The Effect of Reflection on Narrative Writing Ability of Low- and High-Achieving Students

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Abstract

There has long been an argument going on in the field of education about the nature of learning, pitting the importance of what students learn against how students learn, or the content versus the process. Recent years have shown a boost in research on metacognition, including a focus on metastrategic knowledge and metacognitive knowledge monitoring. This study looks at a form of metacognition – reflection – to examine its potential correlation to narrative writing ability in low- and high-achieving 10th grade students at an all-girls school. The short nature of the study opened up many questions about the impact of reflection in the classroom and whether its effectiveness might be correlated to time spent or explicit teaching and what areas other than narrative writing might benefit from the use of reflection. In the future, the study should be continued over a lengthier time frame.
CHAPTER I

INTRODUCTION

Overview

America’s education process is rooted in the tradition of rote memorization, so it’s no surprise that learning, to this day, still falls victim to this way of thinking. There is still much emphasis put on what students are learning and how well they’re learning. However, a recent trend has begun to examine not just the facts and figures of students’ knowledge, but how they’re learning. Students are increasingly being encouraged to examine their own thought process and not just write down the answer that they know is correct but think about how they got to that answer. Oftentimes, there is a disconnect between students’ perception of their knowledge and their actual ability. Isaacson and Fujita (2006) explain how this disconnect is what can prevent students from being able to accurately assess their own mastery. These types of metacognitive, or reflective, processes of students thinking about how they’re thinking help them to self-regulate their learning, simultaneously making them more self-aware and self-confident, which reduces the burden of teaching on the teacher.

Reflection is a natural part of narrative writing. As Foote (2015) explains, narrative writing helps “students to critically reflect upon the past and consider ways they might reframe and make meaning of past experiences” (p. 118). Reflecting on their own personal life stories helps students to have a more personal experience with the learning, but also to reflect on their writing process, which can help them slow down and think about their learning. By combining reflection and narrative writing, students are allowed the opportunity to examine themselves, their experiences and their learning process.
Statement of the Problem

Can using reflection improve students’ mastery of narrative writing and does it have a different effect on low- versus high-achieving students?

Hypothesis

The null hypothesis for this study is that reflection will have no effect on the skill of narrative writing for either low- or high-achieving 10th grade students.

Operational Definitions

Low- and high-achieving students are defined by the class level they were placed in at the beginning of the year as a result of last year’s grades in English and teacher recommendations. Low-achieving students were in a 10th grade standard English class and high-achieving were in a 10th grade honors English class.

Narrative writing was a sequence of prompts. The first prompt for collection of baseline data was relating to personal experience. The second prompt was relating to the ability to take the perspective of a character. The participants were given a full class period for each prompt. Their skill in narrative writing was determined by the rubric used to grade and included six skills. These skills included organization showing insight or good sequencing, creative exploration using rich, relevant and credible details, a strong and creative beginning and conclusion, strong diction and figurative phrasing of language, intentional and committed interaction between the writer and the reader, and few grammatical errors.

Reflection was given the day after participants were given the narrative writing prompt. They were given back their narrative writing and given a reflection prompt and 10 minutes to respond.
CHAPTER II

REVIEW OF THE LITERATURE

This literature review seeks to explore the correlation among varying factors that contributed to this study, including low- and high-achieving students, relevance of cultural background in learning, reflection and narrative writing. Section one provides an overview of the educational context that both student and teachers engage in, as well as, a brief introduction of the prominence of narrative writing and reflection. Section two explores the impact of student’s perceptions on their learning. Section three looks at the different strategies a teacher must use in teaching an at-risk and diverse student population. In a similar vein, section four discusses what it means to be culturally responsive as a teacher and how reflection plays a role. Section five explains the role of narrative writing in the classroom and its potential benefits for students, and section six examines reflection as a method of learning. A summary is provided in section seven.

