

Effects of Graphic Organizers on Student Achievement in the Writing Process

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### Abstract

Writing at the high school level requires higher cognitive and literacy skills. Educators must decide the strategies best suited for the varying skills of each process. Compounding this issue is the need to instruct students with learning disabilities. Writing for students with learning disabilities is a struggle at minimum; teachers have to find a way to instruct students on how to write so they can meet the necessary demands of post-secondary education and the workforce. Working and learning in the 21<sup>st</sup> century also brings in the aspect of using technology to instruct students. The focus of this research will be to determine the effectiveness of using technology and graphic organizers to teach the pre-writing process. The pre-writing process is the most important stage of writing; a stage students with learning disabilities struggle with the most, and routinely spend the least amount of time on.

### Purpose of Study

The purpose of this study was to analyze student achievement when using graphic organizer interventions and technology to organize ideas and thoughts during the pre-writing process and increase student achievement in writing. Through instructional experience of teaching the writing process, I had found that the pre-writing process was the most important stage of writing. Students, who struggled with the pre-writing process or hurried through it, produced an essay lacking cohesiveness and quality. Students with learning disabilities struggled with the pre-writing process most; it was also a stage they routinely spent the least amount of time on. Students received explicit instruction on the use of graphic organizers to organize thoughts and ideas, create outlines, transfer learned knowledge into an analysis, and write a cohesive essay. The expected impact on learning was that the use of graphic organizers and technology would provide students with the ability to effectively utilize the pre-writing process and result in higher achievement on the overall writing process (Strangman, Hall, & Meyer, 2003). The research studied the following questions: How might graphic organizer interventions affect student achievement and organization in the writing process? How might technology affect student achievement and organization in the writing process? How might special education students in English 10 implement graphic organizers as independent tools?

### Literature Review

The Kansas State Department of Education (2008) met in the spring of 2007 to review writing scores across the state and develop new writing standards for assessments; their projected goal of high school students being able to meet or exceed state standards in writing was 76%. Students with learning disabilities struggle with the process of relating their thoughts to paper and thus the skills necessary to complete the processes of writing become overwhelming; the

process of organizing ideas and structuring thought processes, the pre-writing process, is perhaps one of the most difficult for students with learning disabilities. Graphic organizers are proven through research to improve learning and aid students with learning disabilities in organizing thoughts, brainstorming ideas, and linking information learned from literature to prior schema (Strangman, Hall, & Meyer, 2003). However, review of the literature pertaining to graphic organizers, digital graphic organizers, and their direct link to student achievement with respect to organization in writing from students at the high school level is minimal at best, requiring additional research in multiple high school settings to include special education students (Sorenson, 1991).

An ability to write an essay and meet or exceed state standards in Kansas requires the use of the writing process combined with systematic grading using the Analytical Rating Guide (ARG), a rubric designed to assess six traits of writing. Processes of writing vary but as Capretz, Ricker, and Sasak (2003) state in their action research study, the process involves several stages: pre-writing, drafting, revising, editing, publishing and sharing. ARG assessments of writing include a rubric that assesses organization, ideas and content, voice, word choice, conventions, and sentence fluency. A student's ability to meet or exceed state standards in each trait has a cut off score of 3.00 in Kansas with a summative composite score, which determines their ability (KSDE, 2008). Student achievement in writing is a revolution in progress and according to the National Commission on Writing in American Schools, an area of education lacking in quality (McLeod, Brown, McDaniels, & Sledge, 2009).

Current data on student achievement in the ability to write well suggests that many students entering college or the workforce do not write to meet standards (McLeod et al., 2009). Furthering this problematic epidemic, is the idea that once students reach the high school level,

they should know how to write and are not instructed on *how* to write well; this was particularly true in a study conducted by Faull (2007) on high school students in the UK. This revelation correlates with real life experiences in teaching today when educators of students with disabilities are faced with teaching students how to implement the six traits of writing while also attempting to play catch up on the necessary skills to meet each trait. Although Peterson's (2007) study reinforced that writing facilitates learning of content knowledge and engages students in higher level thinking and reasoning; Capretz et al., (2003) argued there is no definitive answers on how to effectively teach organization in the writing process itself. In addition, Capretz et al., (2003) found the National Association of Education Progress to estimate three-fourths of students achieved at the basic level of writing, basic meaning that students had attained partial mastery of the skills needed in writing. Harrington, Holik, and Hurt (1998) discussed a national concern that writing skills on average were inadequate.

Students with learning disabilities struggle with the writing process and therefore may not have obtained even partial mastery of the skills needed to write effectively. Writing is a motor skill, a skill typically deficient in students with learning disabilities, and a variation of motor skills are needed for the different writing processes. The inability in one motor skill will compound additional motor skills needed for the process. Duer (1988) discussed the varying levels of abstract thought process needed in writing and the lack of ability of students with learning disabilities to work in the areas of free writing, listing events, and sequencing of events due to metacognitive disabilities. Disabilities in writing can also occur due to the inability to process or synthesize and deficiencies in perceptions and visual auditory memory recall (Smith 2011). This research directly correlates to the research focus in finding that students with learning disabilities have grown to dislike or even hate writing due to lack of success and failures

despite their level of effort. Other areas of similarity were found in Morris (2007) and Peterson-Karlan, Hourcade, and Parette's (2008) research in that students who struggled with pre-writing tended toward quick completion of the pre-writing process and failed to see the relevance of this stage. Peterson-Karlan et al., (2008) also believed the students' struggles were due to a lack of understanding the purpose for pre-writing, lack of time spent on the process, and a lack of knowledge on how to implement the process. Researching the literature substantiated evidence that students with disabilities tended to produce work that was shorter, not as focused or organized, and of poorer quality when compared to non-disabled students (Smith 2011). Despite the challenges students with LD face in regards to writing, students taught specific strategies for the process were more successful in inclusion settings, improved in literacy skills, and achieved higher on assessments (Peterson-Karlan et al., 2008).

