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Running Head: THE QUEST FOR SELF-EFFICACY

Roosevelt Rough Writers and the Quest for Writing Self-Efficacy

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### Abstract

Self-efficacy, the belief an individual has about their ability to accomplish specific tasks, can be affected by four primary sources, which are performance accomplishments, vicarious experiences, verbal persuasion, and psychological state (Bandura, Barbarenelli, Caprara, & Pastorelli, 1996; Arslan, 2012). Previous research has found that writing centers have relationships with increased self-efficacy (Williams & Takaku, 2011; Schmidt & Alexander, 2012). Based on this existing preliminary research, the current study hypothesized that students who use the Writing Center at Roosevelt High School will have higher writing self-efficacy than students who do not use this Writing Center. A Background Information Questionnaire and a modified Academic Self-Efficacy Scale were administered to current students at Roosevelt High School. Statistical tests were used to explore the relationships between various demographic information as well as Writing Center attendance and responses to the Academic Self-Efficacy Scale. No significant relationships were found between Writing Center attendance and Academic Self-Efficacy Scale responses, but there was a statistically significant positive relationship between age and the number of languages spoken. The majority of the responses (although not statistically significant) followed the general trend predicted by the hypothesis, so future research could potentially find significant relationships between increased Writing Center attendance and increased writing self-efficacy. Future research would need to overcome the limitations of the current study, including recruiting more participants, adding a control group, and using a longitudinal design to measure writing self-efficacy at the beginning of high school rather than asking participants to report what they believe their writing self-efficacy was at that point.

### Roosevelt Rough Writers and the Quest for Writing Self-Efficacy

Self-efficacy has been defined as an individual's belief in their ability to accomplish tasks and the control he or she feels over specific demands made of them (Bandura, Barbarenelli, Caprara, & Pastorelli, 1996). Self-efficacy should not be confused with self-esteem, which is the affective evaluation of the self, relating to the value an individual sees in himself or herself (Gist & Mitchell, 1992). Additionally, self-efficacy does not necessarily stagnate; rather, it fluctuates with new input and experiences (Gist & Mitchell). Consistently, four sources have been pointed to as sources of self-efficacy. Performance accomplishments, vicarious experiences, verbal persuasion, and psychological states act on self-efficacy, strengthening it or weakening it (Arslan, 2012). An individual's performance accomplishments can be described as his or her success in completing tasks. For example, receiving a high grade on a well-written paper would be a performance accomplishment (Arslan). Vicarious experiences are the connections students make by evaluating their performances against the performances of their peers, learning more about the level of their own performance (Arslan). Verbal persuasion is the effect that other people's evaluations have on an individual's view of their capabilities. For example, consistent criticism about a particular task could lower an individual's self-efficacy regarding that task (Arslan). Psychological state encompasses the individual's cognition and feelings and takes into account the effects of the individual's surroundings (Arslan). Currently, the entirety of the literature regarding self-efficacy seems to use these four source categories.

Through the years, researchers have given a considerable amount of attention to the role of self-efficacy in various domains. This increasing specificity comes as no surprise, for self-efficacy has been considered one of the most impactful determinants of human agency,

accounting for the behavioral differences between people who otherwise have remarkably equal knowledge and skills (Pajares & Johnson, 1994). Because self-efficacy seems to be crucial to understanding future behavior in certain areas, self-efficacy in the realm of academia has been increasingly turned to as a central key to understanding academic achievement as well as other areas involved in the lives of students. Before delving deeper into the effects of self-efficacy, it should be noted that self-efficacy does not have a direct relationship with behavior, but influences behavior indirectly through its effects on an individual's overall functioning (Pajares & Johnson). Academic efficacy seems to affect peer acceptance, emotional and behavioral problems, and academic achievement (Bandura et al., 1996). High self-efficacy students tend to fare better in school, considering teacher evaluations and academic achievement (Bassi, Steca, Delle Fave, & Caprara, 2007). High self-efficacy students also value future education more highly and place higher importance on advancing their education (Bassi et al.). Low self-efficacy students, on the other hand, generally do not devote themselves as fully to academics and do not show as much interest in further education (Bassi et al.). Research by Choi (2005) found that specific academic self-efficacy related to the academic achievement of college students, demonstrating the importance of academic self-efficacy for future academic success.