Introduction

The rigid control of the generalized curriculum and lack of a diversified curriculum that has been prominent in education in recent years has caused certain issues, such as development of a type of reading comprehension with tunnel vision and very one-sided viewpoints. As Boyd, Causey and Galda (2015) note, there is a “danger of the single story” (p. 378). This is why currently there has been a push towards incorporating curricula that teach to all levels and are focused on not only students’ experiences, but also their active engagement with assessing their experiences and their learning. Narrative writing and reflection have become a perfect springboard for this type of learning. Foote (2015) discussed how essential it is for students to “critically reflect upon their prior learning experiences in ways that allow them to ‘re-story’ ”
(p. 116). Especially for at-risk students, this ability to escape the danger of the single story is what allows students to re-story their experiences, learn from them and build upon their self-efficacy.

**Danger of the Single Story: Student Tunnel Vision**

As Boyd et al. (2015) state, “no group or individual has a single story, and knowing only one story leads to the creation of assumptions and stereotypes” (p. 378). There are a few ways in which this lack of perspective and understanding among groups can be lessened. Teachers should keep in mind students’ backgrounds and their communities, as well as ways to integrate different perspectives while formulating the curriculum, encouraging inferential comprehension through the use of character perspective-taking so that students can begin to understand human character in a social world (McTigue, Wright, Douglass, Hodges, & Franks, 2015). This would push teachers toward a differentiated type of instruction, in which they consider the culturally diverse backgrounds of their students (Bui & Fagan, 2013; Little, McCoach, & Reis, 2014).

All of the above recommendations for changing teaching instruction to expand students’ perspectives is grounded in the belief that there ought not to be a focus as rigid and single-minded on the cognitive skills of reading and writing but rather more of an emphasis on the process involving meaning-making (Handsfield & Jimenez, 2008; Foote 2015). Walmsley and Birkbeck (2006) also affirm this belief when they state that narrative writing “brings this to practice as an aspect of social identity and a lense with which to view the social world” (p. 113). In addition, they emphasize in their research that “the process was graded, not the narrative” (p. 122). An overly intent focus on skills overshadows the social component of reading and writing and does not allow for full, integrated engagement with the text or story. In order to instruct this
type of curriculum, teachers must be able to differentiate their instruction based on the needs of their differing and diverse students.

**Teaching to At-Risk and Diverse Students**

While DeLuca and Lam (2014) and Boyd et al. (2015) name quite a few components that go into the formation of a diverse human being, there are still even more. The need for diversity in instruction due to diverse student populations, particularly low- versus high-achieving students, has been gaining attention in recent years. In culturally diverse classrooms, students bring a variety of cultural and social understandings into instructional contexts (Handsfield & Jimenez, 2008). Boyd et al. (2015) share their belief that alongside these diversifying student populations, classrooms must include diverse teaching techniques into language arts or English instruction. Reflection can be a diverse teaching strategy as the experience is unique to each individual and therefore is self-modifying. Shipman-Campbell (1995) specifically addresses the need for diversity in terms of both culture and gender, which is especially relevant with the participants in this study being all African-American and attending an all-girls school.

The diverse academic levels in the classroom lead to many implications for the type of instruction required. Recent years have shown a greater focus in increasing the achievement levels of all students, regardless of background, promoting excellence for all (Boykin, 2014). Various studies discuss that it is important for teachers to consider the students’ historical and situational backgrounds when teaching in order to incorporate it into instruction and make the learning process geared towards meaning making (Foote, 2015; Handsfield & Jimenez, 2008). DeLuca and Lam echo this when they recognize “teachers’ ability to integrate knowledge of both educational assessment and student diversity as related to cognitive development, learning ability, and students’ social and behavioral backgrounds” (2014, p. 4). Education is a social
environment, so the students’ experiences and interactions play largely into how they acquire and retain knowledge. As a result, some of the more favored instructional practices involve perspective-taking, a strategy McTigue et al. (2015) call “social emotional learning.” Narrative writing can be used to teach children about the social world and how they can navigate through different emotions and conflicts.