Reauthorization of IDEA 2004, the No Child Left Behind Act (NCLB) and implementation of Universal Design for Learning (UDL) have had profound impacts on instruction for students with learning disabilities. IDEA 2004 requires the use of assistive technology devices to increase, maintain, or improve the learning of a child with disabilities (Dell, Newton, & Petroff, 2008). Additionally, Hulett (2009) stated IDEA and NCLB require teachers not only are highly qualified, but that their practices of instruction follow scientific based research in order to meet federal and state standards. UDL reinforces the need for research based instruction and its development toward student achievement while providing that students with learning disabilities need modifications in learning and assistive technology in order to meet state mandated guidelines (Dell et al., 2008). Strangman et al., (2003) list the three guiding principles of UDL as to provide support for recognition (presentation), support for strategic learning (expression), and support for affective learning (engagement). Graphic organizers,

digital or printed, offer educators an instructional strategy to effectively teach writing while meeting current guidelines of both IDEA and NCLB. They provide multiple templates, formats, can be individualized, and assist in recalling prior knowledge for recognition. Strategic learning processes are provided through supported practice, organizers partially or completely filled out, and with choice of tools and formats combined with digital possibilities graphic organizers provide support for effective learning (Strangman et al., 2003).

Graphic organizers are an invaluable strategy educators can utilize in conjunction with UDL to make the instruction and curriculum more supportive and flexible for all students to include those with learning disabilities (Strangman et al., 2003). Capretz et al., (2003) found graphic organizers broke down the concrete to abstract thought process for students and created a visual link to this complex thinking process. Smith (2011) surveyed students and found that an overwhelming 90% noted they struggled with organizing their thoughts in the pre-writing process. This data supports the use of organizers in that they help to identify relationships between ideas, can connect new information to prior schema, and place ideas in a sequential order. When implementing graphic organizers as an intervention, Capretz et al., (2003) data showed an increase of focus in written work from 80-95% and organization of work rose from 68-84%. Strangman et al., (2003) found that written summary quality increased significantly when students used semantic mapping as a strategy. An additional study conducted by Harrington et al., (1998) found that students' work, which utilized graphic organizers for the writing process resulted in greater focus, more details, and order of organization. The Center for Applied Special Technology supports the use of graphic organizers and their ability to manipulate and reconfigure ideas, color code information, group ideas, and order ideas into a structured piece of writing (Berhmann & Jerome, 2002). One new area of graphic organizers in

research and instruction is the use of computer based software. Digital graphic organizers serve the same purpose as printed but provide extended uses of presentation, engagement, and expression. They allow additional cognitive scaffolding tools to improve the writing process (Harrington et al., 1998).

Technology and computer based software is meant to allow struggling students the opportunity to learn more efficiently and produce better work, the purpose of it is to support learning, not to replace needed skills (Kajder 2005; Peterson-Karlan et al., 2008). Kajder (2005) found using technology in the classroom provided students with the ability to see their work as they planned and organized, placed more emphasis on whole-class discussion and learning while Morris (2007) saw increased student engagement and a lessened cognitive load on memory. McLeod et al., (2009) discussed the need for teachers to use current technology and locate new technology to facilitate writing instruction. Research on the use of computer based software is still fairly new when considering the history of research on the writing process. Strangman et al., (2003) recommend new research should be performed on computer based methods of graphic organizers for instruction as well as the role of instruction itself in using these for the writing process in multiple settings to include special education.

Implementation of graphic organizers and software as an instructional intervention to the writing process can be met with challenges for the educator conducting action research. Traditional views on instructing the writing process may clash with contemporary views on the use of media and technology in the classroom. One question of importance is the reliance on media and technology to complete work; does it replace needed skills or hinder future growth towards scaffold independence? Several other issues of concern for implementing this intervention in action research were discussed by Strangman et al., (2003) in that problems may



arise in acquiring new technology, time spent to learn that new technology, and a lack of support from the school. Many computer based software programs require memberships and may not be cost effective for an educator to purchase. Capretz et al., (2003) noted challenges of lack of planning time, a need to develop specific plans that incorporated the correct graphic organizer for the writing purpose, and creating assessments to analyze the data.

Reviewing the literature provided many common features of the way data was collected on student achievement in writing. One common feature noted from the studies was the use of surveys for students, teachers, and parents. The majority of surveys for students were done to determine student attitudes towards writing and correct knowledge base of the writing process. Many of the researchers sent letters home to parents to notify them of the research and purpose of the study while some actually surveyed parents as well. Class observations were conducted using audio recordings and self-reflected journaling. More substantial data was collected for quantitative and qualitative data in the forms of work samples, writing, samples, and a variety of tests. An important aspect of data collection was discussed by Morris (2007) in that multiple methods of collection promoted objectivity.

The settings and purpose of the studies varied but were all relevant in researching the writing process and increased student achievement. Two of the studies were conducted at the undergraduate level, four at high school level, and four at middle school, elementary, or special education settings. The purposes ranged from studying increased student achievement in writing, organization of writing, or approaches to the writing process. Most all studies used graphic organizers and other instructional strategies to implement their research. Harrington et al., (1998) was one study that specifically looked at the use of graphic organizers on the effects of quality, initiation of planning, and student movement towards independent skills.

The key element of instruction and its role in teaching the writing process with or without the use of graphic organizers was the single most identifiable common theme amongst all literature reviewed. Reassurance to the research focus was provided by Capretz et al., (2003) with the belief that teachers who promote high standards and expectations may expect higher levels of success from their students. Consensus between the researchers was the belief that teachers should provide positive learning experiences in risk-free settings and provide positive feedback to students for greater chances of increased achievement. The pre-writing stage of the writing process was noted as one of the most important; Kajder (2005) stated teachers should provide step by step instruction for struggling writers while Dunn and Finley (2010) believed building a classroom community and providing authentic classroom experiences for learning were pivotal. Several researchers supported the use of graphic organizers but reinforced the need for explicit instruction in their use correlating to their relevance to the writing process. Overall consensus among both teachers and students was the need for time when instructing the use of organizers to the writing process. Students overwhelmingly voiced a need for more time to learn, discuss, and practice the use of organizers and the planning stages of writing (Capretz et al., 2003; Faull 2007; Harrington et al., 1998; Smith 2011). Modeling and direct instruction were two other instructional elements repeatedly mentioned in the studies. One study conducted by Lovell and Phillips (2009) found the use of computer based software aimed at and promoting increased student achievement in writing, although beneficial, could not stand alone in the teaching process; teachers must still instruct on the critical thinking and creation skills needed, model those skills, and provide ample time and practice in instruction. Smith (2011) observed if planning strategies were effectively and explicitly instructed the quality and quantity of writing

increased. Instruction was vital to student achievement, or lack of in these studies, and played a dynamic role in all the literature reviews.

