good demonstration of the student-participants' growth.

## Conclusion

The teacher-researcher considers the study a success, even though it did not produce the anticipated results entirely. The study was very informative for the teacher-researcher as well as for the student-participants, and it revealed four major themes: (a) student-participants' comfort level was raised concerning graphic organizer use, (b) student-participants' writing appeared to be largely unimproved by graphic organizer use, (c) student-participants more often consider metacognition, and (d) student-participants gained confidence in reading due to graphic organizer use. In hindsight, the teacher-researcher realizes that she should have more carefully chosen the graphic organizers and more thoughtfully planned the gathering of research. Regardless, the teacher-researcher believes that she is a more effective teacher as a result of the study. She will use the results of the study continually in her teaching.

The present study revealed that graphic organizers significantly impacted the student-participants; the teacher-researcher feels that more should be done to include the use of graphic organizers in curricula outside of English. She feels that the findings of the present study are important because including metacognitive tools in instruction can make what students are learning more meaningful for them. If what students are learning becomes more meaningful for them, then they become more invested in their education and benefit more from it. Metacognitive instruction matters because it can help students to become more invested in what they are learning, and it can help them to learn more effectively. As demonstrated in the present study, metacognitive tools can increase students' confidence in both reading and writing, and they have the potential to help students read and write more effectively. Teachers must give their students all of the

tools that they can so that students can gain the most knowledge possible and, as a result, be as prepared as possible for the future.

As a result of the present study, the teacher-researcher has developed an action plan to (a) consistently use metacognitive tools in the British literature curriculum, (b) share the findings of the present study with colleagues at Seaside High School, and (c) conduct further research with new student-participants based on the questions raised throughout the study as well as the study's findings. While there are obvious challenges to this action plan, the teacher-researcher will do all that she can to implement the plan.

Regarding future research, the teacher-researcher would like to see the impact of including metacognitive instruction in other subject areas with other students. She would also like to conduct research earlier in the school year to find out if the timing of research makes a difference. In addition, the teacher-researcher would like to restructure her study in order to maximize time and energy.

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APPENDIX A

CONSENT FORM


# James Island Charter High School

1000 Fort Johnson Road, Charleston, SC 29412

Phone: (843) 762-2754 Fax: (843) 762-5228


January 19, 2017

Dear [Parent/Guardian]:

My name is Josie White. In addition to being your child's CP English IV teacher, I am also conducting a research study for my doctoral dissertation.

My study will focus on the use of metacognitive tools in the high school English classroom. It has been my experience that most students have a limited understanding of how their own thinking processes work. I believe that if given the proper metacognitive tools and training, students can greatly improve their reading comprehension, their writing skills, and, as a result, their self-confidence. The goal of the study is to find the extent to which regular level, high school seniors can benefit in reading and writing from using learned metacognitive tools. The study seeks to measure the relationship between students' use of metacognitive tools and perceived and actual academic achievement.

Over the course of the study, I will utilize student surveys, various graphic organizers, and student interviews to evaluate the effectiveness of metacognitive tools. The academic content of the class will still be British literature.

As your child's teacher, my goal is to see my students graduate from high school prepared for their next step, regardless of whether that is a four-year university, a technical school, or the workplace. I believe that by learning these metacognitive tools, students will become self-advocates and will be greater prepared for their futures.

If your child chooses not to participate, he or she will not be penalized in any way. Opting out will have no impact on your child's grade or the academic content covered in class. Participation is completely voluntary. If your child elects to participate, he or she may drop out of the study at any time without penalty. This study's results will only be

published as part of my doctoral dissertation, and no identifying information about the students, the school, or the school district will be used.

If you have any questions or concerns at any point, please feel free to call me at (843) 762-2754 or email me at josie_white@charleston.k12.sc.us.

Respectfully,

Josie White, Doctoral Candidate

By signing below, I give my consent for my child to participate in this study.

Parent/Guardian's name: _____ Child's name: _____

Parent/Guardian's signature: _____

APPENDIX B

ASSENT FORM


# James Island Charter High School

1000 Fort Johnson Road, Charleston, SC 29412

Phone: (843) 762-2754 Fax: (843) 762-5228


January 19, 2017

Dear [Student]:

In addition to being your CP English IV teacher, I am also conducting a research study for my doctoral dissertation.

My study will focus on the use of metacognitive tools in the high school English classroom. It has been my experience that most students have a limited understanding of how their own thinking processes work. I believe that if given the proper metacognitive tools and training, students can greatly improve their reading comprehension, their writing skills, and, as a result, their self-confidence. The goal of the study is to find the extent to which regular level, high school seniors can benefit in reading and writing from using learned metacognitive tools. The study seeks to measure the relationship between students' use of metacognitive tools and perceived and actual academic achievement.

Over the course of the study, I will utilize student surveys, various graphic organizers, and student interviews to evaluate the effectiveness of metacognitive tools. The academic content of the class will still be British literature.

As your teacher, my goal is to see my students graduate from high school prepared for their next step, regardless of whether that is a four-year university, a technical school, or the workplace. I believe that by learning these metacognitive tools, students will become self-advocates and will be greater prepared for their futures.

If you choose not to participate, you will not be penalized in any way. Opting out will have no impact on your grade or the academic content covered in class. Participation is completely voluntary. If you elect to participate, you may drop out of the study at any time without penalty. This study's results will only be published as part of my doctoral

dissertation, and no identifying information about the students, the school, or the school district will be used.

If you have any questions or concerns at any point, please feel free to call me at (843) 762-2754 or email me at josie_white@charleston.k12.sc.us.

Respectfully,

Josie White, Doctoral Candidate

By signing below, I give my consent to participate in this study.
Student's name: _____

Student's signature: _____

APPENDIX C

BIOGRAPHICAL INFORMATION FORM

**First and Last Name**: _____

**How many years have you attended JICHS?**

1 2 3 4

**How many classes are you taking this semester?**

1 2 3 4 5 6

**What letter grade did you receive in your English III class?**

A B C D

**Please rate your typical level of comfort regarding writing essays in English class.**

Not at all comfortable Neutral Very comfortable

**Please rate your typical level of frustration regarding writing essays in English class.**

Very frustrated Neutral Not at all frustrated

**Please describe your strengths when it comes to writing essays.**

**Please describe your weaknesses when it comes to writing essays.**

**Please describe yourself as a student in an English class.**

**How do you learn best in English class? How do you know?**

APPENDIX D

PRE-RESEARCH SURVEY

**First and Last Name**: _____

**Metacognition is commonly defined as "thinking about thinking." To what extent do you think about your own thinking processes?**