Beyond the influence that self-efficacy has on academia, self-efficacy also connects indirectly by building skills that can improve achievement. Self-efficacy seems to relate to both reflective thinking and critical thinking (Phan, 2014). Reflective thinking refers to the process of deliberating in moments of difficulty or doubt in order to come up with a solution. Self-efficacy also plays a role in how well an individual gains skills and retains new information upon learning it (Gist & Mitchell, 1992). In difficult situations, people with high self-efficacy will demonstrate

more perseverance than people who have low self-efficacy (Jackson, 2002). Beyond increased perseverance, Jackson recognized that individuals with high self-efficacy also worked harder to overcome problems and retained more focus on the problem at hand. An individual's level of self-efficacy also has an effect on how the individual construes feedback on a particular task as well as how he or she reacts emotionally to that task, indicating that self-efficacy interacts with attributional styles (Gist & Mitchell). Expanding on the interaction between self-efficacy and attributional styles, it has been shown that individuals with high self-efficacy tend to attribute failure to insufficient effort (Gist & Mitchell). Furthermore, Gist and Mitchell found that self-efficacy affects coping abilities, for individuals with high self-efficacy may show more positive coping mechanisms. Thus, high self-efficacy beliefs reflect a generally positive and adaptive mindset that enables the individuals who hold them to overcome difficulty better than individuals with low self-efficacy. It should also be noted that high self-efficacy can relate to intrinsic motivation (Bandura & Schunk, 1981). If an individual feels that they are able to overcome challenges, he or she is more likely to be more interested in the activity at hand than if the individual did not believe he or she could master the task (Bandura & Schuck). Interest in a particular activity can be adaptive, for completing tasks due to genuine interest rather than for extrinsic rewards can generally lead to increased perseverance when extrinsic rewards do not exist. Tying this idea to students, it would seem that students with high self-efficacy would be more likely to pursue academic tasks for reasons other than merely receiving a grade, perhaps valuing less tangible rewards more than a student with low self-efficacy, who may not feel interested enough in the task on its own to pursue it other than to attain a grade. Overall,

self-efficacy appears to be particularly important in a variety of areas that influence an individual's ability to perform well.

Academic self-efficacy clearly relates strongly to general achievement in school, but the focus of self-efficacy can also be shifted to specific domains. This narrowing of focus can be beneficial as specific self-efficacy provides more confidence in predicting future achievement within a certain field than general self-efficacy would (Choi, 2005). Keeping with this finding, past research has found that writing self-efficacy provides the most reliable predictor of writing ability (Klassen, 2002). Recently, a group of researchers created a new understanding of writing self-efficacy by expanding the characterization of writing. Rather than viewing writing self-efficacy uni-dimensionally, they described writing as an activity with three categories: the formation of an idea, the use of rules and convention in language in order to express the original idea, and the monitoring of decisions surrounding the writing (Bruning, Dempsey, Kauffman, McKim, & Zumbrunn, 2013). This particular study solidifies the general understanding of what the task of writing entails, providing a basis upon which future studies on writing can build. Currently, researchers agree that the determination of writing self-efficacy beliefs shares the four sources that Bandura identified for general self-efficacy as demonstrated by a study that found a positive relationship between English self-efficacy and performance accomplishments, vicarious experiences, verbal persuasion, and emotional states (Phan, 2012).

Modeling can be particularly important in improving self-efficacy as modeling can provide an example of the correct way of accomplishing tasks, resulting in a positive performance accomplishment (Gist & Mitchell, 1992). Since attributional styles have been linked to the level of self-efficacy, one way to improve self-efficacy is to focus on attributional

styles, helping individuals believe that failure results from a lack of effort rather than a lack of ability, for this attribution will encourage the individual to believe that they are capable of accomplishing tasks with the proper exertion of effort (Gist & Mitchell). One research study that evaluated the use of emails intended to increase self-efficacy and performance found that specifically worded emails could impact self-efficacy (Jackson, 2002). Furthermore, the increased levels of self-efficacy after receiving these emails also related to future performance, providing yet another example of the significant relationship between high self-efficacy and high levels of performance.

Although researchers still follow the standardized four sources, studies have also expanded on this concept, expanding the idea of what these sources entail. One study found that writing self-efficacy beliefs ebb and flow, resulting most likely from the social influence of peers and teachers (Phan, 2012). This finding relates to the verbal persuasion source of self-efficacy, for the social influence of peers and teachers likely involves this aspect to a certain extent, but the social influence could be broader than simply evaluations of an individual's performance. Therefore, the social side of self-efficacy should not be overlooked as it likely plays a multi-faceted role in shaping self-efficacy. Another study found, however, that verbal persuasion can improve self-efficacy, but the results do not persist unless the individual makes legitimate improvement in regards to the task at hand (Gist & Mitchell, 1992). This relationship becomes complicated, however, when one considers that improved self-efficacy also relates to improved performance as in the case of the students who received emails aimed at enhancing self-efficacy (Jackson, 2002). Considering the varying results, it seems safer to state that verbal persuasion significantly affects self-efficacy as long as the social influence does not portray the individual's



capabilities as vastly more developed than they are in reality. Keeping this in mind, it should be noted that repeatedly providing empty praise that does not relate to an individual's actual capabilities will not produce a lasting increase in self-efficacy, for this hollow complimenting does not affect the individual's abilities. Thus, social influence plays a role in shaping self-efficacy, but it cannot single-handedly increase self-efficacy. Rather, the individual must demonstrate some amount of success in the task, relating to performance accomplishments.