The purpose for conducting the literature review was to find studies of similar content related to instruction of the writing process in order to harness knowledge of effective research strategies while learning what research is available based on a research focus. Themes occurred throughout the studies on various types of data collection, purpose of the studies, the use of graphic organizers as interventions, and most importantly instructional methods. Results of the effectiveness of organizers as intervention tools were conclusive to increased achievement; however the specific writing processes researched varied as well as age and grade level of students. A lack of research was found on specific studies researching the use of graphic organizers specifically in the pre-writing process for high school students with learning disabilities. Research is abundant in the use of organizers and their direct correlation to increased reading comprehension while less is available to support their ability to increase writing achievement. Since students with learning disabilities typically found the pre-writing process the most difficult, more research should be conducted to study the effectiveness of organizers on this stage of writing and the additional effect this has on the compounding components of the writing process. The review led to a compelling case for additional research focused to study the effects of graphic organizer interventions on the pre-writing process and increased student achievement for high school students in special education.

### Method

The participants in this study consisted of high school students enrolled in tenth grade English. I performed the research in two different classes consisting of twenty-one total students, each with Individualized Educations Plans. From the class total, sixteen students were

male and five were female. Exceptionality categories ranged from Learning Disabled, Other Health Impaired, Intellectually Disabled, and Traumatic Brain Injury. The urban high school had an overall enrollment of 1,540 students in the 2009-2010 school year. Of that population, 18% received special education support/services and 68% were economically disadvantaged.

In order to answer my research questions, I utilized several different data collection methods. In order to determine an increase in student achievement, I used a school required narrative essay as baseline data and an assigned persuasive essay. I used these essays for both quantitative and qualitative data.

#### *Narrative Baseline Essay*

The baseline narrative essay was assigned at the beginning of the semester as a school-required essay for baseline data. Students were provided a writing prompt, “Discuss three things you would like to do before you kick the bucket”. Students were instructed to brainstorm and list things they would hope to see, do, and accomplish in their lifetime if money and other resources were not an obstacle. After this, they were to select the top three from their list, organize them in order of importance and use these as the body of their essay. Since this was a school-required baseline, I was not allowed to provide the students with any further instruction on how to write an essay or what an essay should have in it. The purpose of this baseline was to assess the students on current ability.

The baseline was graded using the Kansas State Department of Education (2008) (KSDE) Analytical Rating Guide of Six Traits of Writing (see appendix A). The six traits are: Ideas/Content, Organization, Voice, Word Choice, Sentence Fluency, and Conventions. Each trait was scored on a scale from 5 to 1 with five being the highest score possible. The total score

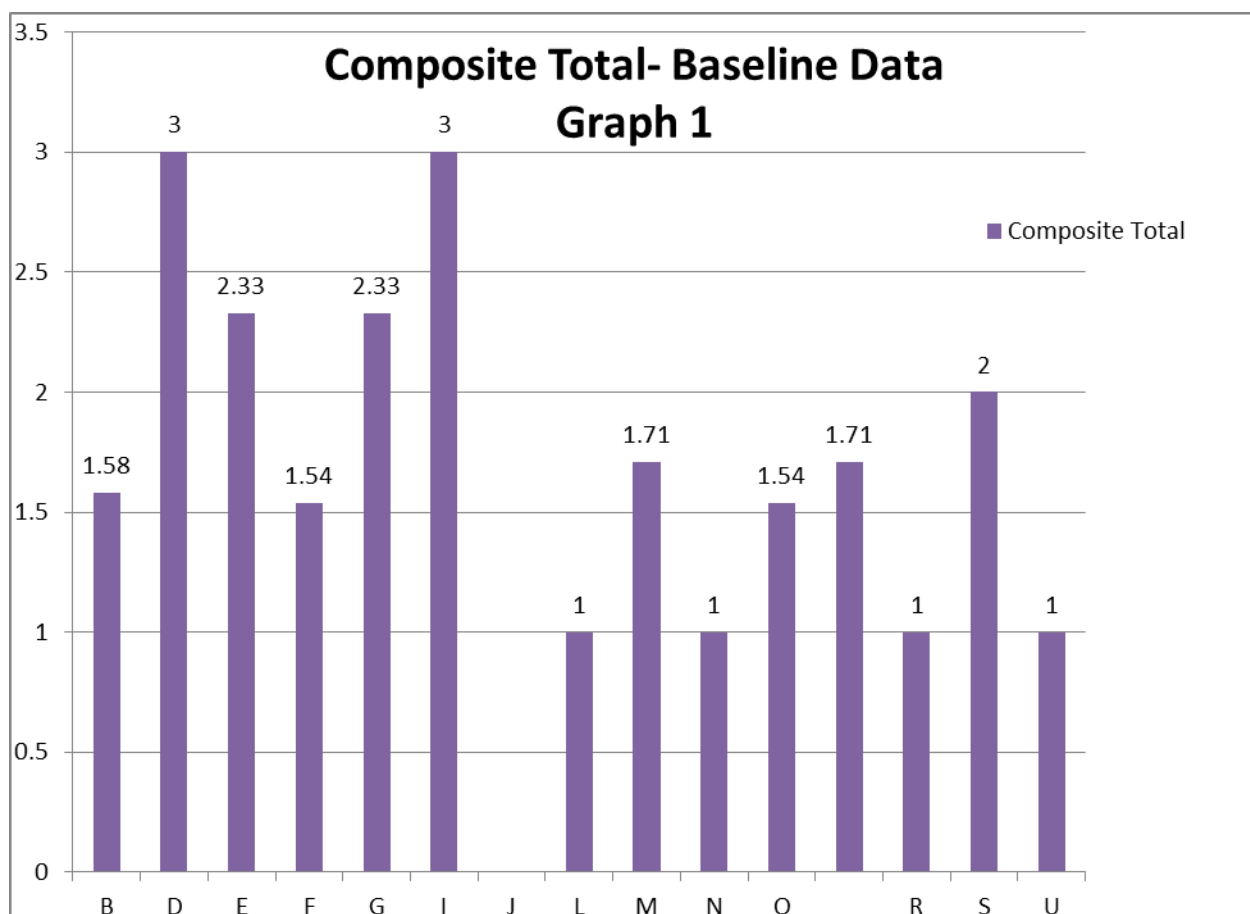
possible was 30. A total of fourteen students submitted a baseline essay. The highest score earned on any trait was a 3. Table 1 below lists how many students received scores on each trait.