The reality of having such a diverse student population is that a teacher is incapable of accommodating to each and every student’s needs 100 percent of the time. This is why reflection is such a valuable teaching tool. As long as the teacher is able to clearly instruct his/her students on how to carry out reflection correctly, it becomes a powerful metacognitive tool in which students can become their own best teachers, editors and peer reviewers when the teacher is unavailable to them. Isaacson and Fujita (2006) highlight that “the application of self-regulation to learning is a complicated process involving not only the awareness and application of learning strategies but also extensive reflection and self-awareness” (p. 39). It is important to note that these metacognitive and self-regulatory processes are excellent for learning within the classroom but are also essential life skills that can and should be utilized outside of the classroom; however, not everyone has the same abilities to be able to use these skills. Isaacson and Fujita (2006) and Zohar and Peled (2008) both recognize the differences between high- and low-achieving students and the different approaches to teaching that must take place to accommodate them both. Where Isaacson and Fujita (2006) refer to high-achieving students as “expert learners” and emphasize their skillfulness at metacognitive knowledge monitoring (p. 39), Zohar and Peled similarly hypothesized that high-achieving students (HAs) had a natural ability with metastrategic understanding. However, they also found that explicit teaching of MSK (Metastrategic Knowledge) greatly aided the low-achieving students’ (LAs’)}
metacognitive processing in comparison to the control group of the HAs. Zohar and Peled’s study (2008) especially brings to light the need for different teaching strategies for diverse students in order to have effective teacher instruction and meaningful growth in the students.

**Culturally Responsive Teaching**

One of the basic premises of culturally responsive teaching, as Shipman-Campbell recognizes, is creating the right classroom atmosphere and adjusting the teaching style to match the students’ cultural learning style (1995). First, understanding that there will be multitudinous perspectives in any given classroom is essential to the teacher becoming culturally responsive. DeLuca and Lam notice how it is necessary for teachers nowadays to be well-versed and competent in multiple approaches to differentiation to promote a culture of teaching in service of learning (2014). In order to become masters of differentiated instruction, teachers must make themselves aware of their students’ prior knowledge, personal background and incorporate reflection and narrative writing into their classrooms. The importance of reflection is highlighted in another study emphasizing Ambrose’s suggestion that “true learning requires reflection on acts of doing or practicing what one is trying to learn, a suggestion consistent with the idea that reflection is a cyclical process promoting continuity of experiences” (Summers, Chennette, Ingram, McCormack, & Cunningham, 2016, p. 29). Whereas, Foote (2015) explained the importance that narrative writing can have on students, allowing them also to learn from prior experiences as reflection does and therefore lead them to “transformational learning” (p. 116). Through these studies, we can see that narrative writing and reflection are a perfect pair of interrelated and overlapping concepts where a student uses prior experience, goes back to readjust perspective, and then learns from that moving forward. If they do not have the
proper amount of background knowledge or perspective on a topic, then Bui and Fagan (2013) explain that for instructional purposes, teachers should first assess whether or not students have an accurate and appropriate amount of prior knowledge about a topic. Then integrate the prereading strategies (e.g., prediction, word web) that will teach the necessary background knowledge to help students interact with the text on a personal level. (p. 65) In the study conducted by Little et al., the results suggested that differentiated instruction did not harm students’ academic achievement and, in fact, could potentially be seen as improving academic achievement (2014). Differentiated instruction is changing the educational playing field, thus producing a greater need for culturally responsive teachers. Narrative writing and reflection are beginning to emerge as powerful tools in this new culturally-responsive teaching model.

**Narrative Writing**

In Foote’s (2015) study, she explained that “humans are storytelling beings. Through the ages, humans have passed down culture, traditions, beliefs, values, and experiences via narrative accounts. Thus, narratives have been a primary means of knowledge impartation and acquisition since the beginning of time” (p. 116). Narrative writing not only enhances students’ ability to learn from previous cultures and traditions, but can also produce constructive texts that represent an individual’s personality or identity construction (Walmsley & Birkbeck, 2006). Narrative writing has a naturally reflective nature in that it directs the writing experience inwards towards the self. Since it largely relies on the exploration of prior experiences, narrative writing implores a type of self-understanding and self-assessment before a student is able to piece those experiences together and start developing or advancing their self-efficacy and self-concept. In fact, Foote (2015) argues that it is most assuredly possible to transfer learning from one situation to another; “importantly, this transfer is embedded in the writing experience” (p. 121). Because
narrative writing can be such a personal experience, its effectiveness can be greatly impacted, perhaps even dependent, upon the extent that trust has developed between the teacher and the student prior to the submission of the assignment (Walmsley & Birkbeck, 2006). It is important to recognize the extremely close connection between writing and critical thinking. Writing demands a student to be engaged in thinking. As Foote (2015) notes of Bean’s study from 1996, “‘when we make them struggle with their writing, we are making them struggle with thought itself,’” which is the very purpose of reflection as well (p. 122). Therefore, this inextricable link between writing, especially of the narrative variety, and reflection is cemented.