This interaction suggests that the four sources of self-efficacy, while powerful, do not exist in isolation but in an interactive relationship, hindering and aiding each other. Writing and reading improvement can be difficult to monitor at the personal level, so verbal persuasion can play a particularly large role in writing and reading self-efficacy (Schunk, 2003). Thus, verbal persuasion as a source warrants focus, for it can affect writing self-efficacy in a variety of manners. Additionally, goal setting, particularly for short-term goals, seems to have a positive impact on writing self-efficacy (Schunk). Performance accomplishments related to previously set goals for writing in that individuals had a more direct gauge of their ability to achieve future tasks if they could evaluate their achievement in relation to those goals (Schunk). Therefore, setting manageable goals could improve self-efficacy, for accomplishing these goals can demonstrate to the individual that they are capable of accomplishing tasks. Combining the ideas of social influence and goal-setting influencing self-efficacy, an effective environment for improving self-efficacy might involve a social setting that encourages appropriate goal-setting and incorporates the basic principles of performance accomplishments, vicarious experiences, verbal persuasion, and psychological states.

Given the importance of self-efficacy and writing self-efficacy specifically, the current study focuses on the role of writing self-efficacy in writing centers. Though limited research centering around writing centers exists, writing centers have previously been linked to self-efficacy (Williams & Takaku, 2011; Schmidt & Alexander, 2012). This connection makes sense for the design of writing centers includes aspects of all of the sources of self-efficacy in addition to the elements of social influence and goal-setting. Regarding the use of writing centers, it should be noted that students with high self-efficacy tend to be more likely than students with low self-efficacy to seek help when encountering problems, indicating that students with high self-efficacy may be more likely to frequent writing centers (Williams & Takaku). Given that using a writing center tends to be voluntary, students who choose to use a writing center demonstrate more adaptive help seeking, an aspect of high self-efficacy (Williams & Takaku). Interestingly, Williams and Takaku found that students can tend to overestimate their self-efficacy, a trend that could relate to inadequate correctional feedback in their classes as well as the fact that teachers may give praise to their students for participation rather than achievement. Because writing centers focus specifically on improving the quality of writing work, it would follow that more correctional feedback could be present in a writing center than in a classroom. Therefore, writing centers could help shape more realistic self-efficacy beliefs. Results have shown that increased attendance at writing centers can be linked with higher grades, and one study stated that writing center attendance helped mediate the relationship between writing self-efficacy and grades in writing classes (Williams & Takaku). An empirical study comparing the writing self-efficacy of students who use a writing center and students who do not use this resource established that students who used a writing center on three occasions displayed

increased self-efficacy beliefs whereas the control group students did not show any significant change to their self-efficacy beliefs (Schmidt & Alexander). Though it would appear logical that students with high self-efficacy would not choose to use writing centers given their belief in their ability to accomplish writing tasks, the study found that no significant differences existed between the experimental group and the control group (Schmidt & Alexander). Reflecting on past research, it would appear that writing self-efficacy and writing center attendance certainly interact.

The current study focuses on Roosevelt High School, for its low performance on measures of writing competence have lagged behind state and city averages (Oregon Live, 2013). As of November 2012, only 47% of the senior class at Roosevelt High School met the state graduation requirement for writing proficiency (Roosevelt Rough Writers, 2012). In response to this marked difficulty surrounding writing, Roosevelt High School created its Writing Center to provide the assistance its students need to improve their writing (Roosevelt Rough Writers). Accomplished writers at Roosevelt High School can sign up to be writing consultants, taking a class in which they work in the Writing Center, but the Writing Center is also staffed by volunteer college students as well as former teachers and AmeriCorps VISTA members (Roosevelt Rough Writers). Currently, the Writing Center primarily aims to strengthen the writing skills of students as well as broadening the influence the students can have in the community by emphasizing the importance of the students' ideas and ability to participate in the community (Roosevelt Rough Writers).