Table 1.

| Score<br>Possible | Ideas/content<br># of Students<br>earned score | Org. | Voice | Word<br>Choice | Sent. Fl. | Conv. |
|-------------------|--|------|-------|----------------|-----------|-------|
| 5                 | 0  | 0    | 0     | 0              | 0         | 0     |
| 4                 | 0  | 0    | 0     | 0              | 0         | 0     |
| 3                 | 4  | 3    | 4     | 1              | 2         | 2     |
| 2.5               | 0  | 1    | 0     | 0              | 0         |       |
| 2                 | 6  | 1    | 6     | 4              | 1         | 2     |
| 1.5               | 0  | 4    | 0     | 1              | 1         | 0     |
| 1                 | 4  | 5    | 4     | 8              | 10        | 10    |

In addition to using the ARG, I compiled scores using the KSDE Composite Score Formula used to grade the Kansas Writing Assessment. This formula required each trait be multiplied by a specific weight and then added. The sum was then divided by 12 and provided a composite score. Since this formula had been used to determine student ability in the Kansas Writing Assessment, I used it to gain an idea of where my students might fall if they were administered this assessment. Scores were reported as: exemplary, exceed standards, meets standards, approaching standards, or academic warning. After calculating the formula based off each student's baseline essay; ten of my students scored at academic warning, 2 scored at

approaching standards, and 2 scored at meets standards. Graph 1 below illustrates each students composite score with 4.4 being the highest possible to achieve.



### *Student Survey Pre-Writing*

Once the research began, I gave students a close-ended survey to gain information on their attitudes towards writing as well gain a perspective on their perceived abilities (See Appendix B). When the research was near conclusion, I gave the students the same survey in order to compare any changes on their attitude toward writing or their perceived abilities.

### *Persuasive Essay*

Students at the high school level were required to take a District Writing Assessment on persuasive techniques. In my original research plan, I had planned on teaching a fictional

analysis essay based off a short novel. Then, students were going to create a Persuasive PowerPoint. I was going to compare these two and work toward scaffold instruction to study how students used graphic organizers independently based off previous instruction. I had to change the research plan to include the short novel and then have students write a persuasive essay utilizing references from the novel as support for their argument.

Students spent a total of six weeks reading the short novel. I provided a graphic organizer in both print and on the Smartboard (See Appendix C). I gave explicit instruction on how to take notes on the graphic organizer. Students listened to the audio version of the book. After each chapter, students worked in small groups or in whole class discussion to list specific examples of conflict, character development, and symbols. They used these graphic organizers when it came time to organize their ideas and list specific support for their arguments during the pre-writing process.

Before students began writing, instruction was given on persuasive techniques and the writing process. Students were instructed on each element of the writing process and the importance of time being spent on the pre-writing process. I provided the students with a graphic organizer to list their ideas and support (See Appendix D). This was also provided on the Smartboard and was color coded for each paragraph. Students spent three 80 minute periods filling out the organizer with ideas and finding specific support for those ideas from the novel. Color-coding the organizer was extremely helpful in assisting students with identifying the different paragraphs in the essay as well as how the content in each paragraph was different.

After spending three days on the pre-writing process, students began their rough drafts, performed peer editing, revised their rough draft, and wrote a final copy. In all, it took seven days for students to complete the writing process for their persuasive essays. The essays were

scored using a teacher made rubric, Kansas Six Trait ARG, and the Kansas Composite Formula. I used these scores to compare with scores from the baseline essay.

### Results and Discussion of Investigation

When I began this research study, I knew there was ample evidence in research to prove the effectiveness of graphic organizers to increase reading comprehension but I wanted to find out the affect they had on organization in the writing process. When students wrote the baseline essay, they spent very little time organizing ideas. None of the students attempted to use mind mapping, lists, or an outline before simply beginning to write the rough draft. This was reflective of the findings from Peterson-Karlan et al., (2008) that found students had a lack of understanding of the pre-writing process and spent little time on the process itself.

I administered the writing survey at the beginning of the study and twelve students turned it in. Of these twelve students, six were not sure what the writing process was and three did not know. Seventy-five percent of the students had a lack of knowledge for the process and most likely would not understand how to use the pre-writing process for effective writing. When asked if they knew how to organize their thoughts and create an outline, 83 percent of the students said “no” or “not sure”. In contrast, when asked how important it was to plan and organize thoughts before writing, 50 percent of the students said it was “very” important while 50 percent stated “somewhat”.

Students were almost as unfamiliar with graphic organizers as they were the concept of the writing process. Of the twelve students, only 50 percent stated they knew what a graphic organizer was while 67 percent had never used a graphic organizer to help with writing. When reviewing scores from the baseline, 71 percent of the students scored a two or lower on Ideas/Content and 79 percent scored a two or lower on organization. These scores, combined



with answers from the survey, substantiated my belief that a lack of planning and no use of a graphic organizer during the pre-writing process adversely affected an essay and all stages of the writing process.

Students were taught the explicit use of graphic organizers during the reading. Through small groups and whole class discussions, students listed specific elements from the novel in order to assist them in incorporating support on arguments for the persuasive essay. This graphic organizer was projected on a Smartboard as well. This technology allowed me to model how to use an organizer and fill one out. Once students completed the novel, they were provided with a different organizer that listed idea suggestion for each paragraph of the essay. This was color coded and projected on the Smartboard as well. The color coding of the organizer was extremely beneficial for the students as well as the fact it was an interactive organizer on the board. Students could identify what each paragraph was and understood the content differentiation for each paragraph. When referring to content or ideas needed during instruction, I was able to refer to the paragraph specifically by the topic and color.