Reflection

Many theorists would agree on the point that reflection is a valuable method of learning (Foote, 2015; Isaacson & Fujita, 2006; Walmsley & Birkbeck, 2006; Zohar & Peled, 2008). Reflection, when taught correctly, can become an immensely powerful metacognitive tool. Students often are not even aware of the knowledge they have accumulated from their experience; “however, this rich source of untapped knowledge” can be accessed through the use of reflection (Foote, 2015, p. 118). Reflection has the ability to not only help students assess their personal development and therefore impact their self-efficacy, but also can greatly impact their cognitive development through awareness and understanding of their own mastery of a topic. As Isaacson and Fujita (2006) explain, “one of the critical barriers to success for many students may be their inability to objectively assess their mastery of the academic tasks they are facing” (p 39). Reflection can help students breach that barrier and become their own teachers, in a sense. Studies like Zohar and Peled’s (2008) highlight the positive impact this type of metastrategic knowledge can have on both low- and high-achieving students, but especially on low-achieving students. Summers et al. (2016) affirmed this belief when they concluded that “our experiences
suggest that reflection can be useful both in teaching specific content and in teaching an approach to learning and thinking” (p. 38). Reflection has the ability to transform every part of a student’s life, which is why Foote (2015) refers to it as “transformational learning,” and which is why the effect of reflection on academic achievement needs to be more thoroughly examined.

Summary

This literature review shows the interrelatedness between many components of education and culturally responsive teaching, as well as other best practices for the instruction of a diverse classroom, narrative writing and reflection. All of these components of education have both been impacted by and have an impact on the diversification of the classroom. Although the classroom has diversified, the teaching strategies and curriculum have not kept pace, resulting in a disparity between diversity and academic achievement, especially with the widening gap between high- and low-achieving students highlighted in studies such as Isaacson and Fujita (2006) and Zohar and Peled (2008). Studies have begun to note the impact of metacognitive teaching and learning, such as reflection, on high- and low-achieving students. Isaacson and Fujita’s (2006) study shows this with their focus on the correlation between knowledge monitoring and a student’s academic performance. However, a clear line has not been drawn between the use of narrative writing in conjunction with reflective practices and their combined impact on student academic performance.
CHAPTER III

METHODS

The purpose of this study was to examine if reflection had an effect on skills in narrative writing (organization showing insight or good sequencing, creative exploration using rich, relevant and credible details, a strong and creative beginning and conclusion, strong diction and figurative phrasing of language, intentional and committed interaction between the writer and the reader, and few grammatical errors) for low- and high-achieving 10th grade students.

Design

This research used a quasi-experimental design as there was no randomization of research participants since they were assigned purposefully by the researcher into control and treatment groups. In this design, baseline data from a narrative writing prompt was collected. Then the researcher implemented a reflection prompt to the students. This process was repeated another time for paper 2 of narrative writing and reflection 2 after the completion of their paper 2. The goal was for the intervention of reflection to improve narrative writing ability by making students more aware of how, what and for what purpose they were writing. The independent variable was the reflection prompts given in between the narrative writing prompts. The dependent variable was the rubric scores of these two narrative writing prompts.

Participants

This study used convenience samples for both the control and treatment group. The control group, consisting of 17 students, was smaller than the treatment group, consisting of 24 students. The participants in the control group were 10th grade English honors students as opposed to the participants in the treatment group who were in standard 10th grade English. This study was conducted as part of action research during a student intern program at an urban, all-
girl’s school in Baltimore City. Since the control and treatment groups did not have an equal number of participants, in order to balance the results, a random sample of 10 students was chosen from each group to analyze their data.