Never Sometimes Often

**Have you ever been asked to think about your own thinking processes? If so, in what context?**

**When your English teacher assigns an essay, what do you do first?**

**What would help you to feel more comfortable writing essays in English class?**

**Graphic organizers are tools (such as a web or outline) that help you organize your thinking. To what extent do you use graphic organizers in school?**

Never Sometimes Often

**Please rate your level of comfort in using graphic organizers.**

Not at all comfortable Neutral Very comfortable

**Additional comments:**

## APPENDIX E

## LEARNING STYLES INVENTORY

1. I have difficulty sitting still in class.
    a. Usually
    b. Sometimes
    c. Rarely
2. I learn best when I get to do something other than just watch or listen.
    a. Usually
    b. Sometimes
    c. Rarely
3. I have an easy time remembering what I hear.
    a. Usually
    b. Sometimes
    c. Rarely
4. I have an easy time remembering what I see.
    a. Usually
    b. Sometimes
    c. Rarely
5. I would rather do a hands-on project than an essay or oral presentation.
    a. Usually
    b. Sometimes
    c. Rarely
6. I remember how to spell words by picturing them in my head.
    a. Usually
    b. Sometimes
    c. Rarely
7. I would rather listen to someone explain something to me than read an explanation.
    a. Usually
    b. Sometimes
    c. Rarely
8. I like to make things or work with my hands in my free time.
    a. Usually
    b. Sometimes
    c. Rarely
9. I doodle during lectures or when talking on the phone.
    a. Usually
    b. Sometimes
    c. Rarely
10. My room and bookbag are messy and disorganized.
    a. Usually
    b. Sometimes
    c. Rarely

11. I have difficulty reading graphs or charts and need someone to explain them to me.
    a. Usually
    b. Sometimes
    c. Rarely
12. I am comfortable talking with almost anyone, even if I don't know him or her well.
    a. Usually
    b. Sometimes
    c. Rarely
13. I write out lists to keep myself or my thoughts organized.
    a. Usually
    b. Sometimes
    c. Rarely
14. When I think of an experience I have had, I mostly remember the way it made me feel.
    a. Usually
    b. Sometimes
    c. Rarely
15. I learn best through class discussion or teacher-led explanations.
    a. Usually
    b. Sometimes
    c. Rarely
16. I enjoy art more than music.
    a. Usually
    b. Sometimes
    c. Rarely
17. I am easily distracted if I am trying to talk with someone while there is background noise.
    a. Usually
    b. Sometimes
    c. Rarely
18. I fidget or play with something on my desk during class.
    a. Usually
    b. Sometimes
    c. Rarely
19. When studying for tests, I write things out or rewrite my notes.
    a. Usually
    b. Sometimes
    c. Rarely
20. I have an easy time remembering song lyrics or movie quotes.
    a. Usually
    b. Sometimes
    c. Rarely
21. When I am given oral instructions, I write them down to remember them.
    a. Usually
    b. Sometimes
    c. Rarely
22. I am good at making charts, graphs, and posters.
    a. Usually
    b. Sometimes
    c. Rarely
23. I have music playing as often as possible.
    a. Usually
    b. Sometimes
    c. Rarely

24. I have to use my finger or another object to keep my place when I'm reading.
    a. Usually
    b. Sometimes
    c. Rarely

**Scoring**

**Write the appropriate number of points next to the question number below.**

**Usually=1 point** **Sometimes=2 points** **Rarely=3 points**

| **Kinesthetic** | | **Auditory** | | **Visual** | |
|---|---|---|---|---|---|
| Question # | Points | Question # | Points | Question # | Points |
| 1 | | 3 | | 4 | |
| 2 | | 7 | | 6 | |
| 5 | | 11 | | 13 | |
| 8 | | 12 | | 16 | |
| 9 | | 15 | | 19 | |
| 10 | | 17 | | 21 | |
| 14 | | 20 | | 22 | |
| 18 | | 23 | | 24 | |

The category with your highest score indicates your preferred learning style!

Adapted from:

Dille, B. K. (n.d.). Learning style inventory. Unpublished manuscript, Department of Social Sciences, Odessa College, Odessa, Texas.

Whyman, P. (n.d.). Learning styles inventory. The Center for New Discoveries in Learning. Retrieved from http://www.howtolearn.com/learning-styles-quiz/

APPENDIX F

PRE-RESEARCH INTERVIEW FORM

**First and Last Name**: _____

**What letter grade did you receive in your English III class?**

A B C D

**In your opinion, why did you receive this grade?**

**In your opinion, is this grade a true indicator of who you are as a student?**

**Please describe your typical level of comfort regarding writing essays in English class.**

**Why is this your comfort level? What contributes to your comfort level?**

**Please describe your typical level of frustration regarding writing essays in English class.**

**Why is this your frustration level? What contributes to your frustration or lack of frustration?**

**Please elaborate on your strengths when it comes to writing essays.**

**Please elaborate on your weaknesses when it comes to writing essays.**

**Please describe yourself as a student in an English class.**

**How do you learn best in English class? How do you know?**

APPENDIX G

BODY PARAGRAPH ORGANIZER

Name:

# Body Paragraph Organizer

| Topic Sentence-Write one main idea that you will prove in this paragraph (Don't start with "In this paragraph..."!). | | |
|---|---|---|
| 1st supporting detail | 2nd supporting detail | 3rd supporting detail |
| | | |
| Concluding Sentence-Combine your topic sentence with your three details to wrap it up. | | |

APPENDIX H

FIELD NOTES

| Observation #:<br>Class Period:<br>Date: | Observations | Observer's Interpretations/Comments |
|---|---|---|
| | | |
| | | |
| | | |
| | | |

APPENDIX I

ESSAY ASSIGNMENT

**Analytical Essay—*Beowulf* and Personal Reflection**

**Choose one of the topics below to develop into a 2-3 page essay. Your essay must be typed and follow MLA format. (See guidelines distributed in class.) No outside research is necessary, but you are required to use at least 3 quotations as textual evidence in your essay. Be sure to use evidence that supports what you say in your essay. You will have 3 days to work in class, Monday (1/30), Tuesday (1/31) and Wednesday (2/1). Your essay is due on Friday, 2/3 and may be submitted in class or via GoogleDocs.**

1. Compare and contrast elements of the *Beowulf* plot with events in your own life. While you certainly have not had to face any Grendel-like creatures, you may have overcome some of the hardships that Beowulf did, such as facing your fears without the support of others or accomplishing something when others doubted you. Use at least 3 examples of textual evidence for support.