One area students did struggle with was utilizing their reading graphic organizers on their essay graphic organizer. Many students wanted to try and write things from memory. I had to continually reinforce that they review their reading graphic organizers to look for notes on conflicts and character development; these notes would then guide them to a certain page in the book. Students wanted to tend toward just writing a thought down without making sure it was specific support from the book. This evidence was also supported in the literature I reviewed in that several researchers supported the use of graphic organizers but reinforced the need for explicit instruction when correlated with relevance to the writing process. Once the students

realized it actually took less work to use the reading graphic organizers to locate information, they were better able to focus on the thinking process behind locating correct supports.

Students spent three out of seven days working on the pre-writing itself. This correlates to taken up approximately 43 percent of the overall writing process. Once students completed their essay organizers, their ability to focus on what they were writing increased. Instead of trying to place too much emphasis on memory, the use of cognitive skills to organize, and thinking about how to structure their thoughts, students were able to focus on one skill at a time; taking an idea and turning it into a sentence. Ideas were already organized and placed in a sequential order; they just had to process “how” to write them down in complete sentences. Scores from the persuasive essay indicate the graphic organizers had a major impact on student abilities to organize thoughts and ideas in the pre-writing process thus impacting an increase in student achievement on the overall essay.

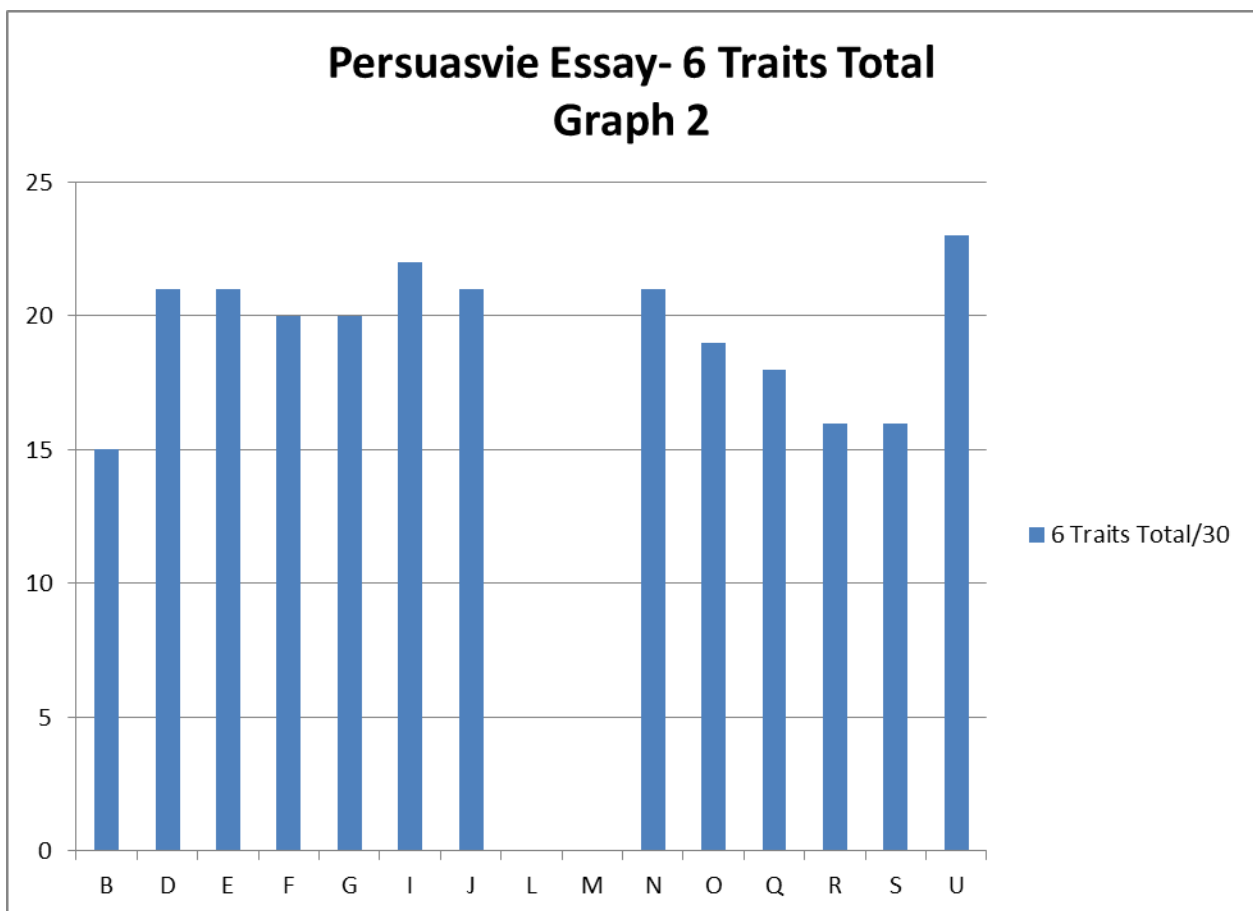
A total of thirteen students submitted the persuasive essay. Five students withdrew from school before completing it. The highest trait score on the persuasive earned was a four compared to a three on the baseline. Table 2 illustrates the number of students who scored a 5 to 1 on the Six Traits of Writing ARG.