Instrument

Two scoring rubrics were used as the instrumentation for this study: one for the participants’ narrative writings and one for their reflections. The rubric for the narratives was taken from “Arizona’s Instrument to Measure Standards” and was a holistic grading rubric on a 6-point scale, with one showing little mastery of narrative writing and six showing great mastery (shown in Appendix A). The rubric for reflections was also a holistic grading rubric but on a 4-point scale, with one showing minimal reflection and four showing skilled, in-depth reflection. This reflection rubric was created by Derrel Fisher in 2004 (shown in Appendix B).

Procedure

This study took place over the course of one month. The control group was given direct instruction on concepts of narrative writing, including perspective-taking and third-person narrative writing, dialogue, use of metaphor and simile and use of sensory details. The treatment group was not given direct instruction. However, it should be noted that their current course unit was a book written in the narrative style which they could have used as a source of information and an example after which to model their responses.

The treatment and control group were given a narrative writing assignment to collect initial baseline data. The day after the narrative writing assignment, they were given a reflection prompt to collect the baseline data for their reflection responses. After the collection of this initial data, the treatment group was given 2 weeks of direct instruction centered around narrative writing, including the concepts listed above, while the control group continued their reading of
the narrative book, with no direct instruction given on narrative writing. After this two-week period, both the treatment and control group were given another narrative writing assignment, and the following day they were given another reflection prompt. Another writing sample was to be completed, but due to unforeseen difficulties, only two sets of data were analyzed and compared.
CHAPTER IV

RESULTS

The purpose of this study was to examine if reflection had an effect on skills in narrative writing (organization showing insight or good sequencing, creative exploration using rich, relevant and credible details, a strong and creative beginning and conclusion, strong diction and figurative phrasing of language, intentional and committed interaction between the writer and the reader, and few grammatical errors) for low- and high-achieving 10\textsuperscript{th} grade students.

The study methodology was a quasi-experimental design with an experimental and a control group. The dependent variables were rubric scores on a classroom paper assignment and there was a further independent variable of reflection on the work of the classroom paper. The first narrative assignment was collected as baseline data before the reflections were given. Then, the second narrative assignment was given followed by another reflection.

Various analyses were undertaken. Independent \textit{t} tests were run to see if there were any differences on either of the two papers. The null hypothesis that reflection will have no effect on skill of narrative writing for either low- or high-achieving 10\textsuperscript{th} grade students was supported. However, there was a significant difference found on paper 1 of the narrative writing assignments, but not paper 2 as displayed in Table I. This could simply be indicative that the baseline for Standard English versus Honors English was significantly different. Interestingly, there were no differences found on the reflections on the papers as displayed in Table II. As such, this study does not show that reflections had any significant impact on skill in narrative writing.
Table I

$t$-test of Differences in Scores on Paper 1 and Paper 2

<table>
<thead>
<tr>
<th></th>
<th>Exp = 1/Cont=2</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>t test</th>
<th>Degrees of freedom</th>
<th>Sig. (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paper 1 Grade</td>
<td>1.0</td>
<td>10</td>
<td>2.600</td>
<td>1.3703</td>
<td>-2.917</td>
<td>18</td>
<td>.009</td>
</tr>
<tr>
<td>Paper 2 Grade</td>
<td>1.0</td>
<td>10</td>
<td>3.900</td>
<td>.7379</td>
<td>.087</td>
<td>18</td>
<td>.932</td>
</tr>
</tbody>
</table>

Table II

$t$-test of Differences in Scores on Paper Reflection 1 and Paper Reflection 2

<table>
<thead>
<tr>
<th></th>
<th>Exp = 1/Cont=2</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>t test</th>
<th>Degrees of freedom</th>
<th>Sig. (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reflection for Paper 1</td>
<td>1.0</td>
<td>10</td>
<td>2.30</td>
<td>1.160</td>
<td>-.199</td>
<td>17</td>
<td>.844</td>
</tr>
<tr>
<td>Reflection for Paper 2</td>
<td>1.0</td>
<td>7</td>
<td>2.57</td>
<td>1.134</td>
<td>.027</td>
<td>14</td>
<td>.978</td>
</tr>
</tbody>
</table>

These analyses led to the question of whether there was differential growth between Classroom Papers 1 and 2 between the experimental and control groups and an independent $t$ test was run to determine if there was. That test showed no differential growth as displayed in Table III.