2. Compare and contrast a character from *Beowulf* with yourself. Conduct an in-depth analysis the character and his traits, and explain how you are both similar and dissimilar. Use at least 3 examples of textual evidence for support.

APPENDIX J

GOLD

The best students use **GOLD** to stay organized while reading!

| | |
|---|---|
| Topic: | |
| **G**ot it! (What I already know): | |
| What I **O**ught to look for while reading: | |
| What I **L**earned while reading: | |
| What I need to **D**o now: (where to look for more information) | |

Adapted from the K-W-L graphic organizer and CSR, created by McCown and Thomason: McCown, M. A., & Thomason, G. B. (2014). Informational text comprehension: Its challenges and how collaborative strategic reading can help. *Reading Improvement*, *51*(2), 237-253.

APPENDIX K

ARTICLE 1

# Anglo-Saxon

is a term used historically to describe any member of the Germanic peoples who, from the 5th century ce to the time of the Norman Conquest (1066), inhabited and ruled territories that are today part of England and Wales.

According to St. Bede the Venerable, the Anglo-Saxons were the descendants of three different Germanic peoples—the Angles, Saxons, and Jutes. By Bede's account, those peoples originally migrated from northern Germany to the island of Britain in the 5th century at the invitation of Vortigern, a ruler of Britons, to help defend his kingdom against marauding invasions by the Picts and Scotti, who occupied what is now Scotland. Archaeological evidence suggests that the first migrants from the Germanic areas of mainland Europe included settlers from Frisia and antedated the Roman withdrawal from Britain about 410 ce. Their subsequent settlements in what is now England laid the foundation for the later kingdoms of Essex, Sussex, and Wessex (Saxons); East Anglia, Middle Anglia, Mercia, and Northumbria (Angles); and Kent (Jutes). Ethnically, the Anglo-Saxons actually represented an admixture of Germanic peoples with Britain's preexisting Celtic inhabitants and subsequent Viking and Danish invaders.

The peoples of each of the various Anglo-Saxon kingdoms spoke distinctive dialects, which evolved over time and together became known as Old English. Within that variety of dialects, an exceptionally rich vernacular literature emerged. Examples include the masterful epic poem Beowulf and the Anglo-Saxon Chronicle, a collection of manuscripts that cover events in the early history of England.

The term Anglo-Saxon seems to have been first used by Continental writers in the late 8th century to distinguish the Saxons of Britain from those of the European continent, whom St. Bede the Venerable had called Antiqui Saxones ("Old Saxons"). The name formed part of a title, rex Angul-Saxonum ("king of the Anglo-Saxons"), which was sometimes used by King Alfred of Wessex (reigned 871–99) and some of his successors. By the time of the Norman Conquest, the kingdom that had developed from the realm of the Anglo-Saxon peoples had become known as England, and Anglo-Saxon as a collective term for the region's people was eventually supplanted by "English." For some time thereafter, Anglo-Saxon persisted as an informal synonym for English, but that use

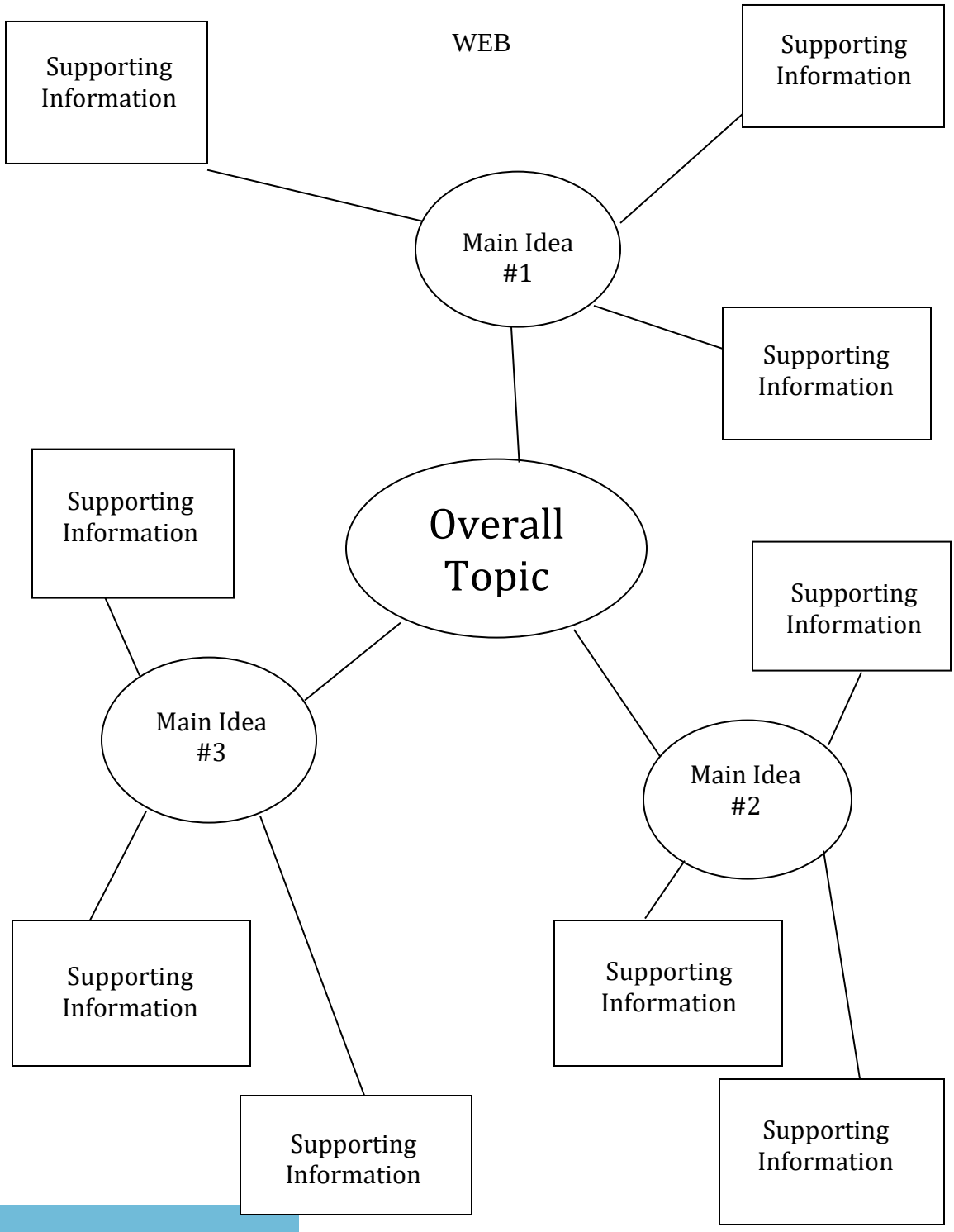
diminished as emigrants from Asia, Africa, the Caribbean, and other areas beyond northern Europe further reshaped Britain's ethnic composition.