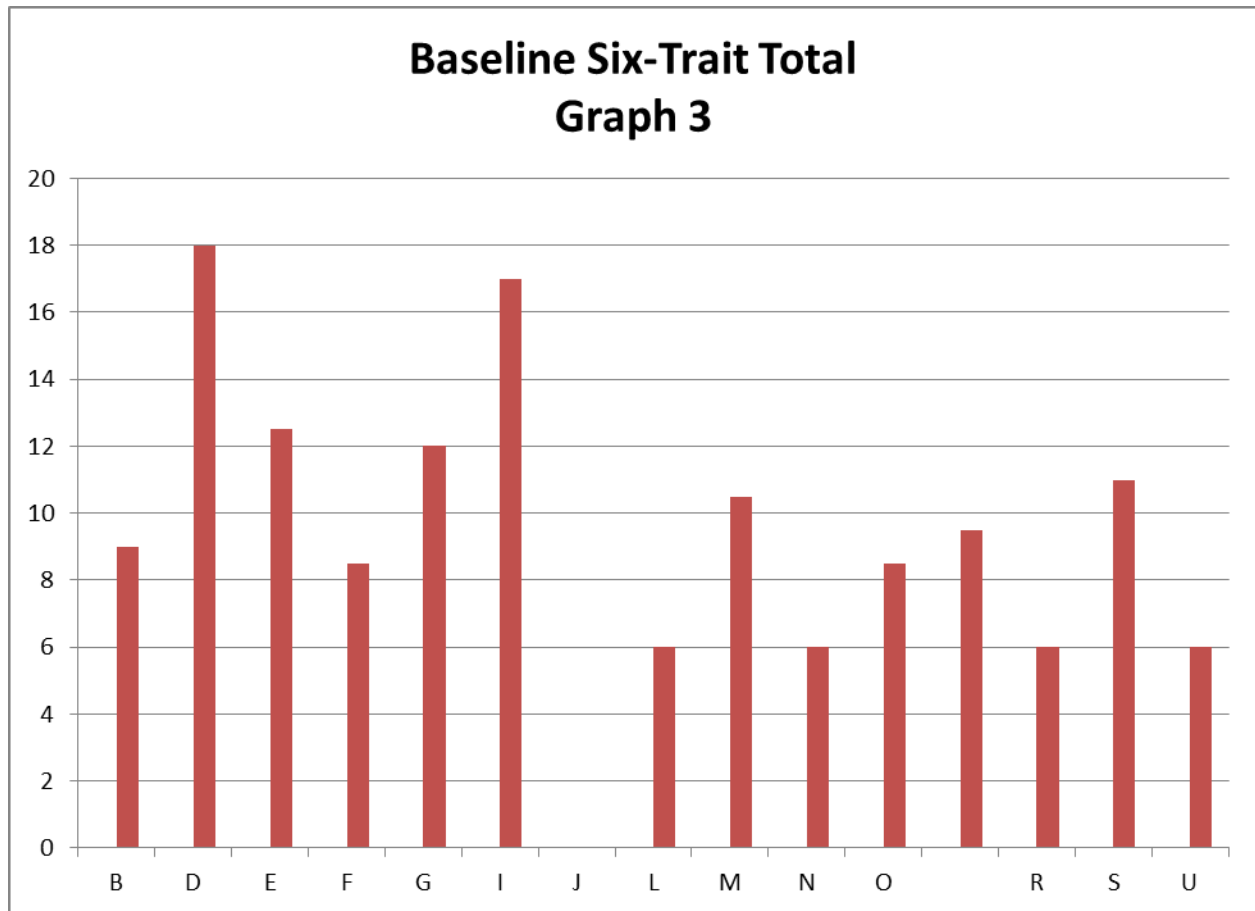
Table 2

| Score<br>Possible | Ideas/content<br># of students<br>earned score | Organization | Voice | Word<br>Choice | Sentence<br>Fluency | Conventions |
|-------------------|--|--------------|-------|----------------|---------------------|-------------|
| 5                 | 0  | 0            | 0     | 0              | 0                   | 0           |
| 4                 | 8  | 9            | 6     | 2              | 1                   | 0           |
| 3                 | 4  | 4            | 5     | 10             | 11                  | 11          |

|   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|
| 2 | 1 | 0 | 2 | 1 | 1 | 2 |
| 1 | 0 | 0 | 0 | 0 | 0 | 0 |

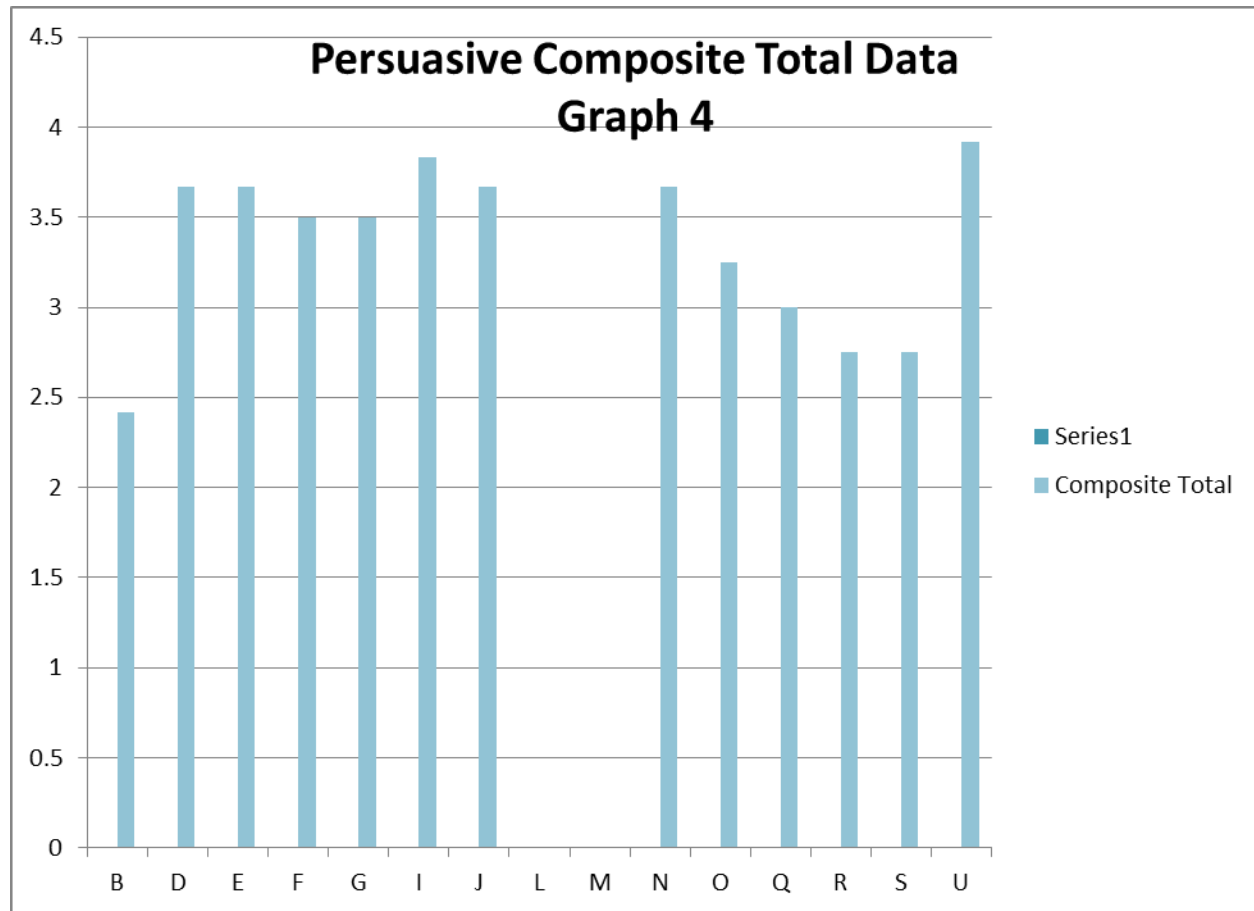
In comparison, on the baseline essay, 25 traits were scored as a one while on the persuasive essay no student received a score of one. Similarly, on the baseline essay no student scored a four or higher while on the persuasive essay there were 26 traits scored at four. Each student demonstrated increased achievement from the baseline essay to the persuasive essay. Graph 2 and Graph 3 below illustrate the total scores received from the Six Traits ARG on the persuasive and the Six Traits ARG on the baseline. Highest scores possible were out of 30.