Table III

Independent $t$-test on Differential Growth between Experimental and Control Groups for Differential Growth from Classroom Paper 1 to Classroom Paper 2

<table>
<thead>
<tr>
<th></th>
<th>Exp = 1/Cont=2</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>t test</th>
<th>Degrees of freedom</th>
<th>Sig. (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paperchange score</td>
<td>1.0</td>
<td>10</td>
<td>1.3000</td>
<td>1.47573</td>
<td>1.961</td>
<td>18</td>
<td>.066</td>
</tr>
</tbody>
</table>

Since the study was interested in the impact of reflections on student work, correlations were run on to determine if there were statistically significant relationships with Paper 1 and Reflection 1 as displayed in Table IV and statistically significant relationships with Paper 2 and...
Reflection 2 as displayed in Table V. There were no statistically significant relationships found for either.

Table IV

*Correlations Between Paper 1 and Reflection 1*

<table>
<thead>
<tr>
<th></th>
<th>Paper 1 Grade</th>
<th>Reflection for Paper 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paper 1 Grade</td>
<td>Pearson</td>
<td>.380</td>
</tr>
<tr>
<td></td>
<td>Correlation</td>
<td>.109</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>20</td>
<td>19</td>
</tr>
<tr>
<td>Reflection for Paper 1</td>
<td>Pearson</td>
<td>.380</td>
</tr>
<tr>
<td></td>
<td>Correlation</td>
<td>1</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.109</td>
<td>19</td>
</tr>
<tr>
<td>N</td>
<td>19</td>
<td>19</td>
</tr>
</tbody>
</table>

Table V

*Correlations Between Paper 2 and Reflections 2*

<table>
<thead>
<tr>
<th></th>
<th>Paper 2 Grade</th>
<th>Reflection for Paper 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paper 2 Grade</td>
<td>Pearson</td>
<td>.073</td>
</tr>
<tr>
<td></td>
<td>Correlation</td>
<td>.788</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>20</td>
<td>16</td>
</tr>
<tr>
<td>Reflection for Paper 2</td>
<td>Pearson</td>
<td>.073</td>
</tr>
<tr>
<td></td>
<td>Correlation</td>
<td>1</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.788</td>
<td>16</td>
</tr>
<tr>
<td>N</td>
<td>16</td>
<td>16</td>
</tr>
</tbody>
</table>
CHAPTER V
DISCUSSION

The purpose of this study was to examine if reflection had an effect on skills in narrative writing (organization showing insight or good sequencing, creative exploration using rich, relevant and credible details, a strong and creative beginning and conclusion, strong diction and figurative phrasing of language, intentional and committed interaction between the writer and the reader, and few grammatical errors) for low- and high-achieving students 10th grade students.

In a null hypothesis, the researcher predicted that reflection would have no effect on either the low- or high-achieving students’ narrative writing ability.

Implications of Results

The null hypothesis stated “reflection will have no effect on skill of narrative writing for either low- or high-achieving 10th grade students.” The hypothesis was supported as there was not a significant result found in any of the t tests pertaining to reflection administered to the data. The only significant difference found was on the grades for paper 1 of the narratives. Due to the fact that these papers were given as a means for establishing baseline before the treatment of reflections were given, no link between narratives and reflections can be affirmed. Rather, this difference is likely easily explainable by the fact that the treatment group was a Standard English class and the control group was an Honors English class; as such, their baseline data would naturally differ.

Theoretical Consequences

Interestingly, although no significance was found due to the limited time frame of the study, it may be exactly due to that fact that a theoretical consequence can be supported. This supports the idea that time is an essential component to learning and significant growth cannot be
expected or found through such a short time period of instruction and knowledge accrual. Foote (2015), explained that “[t]he recursive cycle of learning enables students to make new connections that help make sense of the past in meaningful, transformative ways, thereby creating a learning situation where self-efficacy can be bolstered” (p. 121). Therefore, it stands to reason that because the study was limited in time, the recursive style of nature was not allowed to take hold because there was simply not enough time for repetition or reinforcement for knowledge to take hold.