Roosevelt High School has the most diverse ethnic and racial background in Portland, and the school's students have a generally low socioeconomic status (Portland Public Schools,

2013). The racial and ethnic diversity of Roosevelt High School must be considered relevant to the study, for a study involving an ethnically diverse sample of first-generation college students found that increasing self-efficacy had an essential role in determining academic achievement when these students entered college (Majer, 2009). Roosevelt High School's low socioeconomic status also bears importance, for higher socioeconomic status has been linked to higher levels of academic self-efficacy and achievement (Bandura et al., 1996). Furthermore, the racial and ethnic diversity of Roosevelt High School must be considered relevant to the study, for a study involving an ethnically diverse sample of first-generation college students found that increasing self-efficacy had an essential role in determining academic achievement when these students entered college (Majer, 2009). Additionally, it should be noted that programs aimed at improving the academic achievement of African American and Latino students tend to be more successful if the programs encourage the promotion of cultural identity, so the racial diversity of Roosevelt High School must be considered an important aspect in determining the success of programs, such as the Writing Center (Caldwell & Siwatu, 2003). In essence, Roosevelt High School provides a population that could contribute to a greater understanding of the effectiveness of writing centers.

Because the purpose of the Writing Center revolves around improving the writing achievement of Roosevelt High School students, writing self-efficacy should play into the success of students who benefit from the Writing Center (Roosevelt Rough Writers, 2012). The Writing Center also aims to encourage Roosevelt High School students to value writing beyond its relation to a grade or standardized test score (Roosevelt Rough Writers). Since high self-efficacy has been shown to relate to an increased desire for future involvement in a task,

success in the Writing Center would be reflected in high self-efficacy scores. The Writing Center hopes to promote the view of writing as a lifelong endeavor, for writing plays an essential role in the workplace, relating to both the hiring and advancement process (Roosevelt Rough Writers). Because pursuing a task for extended periods of time relates to intrinsic motivation rather than extrinsic motivation (e.g., acquiring a grade for accomplishing the task), it would follow that the Writing Center would be more likely to succeed in this task if it also increased the writing self-efficacy of students, which would potentially positively affect the student's intrinsic interest in writing tasks. Considering the various goals of the Writing Center, it becomes clear that accomplishing these goals relates considerably with improving the writing self-efficacy of the students.

Various aspects of the Writing Center fulfill the four sources of self-efficacy as well as some of the more specific methods of improving self-efficacy, so there is a legitimate chance that use of the Writing Center could relate to increased writing self-efficacy. Students who use the Writing Center may receive increased scores on writing assignments, which relates to the performance accomplishments source as the students would see that their abilities in writing improve with use of the Writing Center. Vicarious experience factors in because the students can learn from the skills and performances of other students and from the Writing Consultants. Writing Consultants provide the verbal persuasion element by speaking with the students about their capabilities. Finally, the Writing Center may influence the students' emotional states for their surroundings are positive and uplifting as the people who help run the Writing Center endeavor to create a welcoming atmosphere. Due to the various factors in play at Roosevelt High School, such as the ethnic diversity, low socioeconomic status, and low writing achievement,

attempting to understand the effectiveness of the Writing Center warrants effort, for finding support for its success will expand the knowledge on writing centers in general as well as possible increased appreciation for the role of the Writing Center at Roosevelt High School specifically. Considering the presence of features that could fulfill the four sources of self-efficacy, the current study hypothesizes that students who use the Writing Center will have higher writing self-efficacy than students who do not use the Writing Center.

## **Methods**

### **Participants**

14 students from Roosevelt High School completed the Academic Self-Efficacy measures. One participant chose not to complete the Background Information Questionnaire, only marking the frequency of Writing Center Attendance. Of the 13 students who completed the Background Information Questionnaire, eight were female, and five were male. The students ages were 16-years-old ( $n=3$ ), 17-years-old ( $n=2$ ), 18-years-old ( $n=7$ ), and 19-years-old ( $n=1$ ). The 13 students who completed the Background Information Questionnaire were either in eleventh grade ( $n=3$ ) or twelfth grade ( $n=10$ ). The ethnic or racial background of the students included Hispanic or Latino ( $n=2$ ), African American ( $n=7$ ), Caucasian ( $n=2$ ), and mixed descent ( $n=1$ ). Of the 13 students, 10 students indicated that they did not learn English as their first language. One of these 10 students spoke one other language before learning English while the other nine students spoke at least 2 languages before learning English.

### **Procedure**

Participants for this project were recruited through the Writing Center and through a Language Arts class at Roosevelt High School. Because some of the participants were under 18,

they were given parental consent forms to take to their parents in order to obtain official consent for their participation. The parental consent forms provided information about what the students would be doing and what the purpose of the study was, as well as a statement regarding voluntarism and confidentiality. In addition to the parental consent, participants were given assent forms that outlined the general purpose of the study, the process, that participation was voluntary, and that answers were confidential.