Students increased achievement on the overall writing process with a range from 10 percent to 57 percent. Average growth from the 11 students that turned in both a baseline and persuasive essay was on average a 30 percent increase.

Comparing the Kansas Composite Formula scores from the baseline essay to the persuasive essays also showed increased student achievement. No students were scored at an academic warning for the persuasive essay compared to ten on the baseline. Three students scored at approaching standards, eight scored at meets standards, and two scored at exceeds standards. On the baseline essay, only two scored at meets standards and no students scored in the exceeds standard area. Graph 4 illustrates the scores calculated utilizing the composite score formula for the persuasive essay. The highest score possible was 4.4.



When I compared answers from the writing survey after completion of the persuasive essay, it was interesting to note the differences on the students' attitudes towards writing and their perceived abilities in writing. When students were asked if they knew the steps of the writing process on the post survey, 78 percent of the students stated "yes" versus 25 percent of students that stated "yes" on the pre-survey. Thirty-eight percent of students stated they did not know or were not sure how to organize thoughts and ideas for an essay compared to 83 percent students who said the same on the pre-survey. When comparing the students' attitudes towards the importance of pre-writing on the pre-survey, 50 percent of the students stated it was "somewhat" important while on the post-survey 78 percent stated it was "very" important.

The writing survey also indicated students' better understanding of their cognitive abilities and their direct correlation to the importance of the writing process. When asked if they felt graphic organizers were helpful, 52 percent stated yes on the pre-writing survey. On the post-survey, 89 percent stated yes. When given a choice of what they struggled with the most in writing, students listed expressing ideas, structuring ideas, editing, and writing sentences as the highest. When asked what teachers could do to help improve their writing, students on average answered providing practice time and detailed instruction the highest. Providing extra time and graphic organizers rated the second highest from the survey. This data indicates the students were able to reflect on their learning and writing performance. They understood the need for explicit instruction in writing.

### Conclusion

The research study provided me with valuable information concerning the use of graphic organizers and technology interventions in the writing process. Graphic organizers have been researched and proven useful in reading comprehension. Through my study, I wanted to gain a better understanding of the implications of graphic organizers and technology on the writing process. Students with learning disabilities often struggle with processing reading comprehension to written language. The study data indicated that when students were provided with graphic organizers during reading and writing, provided with explicit instruction on how to use graphic organizers, and provided time to practice implementing them, student achievement scores increased. I will continue to use graphic organizers and technology in my daily instruction due to the findings of this study. In the future, I would like to scaffold instruction to require students utilize their learned knowledge of organizers independently; subsequently, I

would then study the effect of transferring learned knowledge to independent work ability and the effects on student achievement in the writing process.

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[http://www.k8accesscenter.org/training\\_resources/udl/GraphicOrganizersHTML.asp](http://www.k8accesscenter.org/training_resources/udl/GraphicOrganizersHTML.asp)

## Appendices

## Appendix A

### Kansas Department of Education 6 TRAITS of Writing

## SCORING CONTINUUM AND A RECURSIVE WRITING PROCESS

From the blossoming of an initial idea to the act of publication, writing is an ongoing recursive process, not necessarily a linear one. The Kansas scoring rubric is designed to reinforce this idea and help writers to understand at what particular stage a piece of writing may be for each of the six traits (Ideas and Content, Organization, Voice, Word Choice, Sentence Fluency, and Conventions). The descriptions of each stage below also suggest specific activities a writer might engage to reach this level.

### **Rating of 5 – Publishing Stage**

Although maybe not perfect, the writing has generally reached its goal and achieved its potential. The writing captures readers' interest, is insightful, and is skillfully crafted. The publishing stage suggests that the writing is ready to share publicly and that the writer has progressed through such activities as revising and editing for standard usage, mechanics, spelling, varied sentence structure, and/or word choice as necessary.

### **Rating of 4 – Polishing Stage**

The writing demonstrates the thoughtful attention to meeting the needs of readers that comes from revising an earlier draft(s). Although the writing may need some additional small-scale revision and editing, generally it is "one draft away" from the publishing stage. The polishing stage suggests that the writer has progressed through such activities as extending ideas, adding examples, supporting with additional evidence, clarifying confusing ideas, strengthening voice, and/or reorganizing structure as necessary.