**Threats to Validity**

There were significant threats to validity. Internally, a threat to validity was selection. The experimental and control groups were both convenience samples; therefore, no randomization for selection could occur, leading to a possible skew in the results for the dependent variable. In addition, selection was a double threat because the experimental group consisted of low-achieving students whereas the control group consisted of high-achieving students. Experimental mortality was also a threat to this study. There were some students who never handed in the first paper, making the baseline for the groups already naturally skewed. Then, throughout the study, there was not consistent participation within the groups – some didn’t complete or hand in reflections or some didn’t complete or hand in the narrative writing assignments.

As far as threats to external validity, population validity was at risk. The sample sizes for the experimental group was only 24 and the control group was even smaller at 17. Since they were both different types of students as well – low- and high-achieving – not much generalization can be applied to the results or findings of these groups outside of the experiment. Due to the researcher’s self-selection of participants, it is also possible that there were interaction
effects of selection biases and the experimental treatment because of the different labeling of students as low- versus high-achieving or standard versus honors students in English.

Notably, the largest threat to validity was the extraneous variable of the short timeframe of the study. Unfortunately, due to circumstances outside of the control of the researcher, the research timeframe was cut short to only about three weeks and, as such, the researcher was only able to collect two sets of data for both narrative writing and reflection, limiting the breadth of the experiment. Even though it fell outside of the range to qualify as a significant result, an independent $t$ test on differential growth between experimental and control groups for differential growth from classroom paper 1 to classroom paper 2 found a positive trend. Despite the limited time in which this study was conducted and the limited data accrued, but also taking into account a positive data trend, it encourages the researcher to believe that should the study have been allowed to continue, a more accurate picture would have emerged with the potential of showing a significance relating reflection to differential growth on narrative writing between the control and experimental groups.

**Implications for Future Research**

This study reveals many potential implications for future research. First and foremost, this study could simply be repeated but with a longer time for administration to see if the elongation of the study would help create a clearer picture and be able to uncover statistically significant results. In addition, in the future, a researcher could attempt to limit many of the threats to validity currently affecting this study to increase accuracy and validity of the study, such as randomizing the group selection and including students of the same academic readiness in both the control and experimental groups, or even choosing a completely different population, such as all-boys or co-ed. In addition, it might be interesting to examine the effect of reflection
not just on narrative writing, but on other subject areas that don’t naturally have a reflective
tendency, such as science or math, to see if reflection has an effect on those as well.

Additionally, there are many different adjustments to the procedure of this study that
could be done that might yield an interesting result. For example, instead of giving the reflection
the day after, the reflection could be given immediately after or 3 days after or maybe even a
week after. Also, the researcher could withhold the narrative writing piece the participants
completed while they complete their reflection to see how mindful they were during the writing
process. It might be interesting to incorporate this adjustment of the procedure with the current
participants of low- and high-achieving students to see if there is a difference in the retention of
their metacognitive processing.

**Summary**

Even though this study had many limits, it also raises many questions. For example, is the
effect of reflection only long-term? What are the overall impacts of reflection on achievement
levels on low- versus high-achieving students? Are there more benefits to reflection in a
classroom other than on skill or ability of writing? Although not many answers were found in
this study, it is even more exciting how it has opened a door for many questions to further be
explored.
References