After consent and assent was acquired, data collection occurred in the Writing Center and the separate Language Arts classes. The participants completed a background information questionnaire as well as the Academic Self-Efficacy Scale. The data were then analyzed statistically to examine relationships between attendance at the Writing Center and the items of the modified Academic Self-Efficacy Scale. Additionally, statistical tests were conducted to analyze the items of the Background Information Questionnaire and their relationships to other items. Specifically, Spearman correlations were used to analyze potential correlations between Writing Center attendance and English as a first language status, sex, and grade. A Spearman correlation was also used to evaluate a potential relationship between age and number of languages spoken. Wilcoxon signed-rank tests were used to explore potential increases in writing self-efficacy.

The entirety of this project was approved before it was implemented by the Institutional Review Board (IRB) at the University of Portland.

## **Measures**

**Background Information Questionnaire.** The current study used an original background information questionnaire (see the appendix) that provided data on age, sex, grade,

ethnic or racial background, if English was the student's first language, and estimated attendance at the Writing Center. As the questionnaire was created specifically for this study, no reliability or validity information currently exists.

**Academic Self-Efficacy Scale.** The Academic Self-Efficacy Scale used in the current study (see the appendix) was adapted from a modification of the Self-Efficacy subscale of the Motivated Strategies for Learning Questionnaire (MSLQ) (Chen, Hsiao, Chern, & Chen, 2014). The modified version of the subscale that was adapted in the current study focused on a specialized class, so the class title was replaced with "Language Arts class" to focus the participants on the writing domain of their academic tasks. One question on the scale, for example, asks on a scale of 1 (*strongly disagree*) to 5 (*strongly agree*) how the student felt about the statement "Compared with others in the Language Arts class, I think I am a good student." Additionally, the current study duplicated the same set of questions with changes that provided a retrospective view of writing self-efficacy levels at the beginning of the students' high school experiences. For example, the retrospective set of questions included "At the beginning of high school, I was sure I could do an excellent job on the essays and tasks assigned for the Language Arts classes." Because the current study used only one measurement date, it is essential to note that the measure of past writing self-efficacy levels looks at a perceived level of writing self-efficacy. An analysis of the validity of the Self-Efficacy subscale of the MSLQ found that Self-Efficacy had statistically significant incremental validity,  $p < .001$  (Burlison, Murphy, & Dwyer, 2009). One evaluation of the MSLQ stated that social desirability response bias could potentially affect responses to the questions, but the researchers found that response bias did not contribute to any significant variance in MSLQ results, indicating that the MSLQ is valid despite



its self-report status (Duncan & McKeachie, 2005). Duncan and McKeachie acknowledge that reliability cannot easily be measured with the MSLQ because it measures areas that are particularly affected by situations. This variation, however, does not seem to be concerning as differences in results have still fit within what would be expected in the conceptual model for the study, so the results landed within an expected range (Duncan & McKeachie). An extensive list of studies have used the MSLQ, and the Self-Efficacy subscale has been shown to be a reliable and valid measure.

### Results

Two of the students attended the Writing Center only about once a school year while the other twelve students either came to the Writing Center about once a week ( $n=5$ ) or about once a day ( $n=7$ ). A Spearman correlation found no significant relationship between Writing Center attendance and number of languages spoken ( $r_s(10)=.23, p > .05$ ). Additionally, a Spearman correlation did not find a statistically significant relationship between Writing Center attendance and if students did or did not learn English as their first language ( $r_s(11)=.21, p > .05$ ). Furthermore, the Spearman correlation found no significant relationship between Writing Center attendance and sex ( $r_s(10)=-.22, p > .05$ ) or grade ( $r_s(11)=.21, p > .05$ ). A one-tailed Spearman correlation did find a significant correlation between age and the number of languages spoken ( $r_s(11)=.71, p < .01$ ). Provided below, Table 1 provides the means and standard deviations for the Academic Self-Efficacy Scale. The data was not normally distributed, so a non-parametric Wilcoxon signed-rank test was used to compare the former Writing Self-Efficacy Scale responses to the current Writing Self-Efficacy Scale responses. The responses generally showed an increase in the perception of writing self-efficacy at the beginning of high school to the time

when the students completed the measures, but this increase was not statistically significant for any of the items as demonstrated in the Table 2 below.