### **Rating of 3 – Drafting Stage**

The writing demonstrates a fully realized draft that begins to satisfy both the writer's and readers' needs and helps to identify areas where large scale revision is still needed. The drafting stage suggests that the writer has progressed through such activities as writing introductions, full body paragraph(s), transitions, and conclusions.

### **Rating of 2 – Shaping Stage**

The writing demonstrates a focus and at least some supporting details; it is "beginning to take shape," but it is not yet a complete draft. The shaping stage suggests that the writer has progressed through such activities as organizing main points and ideas, blocking, and/or developing an outline.

### **Rating of 1 – Inventing Stage**

The writing demonstrates that the writer is at the very beginning stages of generating ideas and selecting a focus for writing. The inventing stage suggests that the writer has progressed through such activities as brainstorming, questioning, and/or free-writing.

## Appendix B

## Student Self-Assessment and Attitude Toward Writing Survey

## Student Writing Survey

Name\_\_\_\_\_

Date\_\_\_\_\_

1. Are you a

Male

Female

2. How old are you?\_\_\_\_\_

Grade level\_\_\_\_\_

3. Do you
- enjoy*
- or
- dislike*
- writing?

**Enjoy** 1      2      3      4      5      **Dislike**

4. Do you like to write in journals or diaries?

Yes

Not sure

No

5. Do you find writing difficult?

Yes

Not sure

No

6. Rate your writing ability

Good

fair

poor

very poor

7. Do you know the steps of the writing process?

Yes

Not sure

No

Yes                      Not sure                      No

| Very important | somewhat important | not important | this step can be skipped |
|----------------|--------------------|---------------|--------------------------|
|                |                    |               |                          |

Yes                      Not sure                      No

Yes                      Not sure                      No

Yes                      Not sure                      No

Yes                      Not sure                      No

**Lowest-1      2      3      4      5      6      7      8      9      10-Highest**

15. Which of the following do you feel you struggle with the most when writing(If more than one applies to you, number them from hardest to least hard)

Expressing my ideas(getting my thoughts out)\_\_\_\_\_

Organizing my ideas so they make sense \_\_\_\_\_

Writing good sentences \_\_\_\_\_

Writing a paragraph \_\_\_\_\_

Grammar \_\_\_\_\_

Spelling \_\_\_\_\_

Edit/revise \_\_\_\_\_

Structure ideas into paragraph essay \_\_\_\_\_

16. Do you know what the 6 Traits of writing are?

Yes                      Not sure                      No

17. How do you feel when you are asked to complete a writing assignment in a class?

Scared\_\_\_\_\_

Mad\_\_\_\_\_

Excited\_\_\_\_\_

Happy\_\_\_\_\_

Sad\_\_\_\_\_

Other\_\_\_\_\_ (explain other\_\_\_\_\_)

18. When you are asked to write an essay for any class, how many paragraphs do you feel you typically write?

1      2      3      4      5 or more

19. What can teachers do to help you improve your writing?

Provide examples\_\_\_\_\_

Provide graphic organizers\_\_\_\_\_

Provide practice time/detailed instructions\_\_\_\_\_

Teach the writing process\_\_\_\_\_

Provide extra time\_\_\_\_\_

Other\_\_\_\_\_ explain other\_\_\_\_\_



## Appendix C

Graphic Organizer- Section:

Find and list examples of conflict, character development, and symbols from each section with a page number.

|                       |  |
|-----------------------|--|
| Conflict              |  |
| Character Development |  |
| Symbols               |  |

## Appendix D

## Persuasive Analysis Organizer

|  |   |
|--|---|
| <b>Introduction:</b><br><div style="background-color: #0000FF; color: white; padding: 2px; margin: 2px;">1. Hook</div> <div style="background-color: #0000FF; color: white; padding: 2px; margin: 2px;">2. Background</div> <div style="background-color: #0000FF; color: white; padding: 2px; margin: 2px;">3. Thesis</div>   |   |
| <div style="border: 1px solid black; padding: 5px; margin-bottom: 10px; text-align: center;">             Conflict caused by secrecy OR<br/>             conflict caused by honesty.           </div> <div style="background-color: #FF00FF; padding: 5px;"> <b>Body Paragraph</b><br/> <div style="background-color: #FF00FF; color: black; padding: 2px; margin: 2px;">1. Main argument-<br/>Topic_____</div> <div style="background-color: #FF00FF; color: black; padding: 2px; margin: 2px;">2. Example</div> <div style="background-color: #FF00FF; color: black; padding: 2px; margin: 2px;">3. Evidence (PG. #)_____</div> <div style="background-color: #FF00FF; color: black; padding: 2px; margin: 2px;">4. Example</div> <div style="background-color: #FF00FF; color: black; padding: 2px; margin: 2px;">5. Evidence (PG. #)_____</div> <div style="background-color: #FF00FF; color: black; padding: 2px; margin: 2px;">6. Transition_____</div> </div> | <div style="border: 1px solid black; padding: 5px; margin-bottom: 10px; text-align: center;">             The opposite of your Thesis!!<br/>             Who would disagree and why?           </div> <div style="background-color: #00FF00; padding: 5px;"> <b>Body Paragraph</b><br/> <div style="background-color: #00FF00; color: black; padding: 2px; margin: 2px;">1. Opposing Argument<br/>Topic_____</div> <div style="background-color: #00FF00; color: black; padding: 2px; margin: 2px;">2. Example</div> <div style="background-color: #00FF00; color: black; padding: 2px; margin: 2px;">3. Evidence_____</div> <div style="background-color: #00FF00; color: black; padding: 2px; margin: 2px;">4. Rebuttal_____</div> <div style="background-color: #00FF00; color: black; padding: 2px; margin: 2px;">5. Evidence_____</div> </div> |
| <div style="background-color: #FFFF00; padding: 5px;"> <b>Conclusion</b><br/> <div style="background-color: #FFFF00; color: black; padding: 2px; margin: 2px;">1. Restate opposing argument/thesis_____</div> <div style="background-color: #FFFF00; color: black; padding: 2px; margin: 2px;">2. Restate rebuttal_____</div> <div style="background-color: #FFFF00; color: black; padding: 2px; margin: 2px;">3. Restate main argument_____</div> </div>  |   |