### Appendix A

Official Scoring Guide: Arizona’s Instrument to Measure Standards

#### HOLISTIC RUBRIC BASED ON 6 TRAITS OF WRITING

<table>
<thead>
<tr>
<th>SCORE POINT 6</th>
<th>SCORE POINT 5</th>
<th>SCORE POINT 4</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Response</strong></td>
<td><strong>Response</strong></td>
<td><strong>Response</strong></td>
</tr>
<tr>
<td>is sophisticated and skillful in written communication, demonstrated by</td>
<td>is excellent and skillful in written communication, demonstrated by</td>
<td>is appropriate and acceptable in written communications, demonstrated by</td>
</tr>
<tr>
<td>- Exceptional clarity, focus, and control in topic development and organization that often show insight.</td>
<td>- Clarity, focus, and control in topic development and organization</td>
<td>- Ideas adequately developed with a clear and coherent presentation of ideas with order and structure that can be formulaic.</td>
</tr>
<tr>
<td>- In-depth and/or creative exploration of the topic using rich, relevant, and credible details.</td>
<td>- A balanced and thorough exploration of the topic using relevant details.</td>
<td>- Relevant details that are sometimes general or limited; organization that is clear, but sometimes predictable.</td>
</tr>
<tr>
<td>- A strong, perhaps creative, beginning and satisfying conclusion.</td>
<td>- An inviting beginning and a satisfying sense of closure.</td>
<td>- A recognizable beginning and ending, although one or both may be somewhat weak.</td>
</tr>
<tr>
<td>- Specifically and carefully chosen words that enhance meaning.</td>
<td>- A broad range of carefully chosen words crafted into phrases and varies sentences that sound natural.</td>
<td>- Effective word choice that is functional and, at times, shows interaction between writer and audience.</td>
</tr>
<tr>
<td>- Intentional and committed interaction between the writer and the reader</td>
<td>- Awareness of the reader and commitment to the audience and topic.</td>
<td>- Somewhat varied sentence structure with good control of simple constructions; a natural sound.</td>
</tr>
<tr>
<td>- Effective and/or creative use of wide range of conventions and few errors.</td>
<td>- Effective use of a wide range of conventions and few errors.</td>
<td>- Control of standard conventions although a wide range is not used; errors that do not impede readability.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SCORE POINT 3</th>
<th>SCORE POINT 2</th>
<th>SCORE POINT 1</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Response</strong></td>
<td><strong>Response</strong></td>
<td><strong>Response</strong></td>
</tr>
<tr>
<td>is inadequate in written communication, demonstrated by</td>
<td>is poor in written communication, demonstrated by</td>
<td>is inferior in written communication, demonstrated by</td>
</tr>
<tr>
<td>- broad or simplistic ideas that are understood but often ineffective</td>
<td>- Overly simplistic and sometimes unclear ideas that have insufficiently developed details.</td>
<td>- Lack of purpose or ideas and sequencing.</td>
</tr>
<tr>
<td>- Attempts at organizing that are inconsistent or ineffective; beginning sand endings that are underdeveloped; repetitive transitional devices.</td>
<td>- Sequencing of ideas that is often just a list; missing or ineffective details tat require reader inference to comprehend and follow.</td>
<td>- Organization that obscures the main point.</td>
</tr>
<tr>
<td>- Developmental details that are uneven , somewhat predictable, or leave information gaps; details not always placed effectively in the writing.</td>
<td>- Missing beginning and. or ending.</td>
<td>- An attempt that is too short to offer coherent development of an idea, if it is stated.</td>
</tr>
<tr>
<td>- Reliance on clichés and overuses words that do not connect with the reader; limited audience awareness.</td>
<td>- Repetitive , monotonous, and often misuse words awkwardly strung into sentences that are difficult to read because they are either choppy or rambling; many sentences that begin with repetitive noun = verb pattern.</td>
<td>- Extremely limited vocabulary that shows no commitment to communicating a message.</td>
</tr>
<tr>
<td>- Monotonous and sometimes misused words; sentences may sound mechanical, although simple constructions are usually correct</td>
<td>- Lack of audience awareness</td>
<td>- Sentences with confusing words order that may not permit oral reading.</td>
</tr>
<tr>
<td>- Limited control of standard conventions with significant errors.</td>
<td>- Little control of basic conventions resulting in errors impeding readability.</td>
<td>- Severe and frequent errors in conventions.</td>
</tr>
</tbody>
</table>
Appendix B

Simple Scoring Rubric

Depth of Reflection

The following rubric is modified by one from 2004 from Derrel Fisher.

Level 4, Superior
- Reflection shows thorough thoughtfulness
- Reflection has supporting details and examples
- All parts of reflection are complete and well done
- Reflection is highly appropriate for addressing the assignment

Level 3, Sufficient
- Reflection shows some thoughtfulness
- Reflection has some supporting details and examples
- All parts of the reflection are complete
- Reflection is appropriate for addressing the assignment

Level 2, Developing
- Reflection shows little thoughtfulness
- Reflection has few details and examples
- Most parts of reflection are complete
- Reflection is somewhat appropriate for addressing the assignment

Level 1, Minimal
- Reflection shows no thoughtfulness
- Reflection has not details or examples
- Reflection is incomplete
- Reflection does not address the assignment

Level 0, Unacceptable
- Not enough work completed for assessment