"Anglo-Saxon" continues to be used to refer to a period in the history of Britain, generally defined as the years between the end of Roman occupation and the Norman Conquest. During that period, though, the various peoples commonly grouped together as Anglo-Saxons were not politically unified until the 9th century, and their reign over England was interrupted by 26 years of Danish rule that began in 1016 with the accession of Canute.

"Anglo-Saxon." *Britannica Library*, Encyclopædia Britannica, 10 Mar. 2015. library.eb.com.scsl.idm.oclc.org/levels/referencecenter/article/1593. Accessed 18 Jan. 2017.

APPENDIX L

WEB



APPENDIX M

ARTICLE 2

THREE NOTES ON SWORDS IN *BEOWULF*

'Beowulf', line 1459, 'ecg waes iren, atertanum fah'

On this description of the sword Hrunting Klaeber comments, 'ater is perhaps used figuratively with regard to the acid employed in the process of (false) damascening. Another possibility is that the serpentine ornamentation (cf. wyrmfah 1698, also waegsweord 1489) was supposed to have a miraculous poisoning effect (Stjerna), the figures of serpents suggesting their well-known attribute (cp. attorscea[eth]a 2839, also 2523). It is less likely that the edge was really meant to be poisoned.' (1) 'Atertanum fah' literally means 'adorned with poison-twigs' or (as Wrenn rendered it) 'patterned by twigs of venom', (2) and W. F. Bolton was nearer the mark in glossing the phrase 'adorned with twiglike patternings of deadly effect'. (3) The sense may become clearer when we compare a passage in the Nine Herbs Charm dealing with snakebite. The actual remedy prescribed in the Lacnunga involves powdering nine herbs and making them into a poultice to apply to the wound, (4) but the charm to accompany the making of the poultice runs as follows:

> [ETH]as VIIII magon wi[eth] nigon attrum:
> Wyrm com snican, toslat he man;
> [thorn]a genam Woden nigon wuldortanas,
> sloh [eth]a [thorn]a naeddran [thorn]aet heo on nigon tofleah.
> [THORN]aer geaendade aeppel and attor,
> [thorn]aet heo naefre ne wolde on hus bugan. (5)
>
> (These nine (herbs) avail against nine poisons:
> A snake came creeping, it wounded a man;
> then Woden took nine twigs of glory,
> then struck the serpent so that it burst into nine (pieces).
> There the swelling and the poison came to an end,
> so that it might never wish to dwell in (that) house again).)

Godfrid Storms explained this as follows: '[Woden] takes nine glory-twigs, by which are meant nine runes, that is nine twigs with the initial letters in runes of the plants representing the power inherent in them, and using them as weapons he smites the serpent with them. Thanks to their magical power they pierce its skin and cut it into nine pieces.' (6) Other explanations are possible, but the 'wuldortanas' ('glory twigs') of the charm are fairly evidently magical healing runes cut by the great runemaster of Havamal; and it seems likely that the 'atertanas' ('poison twigs') of Beowulf, line 1459 are deadly magical runes etched or scored on the blade of Hrunting. In ON the term kvistrunar ('twig runes') is used for a kind of cryptic runes resembling those found in England on the Hackness Cross, which look very much like stylized fir twigs. (7) Runes are certainly found on scabbards and on the blades of knives and spears, (8) while the sword Beowulf

takes from the ogres' lair has runes inscribed on the hilt ('[thorn]urh runstafas rihte gemearcod', line 1695). A short sword or 'scramasax' found in the bed of the Thames in 1857 and now in the British Museum has a runic alphabet or futhorc inscribed on its blade, which has been thought to have a magical purpose. (9) But the most pertinent English inscription extant is probably the one on the inside of the sixth-century silver scabbard mount of the sword found in a pagan Jutish cemetery at Chessel Down in the Isle of Wight and now also in the British Museum; it most likely reads 'aeco soeri', which R. W. V. Elliott interpreted as 'increase to pain' or 'augmenter of pain'. (10) Another runic inscription that may have been intended as a magic spell to augment the power of a weapon appears on an older or roughly contemporary spear shaft found in a bog at Kragehul in Denmark. (11) In Sigdrifumal, stanza 6 the valkyrie advises Sigurd to carve runes on the hilt and perhaps also the blade of his sword to obtain victory; (12) and Egils Saga, chapter xliv, where the hero carves runes on a horn to bring about his enemies' death, provides further evidence of how runes were believed to kill.

'Beowulf', line 1698a, 'wreo[thorn]enhilt ond wyrmfah'

Klaeber glossed 'wreo[thorn]enhilt' 'with twisted hilt' and 'wyrmfah' 'with serpentine ornamentation'. Wrenn glossed 'wreo[thorn]enhilt' 'having a twisted hilt--i.e., with hilt decorated with spiral or serpentine patternings' and cited Girvan's fuller discussion of the passage, (13) while essentially concurring with Klaeber about 'wyrmfah'. Girvan rightly emphasized that the poet is here depicting a hilt, not a complete sword; the blade of the sword that Beowulf snatched up in the ogres' lair dissolved when he had used it to behead the ogress, corroded by her venomous blood, and he could bring only the hilt back to Hrothgar. Stjerna was therefore right to dismiss the ample evidence for serpentine patterning on sword blades as irrelevant here. (14) According to him, 'wreo[thorn]enhilt' 'may be assumed to mean that the cross-guard was wound round the hilt, or that the latter was provided with an ornament of twisted bands'. (15) The second suggestion seems nearer the truth; for 'wreo[thorn]en' is a variant of wri[thorn]en meaning 'bound', and a 'wreo[thorn]enhilt' was most likely a sword hilt that had an iron tang at the core--sometimes forged along with the blade and handguard--wound about with some more perishable material that afforded a softer and better grip, as the handle of a modern cricket or baseball bat is bound with tape. The binding would probably have been a coiled strip of leather or fabric, but that could have been overlaid or secured with gold rings or gold or silver wire; H. R. Ellis Davidson provides several examples (16) and notes that King AEthelwulf of Wessex, the father of Alfred the Great, gave Pope Benedict III 'spata cum auro purissimo ligata', a sword bound with purest gold. (17) Wyrmfah properly means 'adorned with one or more dragons or serpents', and that is the safest gloss. (18) Girvan confidently asserts that the serpents occupied the grip, because the runic inscription mentioned in 1695 must have appeared on the crosspiece, and compares a sword hilt found in Fetter Lane in London and now in the British Museum; (19) but he seems over-dogmatic, since a sixth-century sword hilt probably found in the early cemetery at Gilton in Kent has runes inscribed on the pommel (20) and a later sword found at Skane in Sweden, but thought to have been made in England or by an English craftsman, has beasts in relief on both the pommel and the handguard. (21) Stjerna illustrated two sixth- or seventh-century swords from Vallstenarum in Gotland and Ultuna in Uppland in Sweden, of which the first displays interlaced serpentine figures at either end of the handgrip while the second has them on both the pommel and the scabbard mount. (22)

