Fostering Student Self-Assessment Confidence and Skill

by

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Abstract

The present study was created to develop students’ confidence (self-efficacy) and skill (expertise) to self-assess their own writing. The literature suggested that the self-assessment process is designed to enable students to understand and apply quality criteria to their work (Harris & Brown, 2013). Student engagement is vital to the student’s learning at any grade level K through 12 (Handley & Williams, 2011; McMillan & Hearn 2008; Orsmond et al., 2002). Student self-assessment is directly related to intrinsic student motivation and purposeful learning (McMillan & Hearn, 2008). A class of Grade 4 and 5 students participated in an instructional self-assessment unit to improve both confidence and skill. Instructional qualitative rubrics were introduced as the format of the self-assessment. The students completed a survey regarding self-assessment confidence and skill before and after the instructional unit. As the teacher, I completed the instruction, teaching the writing process write, assess, goal set, edit and revise. The writing process was practiced three times. My hypothesis was that the students would rate their confidence and skill levels higher after the implementation of an instructional self-assessment unit. Overall, the results of the pre-and post-surveys indicated that the instructional self-assessment unit was successful. The data concluded that both skill and confidence regarding self-assessment improved. Further research and surveys are encouraged to further support the theory that confidence and skill levels regarding self-assessment can be developed through a reflective creative writing unit.

Keywords: self-assessment, rubrics, confidence, skill, writing process, goal setting
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Chapter 1: Problem to be Investigated

Purpose of the Study

The present study was created to develop students’ confidence (self-efficacy) or skill (expertise) to self-assess their own work. The BC Ministry of Education put forth a revised curriculum. The new revised curriculum placed more ownership, evaluation and direction for their learning upon the students (curriculum.gov.bc.ca). As of February 10, 2017, School District No. 68 implemented a dramatic change in reporting students’ academic ability or areas for growth. The new reporting process must contain four parts:

1) Specific curricular content taught throughout the term.
2) Authentic examples of student growth.
3) Formative feedback from the teacher.
4) Student self-assessment (Student’s Perspective). (Ministry of Education, 2016)

The fourth segment of student self-assessment caused a reaction amongst teachers. The Student’s Perspective portion of the reporting process must include two parts. The first part of the report included a personal self-assessment on their level of understanding and participation in a specific subject. The second part included a measurable goal used to guide the assessment of their academic improvement. The uncertainty that Grade 4 and 5 students currently had the confidence and skills to complete the personal assessment process School District 68 was asking of them initiated my research question. The current research and investigation aimed to improve and develop my teaching practice, as the students and myself became experts at the self-assessment process.
Justification of the Study

Throughout my career of 18 years, I have observed that many students lacked the self-efficacy (confidence) and expertise (skill) to self-assess to a level that would be valued by adults. Previously, report cards were teacher directed, with a letter grade based format. The letter grades were based on all assignments and given a numeric value throughout a term. All assigned numeric values were totaled. The commuted value was divided by the total possible marks and multiplied by 100 to create a percentage (for example 34/46 x 100 = 73.91%). The percentage was then equated to a letter grade for the curricular content taught. For example, the student with a grade 71.91% would be assigned a letter grade of ‘B’. Far too often the students did not understand the criteria behind the letter grade assigned to them.

As an educator, I implemented self-assessment practices throughout my career as a source of formative assessment. An unstructured, ‘teaching moment’ style of self-reflection was often practiced. My students were asked to give various signals to communicate their level of understanding of the material taught. The students were asked to hold their thumbs up (the student understood) or thumbs down (the student needed more help). In another example of informal student self-assessment, I asked the students to call out ‘green light/red light’, which immediately communicated their confidence in understanding a concept. The students were also asked to show one to four fingers based on a simple qualitative scale, to represent their level of understanding. One finger meant they had very little understanding and four fingers meant they were quite confident.

I occasionally had the students self-assess their written work through reflective journals in which the students set goals for the next assignment, celebrated a new concept learned, or
identified a new learning strategy that they wanted to implement. The practices described above were made at the end of lessons to informally request the students to self-assess their own understanding of the concepts taught. These unofficial self-assessment tools were never formalized and were rarely shared with parents or administration. Self-assessment was not identified to the students as a specific skill that was taught and developed to promote their learning but implemented as a teaching tool. The tool was used to communicate information to me as their teacher to immediately improve my lesson and give direction for future lessons.

Moving forward, self-assessment is designed to enable students to understand and apply quality criteria to their work as it freed them from teacher dependence (Harris & Brown, 2013). Student engagement is vital to the student’s learning at any grade level (K through 12) and undergraduate studies (Handley & Williams, 2011; McMillan & Hearn, 2008; Orsmond et al., 2002). McMillan and Hearn (2008) directly connected student self-assessment with intrinsic student motivation and purposeful learning.