Table 1

*Responses to Academic Self-Efficacy Scale*

## Achievement Comparison

<u>Former Mean</u>	<u>Former SD</u>	<u>Current Mean</u>	<u>Current SD</u>
3.92	1.24	3.92	1.00

## Understanding

<u>Former Mean</u>	<u>Former SD</u>	<u>Current Mean</u>	<u>Current SD</u>
3.42	1.00	4.17	.83

## Achievement Expectation

<u>Former Mean</u>	<u>Former SD</u>	<u>Current Mean</u>	<u>Current SD</u>
3.75	.87	4.17	1.19

## Good Student Comparison

<u>Former Mean</u>	<u>Former SD</u>	<u>Current Mean</u>	<u>Current SD</u>
3.83	.94	4.17	.94

## Task Expectations

<u>Former Mean</u>	<u>Former SD</u>	<u>Current Mean</u>	<u>Current SD</u>
3.50	1.24	3.58	1.08

## Grade Expectations

<u>Former Mean</u>	<u>Former SD</u>	<u>Current Mean</u>	<u>Current SD</u>
3.75	.97	3.83	.94

## Skill Comparison

<u>Former Mean</u>	<u>Former SD</u>	<u>Current Mean</u>	<u>Current SD</u>
3.08	1.38	3.17	1.03

## Knowledge Comparison

<u>Former Mean</u>	<u>Former SD</u>	<u>Current Mean</u>	<u>Current SD</u>
3.33	1.15	3.42	.90
<hr/>			
Learning Expectations			
<hr/>			
<u>Former Mean</u>	<u>Former SD</u>	<u>Current Mean</u>	<u>Current SD</u>
3.92	.90	4.08	.90
<hr/>			

Table 2

*Comparison of Former and Current Writing Self-Efficacy*

<u>Item</u>	<u>Z-Score</u>	<u>2 Tailed Significance</u>
Achievement Comparison	.000	1.00
Understanding	1.67	.09
Achievement Expectation	1.07	.29
Good Student Comparison	1.27	.21
Task Expectations	.368	.71
Grade Expectations	.577	.56
Skill Comparison	.431	.67
Knowledge Comparison	.276	.78
Learning Expectations	.905	.37

*Note.* Positive Z-scores indicate an increase in the item from the beginning of high school to the time of measurement. Two participants did not attend the Writing Center at least once a week, so their responses were excluded from this comparison.

**Discussion**

As expected, the results indicated that the students who used the Writing Center frequently demonstrated an increase in writing self-efficacy when compared to their perception

of what their writing self-efficacy was at the beginning of high school. The only item of the Academic Self-Efficacy Scale that did not demonstrate any increase was the achievement comparison item. The general increasing tendency of the Academic Self-Efficacy items did not, however, meet requirements for statistical significance. The items that came closest to having a statistically significant increase were the understanding, achievement expectation, and good student comparison items.

The understanding item of the Academic Self-Efficacy Scale (“I am certain I can understand the ideas taught in my Language Arts class”) came closest to having a statistically significant increase ( $Z(10)=1.67, p > .05$ ). It seems that the Writing Center might have an important relationship with understanding, meaning that using the Writing Center could help students understand the material that they learn in their Language Arts Classes. This possible relationship seems natural, for the Writing Center seek to build writing skills, and understanding acts as the natural base for all future work toward improving writing (Roosevelt Rough Writers, 2012). Thus, ensuring that students understand material takes priority in the Writing Center. Because of the focus on assisting students in understanding the material they learn in Language Arts classes, it follows that students who regularly use the Writing Center would likely understand increasing amounts of the material their teachers present to them. It is important to note that an increase in actual understanding of material in writing-based classes would be particularly important in maintaining increased levels of writing self-efficacy, for increases in self-efficacy often fall again in the absence of legitimate gains in ability (Gist & Mitchell, 1992). Therefore, if the Writing Center truly benefits students’ understanding, this item could prove to be particularly important for the writing self-efficacy of these students.

The responses to the achievement expectation item (“I expect to do very well in the Language Arts class”) also demonstrated an apparently greater increase than for the majority of the other items ( $Z(10)=1.07, p > .05$ ). This increase, although not statistically significant, could potentially indicate that these students, who regularly attend the Writing Center, feel that they can do well in their Language Arts classes as they can rely on their own abilities as well as the assistance they regularly receive from writing consultants in the Writing Center. Again, this potential relationship makes sense as the Writing Center endeavors to assist students in meeting graduation writing requirements, which also includes helping students do well in writing-based classes (“About Us”, 2012). If the Writing Center successfully improves students’ writing, it seems like a natural progression for students to believe they can do so in the future, for performance accomplishments are one of the four primary sources of self-efficacy (Arslan, 2012). Because the Writing Center often helps improve the quality of students’ writing, the increase in expectations of achievement might be an indication that these performance accomplishments act on Roosevelt students’ writing self-efficacy. Further research could potentially uncover a statistically significant relationship between Writing Center usage and achievement expectations, demonstrating that the Writing Center provides a sense of security for students in that they feel confident that they can do well in writing-based classes.