'Beowulf', lines 2498b-2505

ond swa to aldre sceall
saecce fremman [thorn]enden [thorn]is sweord
[thorn]ola[eth]

[thorn]aet mec aer ond si[eth] oft gelaeste
sy[eth][eth]an ic for duge[eth]um Daeghrefne wear[eth]
to handbonan, Huga cempan;
nalles he [eth]a fraetwe Frescyning<es>
breostweor[eth]unge, bringan moste,
ac in campe gecrong cumbles hyrde,
ae[thorn]eling on elne; ne waes ecg bona,
ac him hildegrap heortan wylmas,
banhus, gebraec.

Klaeber and Wrenn read 'Frescyning[e]' but both ignore a difficulty. Daeghrefn was 'Huga cempan', a champion of the Franks; then why was he apparently trying to retrieve armour from the battlefield (or else come back intact in his own) for the king of the Frisians? Surely he served his own king. Chambers in his revision of Wyatt's edition cited lines 1210 and 2921 as evidence that the poet knew that the real head of the host Hygelac encountered was the king of the Franks. 'But', he continued, 'the writer of Beowulf may well have been using traditional names which he himself did not clearly understand.' (23) In Beowulf: An Introduction he gave his solution somewhat more fully: 'The author of Beowulf may not have been clear as to the exact relation of the different tribes. We cannot tell, from the vague way he speaks, how much he knew.' (24) Sedgefield concurred, while Hoops thought the poet had actually confused the Franks and the Frisians. (25) Elsewhere, though, Chambers himself emphasized the prominence of the Frisians in the seventh and eighth centuries, (26) and we may reasonably doubt whether any English court scop of the period 650-850 could have failed properly to distinguish two such famous mainland peoples, with each of whom England had considerable trade. (27) In the manuscript 'Frescyning' extends to the crumbled far outer edge of the leaf, and we can legitimately assume that two letters are lost and read Frescyning<es>. If so, translate 'and so shall I all my life wage battle, as long as this sword lasts that early and late has often availed me, (ever) since, in the presence of the seasoned warriors, I became the slayer by hand of Daeghrefn, the Franks' champion. He could by no means fetch the trappings of the King of the Friese, the adornment of his chest, but fell in the battle, the keeper of the standard, a prince in his valour. The sword was not his slayer, but a hostile grip crushed his body (and) the surgings of his heart.' This reading implies that the Frisian king had been fighting in the battle as ally or (more likely) vassal of the Frankish king and had been slain, presumably by Beowulf. Daeghrefn, the Frankish standard-bearer, had then engaged Beowulf to recover the slain king's war-gear, which Beowulf would otherwise carry off as booty; but Beowulf had slain him, too, not with a sword but by crushing him to death.

Why he did so, we do not know. The poet has made Beowulf tell the whole episode very obliquely, and again we do not know why; Brodeur rightly commented that 'The poet could have made much of all this if he had wished.' (28) Perhaps he intended his hero to show a becoming modesty in speaking of his feats in his old age, to contrast with his boastfulness in youth. Or perhaps he meant to whet his audience's appetite by giving them only puzzling and tantalizing scraps of a story he meant to tell in full on another occasion. Or he may have deliberately chosen to pass lightly over Beowulf's achievements against human adversaries, since his chief interest in this poem was clearly in his hero's fights with the three monsters. But we should not rule out a fourth possibility, which is that his audience knew the story of Hygelac's raid and Beowulf's part in it full well and needed no more at this point than the hints and allusions that leave us, who do not know that story, scratching our heads over them. If that were the true explanation, it would furnish a strong though not a conclusive argument that Beowulf was a well-established figure in the poetic tradition that the poet worked in, not an invention of his own.

However that may be, the reading just proposed also helps to solve a second difficulty that Ellis Davidson noted: (29) if Beowulf slew Daeghrefn with his hands, why does he link that particular fight to the trustiness of the sword Naegling that he will use to fight the dragon? Commentators have mostly conjectured that Beowulf took Naegling when he despoiled Daeghrefn after killing him, but that raises a worse problem than it solves. For while recounting the dragon fight, the poet calls this sword 'incgelafe' (line 2577a). This mysterious word should probably be connected with the compounds 'ingefolca', 'ingemen', and 'inge[eth]eode' in Exodus, lines 142, 190, and 444. J. L. Rosier analysed them as made up of a prefix in-, identical with the preposition and here meaning 'native', the common nominal prefix ge-, and a root. (30) Tolkien parsed the words the same way but suggested in- meant 'belonging to a household, home, or native land', (31) as in such compounds as inland, 'lord's demesne'; inorf 'household goods'; and ingewinn, 'civil war'. If 'incgelafe' in Beowulf, line 2577a is an odd spelling of ingelafe, a compound of the same type as ingewinn and the three in Exodus, then it probably means either 'heirloom of his people' or 'heirloom of his house'; but if so, Naegling cannot be a sword that Beowulf won on the field of battle in Friesland but must rather be one that he brought to it when he came with Hygelac's host. Unless the poet had forgotten lines 2498b-2502 by the time he came to compose line 2577a, the point of the first passage must be that the fight in Friesland was the first one in which Beowulf used that sword; and the point of the lines that follow must be that he used it to kill the Frisian king and win his armour, which he then had to defend by killing Daeghrefn.

Toronto WILLIAM COOKE

NOTES

(1) Beowulf and the Fight at Finnsburg, ed. Fr. Klaeber, 3rd edn (Boston, 1950), p. 185 n. to lines 1459b-1460a.
(2) Beowulf and the Finnesburg Fragment, trans. John R. Clark Hall, rev. C. L. Wrenn (London, 1950), p. 94.
(3) Beowulf, ed. C. L. Wrenn, rev. W. F. Bolton (London, 1973), glossary, s.v. 'atertanum', citing Winfred P. Lehmann, 'Atertanum fah', in Studies in Historical Linguistics in Honor of George Sherman Lane, ed. Walter W. Arndt et al. (Chapel Hill, NC, 1967), pp. 221-32. Lehmann, however, posits an Old Irish origin for 'atertanum'.
(4) Wilfrid Bonser, The Medical Background of Anglo-Saxon England (London, 1963), pp. 339f.
(5) The Anglo-Saxon Minor Poems, ed. Elliott Van Kirk Dobbie, ASPR VI (New York, 1942), pp. 119f., lines 31-5.
(6) Anglo-Saxon Magic (The Hague, 1948), p. 195.
(7) R. W. V. Elliott, Runes: An Introduction (Manchester, 1963), pp. 85f.; shown in R. I. Page, An Introduction to English Runes, 2nd edn (Woodbridge, 1999), p. 85, fig. 22.
(8) See H. R. Ellis Davidson, The Sword in Anglo-Saxon England (Oxford, 1962), pp. 42-4, 77-82, and 99-101 and fig. 22, and Elliott, Runes, pp. 72f. and 79f., and plates III and IV.
(9) Elliott, Runes, pp. 34, 68, and plate III, fig. 7.
(10) Ibid., pp. 79f. and plate IV. But as Page emphasized (Introduction, p. 181), both the decipherment and the interpretation are open to question. See further Elliott's afterthoughts in Runes, 2nd edn (Manchester, 1989), pp. 104f. and David N. Parsons, Recasting the Runes: The Reform of the Anglo-Saxon 'Futhorc', Runron 14 (Uppsala, 1999), pp. 48-50, 81, 85.
(11) Discussed and shown in Parsons, Recasting the Runes, pp. 18f. The standard reference is Wolfgang Krause, Die Runeninschriften im alteren Futhark, and edn, with contributions by Herbert Jankuhn (Gottingen, 1966), no. 27, which I was not able to consult for this study; I have relied on the summary in Stephen E. Flowers, Runes and Magic (New York, 1986), pp. 275f. Krause's dating has recently been questioned; see Elmer H. Antonsen, 'On runological and

linguistic evidence for dating runic inscriptions', in Runeninschriften als Quellen interdisziplinarer Forschung, ed. Klaus Duwel and Sean Nowak (Berlin and New York, 1998), pp. 150-9 (p. 153). See also Flowers's remarks in Runes and Magic, pp. 356f.
(12) Edda, ed. Gustav Neckel, 4th edn, rev. Hans Kuhn, vol. I (Heidelberg, 1962), p. 191. Whether she tells Sigurd to carve runes on the blade is uncertain, because the meanings of 'vettrimon' and 'valbostm' in line 3 are doubtful.
(13) Ritchie Girvan, Beowulf and the Seventh Century (London, 1971), p. 39.
(14) Knut Stjerna, Essays on Questions Connected with the Old English Poem 'Beowulf', trans. John R. Clark Hall, Viking Club Publications, ES 3 (Coventry, 1912), p. 23.
(15) Ibid., p. 24.
(16) The Sword, pp. 67f. and figs 63, 66.
(17) Ibid., p. 110, citing Le Liber pontificalis, ed. L. Duchesne (Paris, 1886-92), II, 148.
(18) G. V. Smithers's argument that 'wyrmfah' means 'coloured red' (Studies in Honour of Margaret Schlauch, ed. Mieczyslaw Brahmer et al. (Warsaw, 1966), pp. 417-20) does not sway conviction. It requires us to take wyrm- as an inverted spelling of wurm; but the only arguably analogous spelling in Beowulf (or indeed any text in the Beowulf MS) is 'wyruldcyning<a>' for woruldcyninga in line 3180, which is the work of the other scribe and probably represents a false association with wyrd, not an inverted spelling. Nor is Smithers on solid ground when he argues that -fah here must mean 'coloured', not 'adorned'; for as nominal compounds both 'sincfage' in line 167 and its echo 'sinchroden' in Andreas, line 1673 probably mean 'adorned with treasures' rather than 'richly decorated' as editors have glossed them, and the 'straet ... stanfah' in Beowulf, line 320 is surely a paved way leading to Heorot, not a mosaic floor or something similar as it would have to be if 'stanfah' meant 'coloured with stones'.
(19) Shown in The Sword, plate IIIb and c.
(20) Ibid., pp. 78f. and plate IIa.
(21) Shown in Magnus Magnusson and Werner Forman, Hammer of the North (London, 1976), pp. 30f.
(22) Stjerna, Essays pp. 28f., figs 14, 15.
(23) Beowulf, ed. A. J. Wyatt, rev. R. W. Chambers, 2nd edn (Cambridge, 1920), p. 125 n. to line 2503.
(24) Beowulf: An Introduction, 3rd edn (Cambridge, 1959), p. 269 n. 3.
(25) Beowulf, ed. W. J. Sedgefield, 3rd edn (Manchester, 1935), p. 139 n. to line 2503; Johannes Hoops, Kommentar zum Beowulf (Heidelberg, 1932), p. 267 n. to line 2503.
(26) Chambers, Beowulf, pp. 288f., 341.
(27) Wilhelm Levison, England and the Continent in the Eighth Century (Oxford, 1946), passim, but particularly pp. 4-8, 44-69, and 108-10.
(28) Arthur G. Brodeur, The Art of Beowulf (Berkeley and Los Angeles, 1960), p. 73.
(29) The Sword, pp. 143f.
(30) PMLA, 81 (1966), 342-6.
(31) Exodus, ed. Joan Turville-Petre after J. R. R. Tolkien (Oxford, 1981), p. 48 note to line 142.

Cooke, William. “Three Notes on Swords in *Beowulf*.’” *Medium Ævum*, vol. 72, no. 2, 2003, pp. 302–307. www.jstor.org/stable/43630500.

APPENDIX N

OUTLINE

Outline

I. Introduction
    A. Attention Grabber
    B. Lead-in
    C. Thesis
II. Body Paragraph #1
    A. Topic sentence for first main idea
    B. Supporting detail
    C. Supporting detail
    D. Supporting detail
III. Body Paragraph #2
    A. Topic sentence for second main idea
    B. Supporting detail
    C. Supporting detail
    D. Supporting detail
IV. Body Paragraph #3
    A. Topic sentence for third main idea
    B. Supporting detail
    C. Supporting detail
    D. Supporting detail
V. Conclusion
    A. Restate thesis
    B. Summarize what you said before
    C. Strong final statement

Your entire introduction should be written out and labeled in the following format.