The third item that had a nearly statistically significant relationship with use of the Writing Center was the item that evaluated if the participants felt that they were good students in comparison to other students (“Compared with others in the Language Arts class, I think I am a good student”) ( $Z(10)=1.27, p > .05$ ). This item touches on the vicarious experiences source of self-efficacy, for answering the item requires the student to evaluate their own abilities with

those of other students. The vicarious experiences source of self-efficacy centers around the role that comparing one's abilities and accomplishments to those of others has on positively or negatively influencing self-efficacy (Arslan, 2012). Although different students would have varying concepts of what being a good student entails, this particular question encourages participants to evaluate how they compare to other students, which focuses their attention on the vicarious experiences source. The participants used for these analyses attend the Writing Center at least once a week with 58% of the students coming to the Writing Center daily. This frequent attendance could possibly contribute to the students' perception of themselves as good students in comparisons to peers in Language Arts classes, for the students who attend the Writing Center regularly choose to make use of a non-required resource to help them improve their abilities. This commitment to exceeding expectations for Writing Center use regularly contrasts with other students who have never been to the Writing Center. Hence, the participants have a marked difference from students who do not use the Writing Center that could potentially have an impact on writing self-efficacy. In the future, researchers could attempt to determine if this relationship is actually statistically significant.

Unexpectedly, the only statistically significant relationship found in the current study was between age and the number of languages spoken. Although this subject does not relate directly to the purpose of the current study, it does raise some interesting demographic questions. Potentially, the positive relationship between age and number of languages spoken could indicate that the older students simply had more time to learn additional languages. Alternatively, this finding could reflect a larger influx of those who did not learn English as their first language at a concentrated time. Without further research into demographic history beyond the scope of the

current study, confident explanations cannot be made about potential reasons behind this significant relationship.

Interestingly, the majority (77%) of the participants did not learn English as their first language or spoke several languages in addition to English. Potentially, the perceived but not statistically significant increase in writing self-efficacy could be attributed to the students' improvement in understanding of English as the years of high school progressed. These participants might have had difficulty fulfilling the requirements of Language Arts classes early in high school if they did not fully understand English. Thus, learning English more completely by the time of the current study could also have contributed to the increases in writing self-efficacy items. Interestingly, one study evaluating the use of a college writing center found that English as a Second Language (ESL) students sought help statistically significantly more than the students who learned English as their first language, indicating that students who have limited English proficiency may also be more likely to ask for help when facing English-related assignments (Williams & Takaku, 2011). The current study's sample included a far greater percentage (77%) of students who learned at least one language before learning English than the population of students with limited English proficiency students in the school (8.8%), which could potentially indicate that the current study supports the findings of Williams and Takaku regarding the help-seeking behavior of ESL students (Portland Public Schools, 2013). Although the proportion of students in the current study who did not learn English as a first language and who frequently use the Writing Center was larger than the population of students at Roosevelt High School with limited English proficiency, a Spearman's correlation did not find a statistically significant relationship between Writing Center attendance and if the students

learned English as a first language or not. Thus, it is premature to state conclusively that students who are not native English speakers are more likely to seek help at the Writing Center at Roosevelt High School.

The primary limitation of the current study centers around the recruitment of participants. Obtaining parent or guardian consent for the students who were under 18 proved to be extraordinarily challenging. Because students had absolute control over their decision to participate or not to participate and no reward existed for participation, motivation to cooperate by acquiring parent or guardian consent was minimal. Though the original design of the study included a control group of students who did not use the Writing Center on a regular basis (e.g., only once in a school year), only two students who fell within this group were at least 18 or brought back a parent consent form. Therefore, the study could only evaluate the difference between the participants' perception of their writing self-efficacy at the beginning of high school and their current writing self-efficacy. Furthermore, the limited timeframe of the project meant that the perception of writing self-efficacy at the beginning high school was measured retrospectively rather than at the beginning of high school. Therefore, the measure of writing self-efficacy at the beginning of the high school might not have captured the true level of writing self-efficacy at the beginning of high school. Overall, the current study suffers from several limitations that indicate that future research should be conducted.

Because the results followed the direction that supported the hypothesis at a statistically insignificant level, future research could potentially discover a significant relationship between attendance of the Writing Center and writing self-efficacy level. Future studies should focus on increasing the number of participants to determine more conclusively if a significant relationship



exists. In the recruitment process of the current study, some students complained that they did not want to complete the parent or guardian consent process as their caretakers did not speak English and would not understand the consent form. Future research should keep this factor in mind and potentially create multiple versions of the consent forms in the various languages spoken by Roosevelt High School parents and guardians in order to expand the amount of participants available for the study. Along with increasing participants, the research design of future studies should also include a control group of students who do not attend the Writing Center. The hypothesis of the current study could not be fully addressed because there were not enough participants who used the Writing Center infrequently to constitute a control group, meaning that future analysis of this hypothesis would require a control group to answer the question more completely. Additionally, a longitudinal study design would be beneficial for evaluating the effect of Writing Center attendance throughout the entirety of Roosevelt High School students' years at the school. This longitudinal study design would ideally include annual measurements of the level of writing self-efficacy to track the development of writing self-efficacy as it develops rather than asking the students to remember how they felt about writing tasks in the past. Because Roosevelt High School has one of the largest percentages (8.8%) of students who display limited English proficiency, further research could capitalize on this relatively large group of students who did not learn English as their first language to understand the writing self-efficacy of students who have limited English proficiency in addition to increasing the understanding of help-seeking behaviors of these students (Portland Public Schools, 2013). Ultimately, the priority for future research should be increasing the strength of the findings by increasing the number of participants and including a control group.