The Body of your outline should be written as short bullets. DO NOT WRITE YOUR PAPER—This is ONLY AN OUTLINE OF IT

APPENDIX O

ARTICLE 3

From "Christian and Pagan Elements" by Edward Irving

Although *Beowulf* deals with ancient Germanic stories and heroes clearly dating back to a time before the Anglo-Saxons or their Continental cousins were converted to Christianity, in its style throughout its narrator and characters seem entirely comfortable with the conventional Christian phrases found elsewhere in Old English poetry, phrases deferring at all times to a recognizably Christian order. There are references to God's creation of the universe, the story of Cain, Noah's flood, devils and hell, and the Last Judgment. At least since 1951, when Dorothy Whitelock's influential *The Audience of Beowulf* appeared, readers have generally agreed that the poet of the text we have was a Christian composing for a Christian audience. Many scholars, and perhaps most ordinary readers, have simply accepted this odd blend of pagan story and Christian teller as perhaps illogical and somewhat puzzling in purpose and implications, but nonetheless the way the poem is. To many other scholars over the years, however, the combination of pagan and Christian elements has seemed a problem demanding clearer resolution.

We ought first to clarify our key term, since *pagan* is a word used in at least three different senses in discussing this problem: the literal, the vestigial, and the ethical. The first sense is the most precise, since it refers to the actual practices and beliefs of a pre-Christian religion in which Germanic peoples participated. For a general account of this religion, see Owen (1981), Wilson (1992; largely archaeological evidence), Polomé (1989), and Niles (1991). *Beowulf* contains descriptions of pagan religious rituals. Most striking are the three accounts of pagan funeral rites, of a kind known to be frequently condemned by Christian authorities: there is an odd version of a ship burial (odd since the funeral ship is not buried in a mound but pushed out to sea) in the funeral of Scyld (26–52), a ceremonial pyre for the casualties in the Finn Episode (1107–24), and Beowulf's own cremation funeral at the end (3134–82), all three rites accompanied

by rich grave goods. Discovery in 1939 of a sumptuous ship burial, almost certainly a royal one, at Sutton Hoo in the former kingdom of East Anglia, datable within a few years of 625, and thought by some to be the tomb of King Rædwald, has provided a clear picture of the nature of such pagan funerals on English soil, a picture consonant with the descriptions in *Beowulf*, so much so that some have tried, though without any striking justification, to tie this archaeological find directly to the poem (see Frank 1992, and, for a full account of the find, Bruce-Mitford 1975–83; see also Pearson, van de Noort, and Woolf 1993 and, for a recent discussion of the possible relation of *Beowulf* to East Anglia, Newton 1993).

Then at one point (and one point only, in 175–93) the Danes, despairing of any other remedy for Grendel's attacks, are said to engage in the actual worship of heathen gods, for which the poet roundly condemns them, though realizing with some sympathy that they cannot help their ignorance. Though the Danes of the poem (and indeed all its characters) were pagans both before and after this event, we never otherwise see them engaging in actual worship of any kind (though they may voice vaguely Christian-sounding expressions of gratitude to God), no pagan gods are ever referred to elsewhere, and there is no other explicit mention of their being pagans.
…

A second "pagan" area is less clearly defined and may be the least important in the controversy, though it was much investigated in earlier years when there was great interest in turning up every trace of paganism. Much of it, perhaps most of it, is what we might call fossil paganism, where an expression we can now identify as originally pagan has been preserved in a poetic formula that may well have lost any such specific meaning. The Germanic gods live every day now in the names of the days of the week, but no one notices it. Like an attic, language, especially the highly stereotyped language of Old English verse, preserves much forgotten lumber. For instance, warriors in *Beowulf* wear helmets with images of boars on them (303b–06a). The boar was an animal sacred to the Germanic god Freyr, and thus its image was once seen as powerful protection, but probably later Anglo-Saxon poets merely inherited a verbal convention that saw boar images as appropriate for heroes' helmets and had no special thought of Freyr. Brief references to magic spells and "battle runes" ("onband beadurune," 501a) probably fall into the same category (but for the persistence of some pagan practices even in late Anglo-Saxon England, see Wentersdorf 1981). Doubtless some of the much-discussed phrases concerning Wyrd or Fate, especially when it

seems to be personified, were also such fossil expressions, and not evidence for any still viable religious beliefs in a god or goddess of Fate (the curious should consult references to wyrd in the glossaries, and see Phillpotts 1928 and Kasik 1979). There is not enough evidence to conclude that the hanged son for whom the old father mourns, in the famous passage in Beowulf's last long speech (2444–59), had been hanged as a human sacrifice, as some have speculated; he might simply have been executed by royal command for some crime. But the recent discovery of mutilated bodies, perhaps hanged, surrounding what might have been a large tree in the cemetery at Sutton Hoo does make the possibility of human sacrifice among the pagan Anglo-Saxons seem more vivid.[1]
…

A third sense of *pagan* lies in the realm of ethics and morality, and this is the area that has caused the most argument. Here matters might often be clarified if we used terms like *secular* or *non-Christian* (or possibly *Germanic* or *heroic*) for *pagan*, since we clearly do not know enough about truly pagan ethics, the explicit recommendations of pagan priests, for example, to talk reliably about the subject.

The fundamental ethical code of the poem is unmistakably secular: it is the warrior code of the aristocracy, celebrating bravery, loyalty, and generosity, with the hero finding his only immortality in the long-lasting fame of great exploits carried out in this world. It is not fundamentally different from the code found in Homer's *Iliad*. Katherine O'Brien O'Keeffe (1991) provides a good summary of the values of this code. In later Scandinavian mythology, a similar code is sanctioned by the warriors' god Odin (Woden in Old English), who rewards his followers with a place in Valhalla, but we cannot assume that such beliefs were current among Anglo-Saxons, though they sometimes thought it important for their kings to claim descent from Woden (doubtless thinking of him as an ancient hero rather than as a god). The code could clearly have gone on existing, however, without such elaborate supernatural sanctions—as in fact it did.

In certain strict Christian contexts, on the other hand, some of these secular virtues can be seen as vices: especially pride in the frank display of strength and the open pleasure taken in material wealth. Wealth was to the Germanic people ordinarily a positive value, a symbolic measure of a man's worth (see Leisi 1952–53 and Cherniss 1972), but in Christian thinking wealth led too quickly to the deadly sin of avarice. And it was always the case that strict Christians might elect to view these pagans, however obedient they may have been to

their own code, as ignorant of the true God and thus having before them only the prospect of damnation.
…

Such are some of the defenses offered for Beowulf's character, but it has also been under heavy attack from some of the Christianizers, who claim that, far from being a figure of Christ, Beowulf is an active sinner who deserves damnation not merely for the unlucky technicality of being unconverted but for his own evil deeds. Margaret Goldsmith has already been mentioned in this context. Her book of 1970, its footnotes thick with Biblical and patristic references, accuses Beowulf of two deadly sins, pride in recklessly volunteering to fight the dragon alone and cupidity in longing for the dragon's treasure, and similar accusations have since been echoed by others. Two examples of more recent books taking a more moderate "exegetical" view are Huppé (1984) and Dahlberg (1988). Huppé views Beowulf as not so much actively evil as helplessly "caught in the iron circle of heroic error" (38) and sees the conclusion as demonstrating the failure of the "ancestral way" of the English (40). Dahlberg, who is heavily Augustinian in his developing of a Christ-centered theory of kingship applicable to the poem (26–35), finds in it a "sense … of constant uncertainty and apprehension" (35). Like Robinson (1985), he stresses what he sees as the poet's careful critical distancing from pagan ideals and behavior.
…

One important finding was that lines 1–1887 of the poem contain one hundred forty-two such references while lines 1888–3182 contain only thirty-six—that is to say, there is one Christian reference for every thirteen lines in the Danish part of the poem and one for every thirty-six in the Geatish part. Several possible reasons for the difference suggest themselves. The most thoroughly Christian speaker of the poem, Hrothgar, is absent in part 2; he averages twice as many Christian references as the narrator in the poem as a whole. Then too the symbolic structure of part 1 is amplified in Christian terms in a way that part 2 is not: it is in part 1 that Grendel is said to be descended from Cain, associated with devils, and either resident in or destined for hell, and it is here that the pious Hrothgar thanks God for sending his champion in the person of Beowulf. But the final fight with the dragon is never put in symbolic terms like these, though prolonged and strenuous attempts have been made by a number of exegetes to relate him to Satan, the great dragon mentioned in chapter 12 of the Book of Revelation.

If the difference between the two parts in this respect is significant, any full account of the Christian/pagan problem might then have to deal fairly and separately with both parts of the poem. It seems likely that the version of *Beowulf* we have may have been patched together from two or three earlier stories. If so, it seems plain that the Danish story (or perhaps two stories: "Grendel" and "Grendel's Mother") was given a much more thorough Christian treatment than the final story of Beowulf's death fighting the dragon. Why this uneven distribution of Christian references remained in the final composite version is unclear. Osborn offers one possible reason: "There is no need for further scriptural references after the two kinsfolk of Cain have been destroyed" (1978, 979). One may even speculate that the final poet believed that, whatever his heroic virtues, the pagan Beowulf's death had better not be surrounded by too much Christian language, lest it raise awkward questions.

…

John D. Niles has spoken in several places (1983; 1991) of the "tempering" of the strong secular themes of the poem with Christianity, a better way to describe what happened. Something like this takes place, but we may still feel a certain uneasy incongruity. We have a classic example of such strange pairing in the Franks Casket, where a panel showing Weland, a pagan hero of a tale of bloody vengeance, as offering a vessel made of a skull to his captors nestles symmetrically beside one showing the Magi offering gifts to the Christ Child. Did an Anglo-Saxon examining the casket feel that these were similar gifts, both part of equally powerful and interesting stories from the past? So the artist seems to suggest; there is no indication in the *picture* that the Christian story is to be favored. We can never answer that question with any assurance, but it is likely that the Anglo-Saxon's answer would not be ours.

Irving, Edward B., Jr. "Christian and Pagan Elements." *A Beowulf Handbook*, Robert E. Bjork and John D. Niles, eds. (Lincoln: The University of Nebraska Press, 1998): pp. 177–192. Quoted as "Christian and Pagan Elements" in Bloom, Harold, ed. *Beowulf*, Updated Edition, Bloom's Modern Critical Interpretations. New York: Chelsea House Publishing, 2007. *Bloom's Literature*, Facts on File, Inc. www.fofweb.com/activelink2.asp?ItemID=WE54&WID=101204&SID=5&iPin=MCIBue07&SingleRecord=True.

APPENDIX P

OUTLINE RESEARCH ASSIGNMENT

**Research Outline Assignment—*Beowulf***

**Choose one of the topics below to develop into a detailed outline. (You will not be required to turn the outline into an essay.) Use the outline organizer distributed in class as a model. Use the articles distributed in class to jumpstart your research. You should use at least 2 additional sources. Your outline should include paraphrasing from your sources as well as direct quotations. (Support what you say with evidence from your sources.) You will have 3 days to work in class, Wednesday (2/15), Thursday (2/16) and Friday (2/17). Your outline is due on Wednesday, 2/22 and may be submitted in class or via GoogleDocs.**

1. Discuss Anglo-Saxon values as they are displayed in *Beowulf*. Use "Anglo-Saxons" (Article 1) as a starting point.
2. Discuss Anglo-Saxon weaponry and/or warfare tactics. Be sure to relate this to the *Beowulf* text. Use "Three Notes on Swords in Beowulf" (Article 2) as a starting point.
3. Discuss the religious undertones in a text other than *Beowulf*. Use "Christian and Pagan Elements" (Article 3) as a starting point.

APPENDIX Q

POST-RESEARCH SURVEY

**First and Last Name**: _____

**Metacognition, as you know, is commonly defined as "thinking about thinking." Now that we are at the end of this study, to what extent do you think about your own thinking processes?**

Never Sometimes Often

**To what extent does it help you perform better when you consider your own thinking processes?**

Never Sometimes Often

**When you are assigned an essay in the future, what will you do first?**

**Describe your level of comfort with writing essays in English class.**

**Graphic organizers, as you know, are tools (such as a web or outline) that help you organize your thinking. Now that we are at the end of this study, please rate your level of comfort in using graphic organizers.**

Not at all comfortable Neutral Very comfortable

**To what extent do graphic organizers help you in writing essays?**

Not at all Neutral Very much

**Additional comments:**

APPENDIX R

POST-RESEARCH INTERVIEW FORM

**First and Last Name**: _____

**What letter grade do you expect to receive in your English IV class?**

A B C D

**Why do you expect to receive this grade?**

**In your opinion, will this grade be a true indicator of who you are as a student?**

**Please describe your current level of comfort regarding writing essays in English class.**

**Why is this your comfort level? What contributes to your comfort level?**

**Please describe your current level of frustration regarding writing essays in English class.**

**Why is this your frustration level? What contributes to your frustration or lack of frustration?**

**Please elaborate on your strengths when it comes to writing essays.**

**Please elaborate on your weaknesses when it comes to writing essays.**

**Please describe how this research study has impacted you as a student.**