## Appendix

**Academic Self-Efficacy Scale***(modified for current perception of writing self-efficacy)*

1. Compared with other students in Language Arts classes, I expect to do well.

1 (*strongly disagree*)      2                      3                      4                      5 (*strongly agree*)

2. I am certain I can understand the ideas taught in my Language Arts class.

1 (*strongly disagree*)      2                      3                      4                      5 (*strongly agree*)

3. I expect to do very well in the Language Arts class.

1 (*strongly disagree*)      2                      3                      4                      5 (*strongly agree*)

4. Compared with others in the Language Arts class, I think I am a good student.

1 (*strongly disagree*)      2                      3                      4                      5 (*strongly agree*)

5. I am sure I can do an excellent job on the essays and tasks assigned for the Language Arts class.

1 (*strongly disagree*)      2                      3                      4                      5 (*strongly agree*)

6. I think I will receive a good grade in the Language Arts class.

1 (*strongly disagree*)      2                      3                      4                      5 (*strongly agree*)

7. My writing skills are excellent compared with those of other students in the Language Arts class.

1 (*strongly disagree*)      2                      3                      4                      5 (*strongly agree*)

8. Compared with other students in the Language Arts class, I think I know a great deal about the subject.

1 (*strongly disagree*)      2                      3                      4                      5 (*strongly agree*)

9. I know that I will be able to learn a lot from the material of the Language Arts class.

1 (*strongly disagree*)      2                      3                      4                      5 (*strongly agree*)

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**Academic Self-Efficacy Scale***(modified for retrospective perception of writing self-efficacy)*

1. At the beginning of high school, I expected to do well compared with other students in the Language Arts classes.

*1 (strongly disagree)                    2                    3                    4                    5 (strongly agree)*

2. At the beginning of high school, I was certain I could understand the ideas taught in Language Arts classes.

*1 (strongly disagree)                    2                    3                    4                    5 (strongly agree)*

3. At the beginning of high school, I expected to do very well in the Language Arts classes.

*1 (strongly disagree)                    2                    3                    4                    5 (strongly agree)*

4. Compared with others in the Language Arts classes, I thought I was a good student at the beginning of high school.

*1 (strongly disagree)                    2                    3                    4                    5 (strongly agree)*

5. At the beginning of high school, I was sure I could do an excellent job on the essays and tasks assigned for the Language Arts classes.

*1 (strongly disagree)                    2                    3                    4                    5 (strongly agree)*

6. At the beginning of high school, I thought I would receive good grades in my Language Arts classes.

*1 (strongly disagree)                    2                    3                    4                    5 (strongly agree)*

7. At the beginning of high school, my writing skills were excellent compared with those of other students in the Language Arts classes.

*1 (strongly disagree)                    2                    3                    4                    5 (strongly agree)*

8. Compared with other students in the Language Arts Classes, I thought I knew a great deal about the subject at the beginning of high school.

*1 (strongly disagree)                    2                    3                    4                    5 (strongly agree)*

9. At the beginning of high school, I knew that I would be able to learn a lot from the material of the Language Arts classes.

*1 (strongly disagree)                    2                    3                    4                    5 (strongly agree)*

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Note : The Academic self-efficacy scale was adopted from the self-efficacy subscale of the Motivated Strategies for Learning Questionnaire, which was referenced from Pintrich and De Groot's (1990) research.

**Background Information Questionnaire**

*Please circle your age and sex:*

Age: 13 14 15 16 17 18 19 Other: \_\_\_\_\_

Sex: Male Female

*Please make a check in the correct box:*

Grade:

9th (Freshman)	10th (Sophomore)	11th (Junior)	12th (Senior)

Ethnic/Racial Background:

Hispanic	African American	Asian	Native American	Pacific Islander	Caucasian	Mixed

Is English your first language?:

Yes	No

*If **no**, how many other languages do you speak? (Please circle your answer)*

**1**                      **2**                      **3**                      **4**                      **5+**

How often do you attend the Writing Center? (select the closest option)

Never	Once a School Year	Once a Semester	Once a Month	Once a Week	Once a Day

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