‘Self-assessment’ is defined as a process during which students evaluate the quality of their work in a given domain based on explicitly defined criteria. Accurate self-assessments were found to improve the students’ academic achievement (Siegler, Shaenfield, & Elder, 2015). Self-assessment in primary and secondary schooling was found to engage and empower students (Handley & Williams, 2011; McMillan & Hearn, 2008; Orsmond et al., 2002). ‘Student self-assessment’ is defined as the ability to review and critique the quality of their own thinking and behaviour during their education, and to identify strategies improving their learning with specific skills (McMillan & Hearn, 2008). ‘Student self-assessment’ was meant to engage students fully in the learning process and encourage them to take responsibility for their own learning (Handley...
& Williams, 2011). Using ‘student self-assessment’ requires academic staff to make a shift from direct teaching to facilitating active learning through personal reflection (Orsmond, Merry, & Reiling, 2002).

‘Student self-assessment’ is most successful if it is implemented specifically for personal formative assessment (Orsmond, Merry, & Reiling, 2002). In this process, the student identified both the areas of strength and weakness in their assignments and through self-assessment, improvements were made. The students then define their learning goals within their written work (Andrade & Valtcheva, 2009).

Student self-assessment was found to engage the student to improve the learning more than a single letter grade decided by a teacher (Berger, Rugen, Woodfin, Johnston, & Grant, 2014). Letter grades are marks gathered by amalgamating all of the students’ work from the beginning of a term to the end. In contrast, Andrade, Du, and Wang’s (2008) ‘student self-assessment’ allowed the students to choose assignments they believed to represent the students’ greatest successes. The students set goals based on their peak performance (Andrade et al., 2008). The self-assessment process was found to be most successful when the educators properly supervised the students and prevented them from cheating or under/over marking (Lew, Alwis, & Schmidt, 2010).

Micheletta (2013) completed a vast review of research involving millions of students seeking the most effective and successful teaching practices. He listed hundreds of teaching practices in order of effectiveness. He created a formula identified as an effect scale (ES). An effect scale rating greater than .40 was considered as positively impactful on students’ learning. Various teaching practices that occur throughout the process of self-assessment are listed as
extremely impactful. For example, meta-cognitive practices, the process of reflecting upon your learning had an ES rating of .69. Students receiving feedback had an ES scale of .75. Formative evaluation, the whole purpose of self-assessment received an ES rating of .90. Lastly, self-reported grades and student expectations had an ES rating of 1.44. Hattie’s research supported the research question I investigated (Micheletta, 2013).

I also referred to the Aboriginal Ways of Knowing and Being pdf (bctf.ca/uploadedFiles/Public/AboriginalEducation/AboriginalWaysofKnowing.pdf) provided by the BC Teachers’ Federation. After reflecting on the aboriginal practices I intentionally embedded two philosophies into the self-assessment practices. The first aboriginal way of knowing and being I chose to embed was that learning involves developing relationships, respecting distinct cultures and honouring the perspective of others in our communities. The phrase I centered on was developing safe relationships between student and teacher where effective self-assessment could occur. The next phrase was honouring the perspective of others. I was aware there might be disagreements during the self-assessment process. I would strive to honour the perspective of the students. The second acknowledged aboriginal way of knowing and being was that the deepest learning takes place through lived experience. It requires exploring identities, learning from our mistakes, and having gratitude for our gifts. My connection to the phrase “lived experience” referred to the amount of practice the students would need to become self-assessment experts. The next phrase was “learning from our mistakes”. From a teacher’s perspective the most successful learning occurs through mistakes. The self-assessment process would identify the mistakes and allow opportunity for correction. The eight
Aboriginal Ways of Knowing and Being are excellent tools to reflect upon and consider when beginning new plans.

**Assumptions**

I identified with the assumption that students may be too inexperienced to appropriately assess their own academic level and to set appropriate goals for progress. Adults have assumed children lacked the academic skills to complete a self-assessment that would lead to a deeper knowledge and specific goal setting (Gorlewski, 2010). I was aware that adults might not value the students’ voice for assessment (Brown & Harris, 2013). I was cognizant that many students may only want their best academic self represented and would find it difficult to critically evaluate their own writing. Historically, the elementary education system has been based on letter grades structured around a teacher’s subjective perspective and criteria. The students appeared to have no personal connection to the grade they were given. Another assumption I addressed was that children’s personal self-assessment would not lead to academic progress. Self-assessment was most successful when the evaluation and goal setting was a gradual and step-by-step process completed by the student throughout a project (Andrade & Valtcheva, 2009). Experienced students often received minimal feedback about how to improve their writing when the writing assignment was completed. Andrade and Valtcheva (2009) found that Grade 3 and 4 students had the academic skills and maturity needed to successfully self-assess.

**Research Question and Hypothesis**

The following research question was explored in the present study: To what degree, if any, did the level of confidence and skill regarding self-assessment increase after the
implementation of a six-week teacher modeled self-reflection unit as reported by Grade 4 and 5 students at an elementary school Nanaimo BC? My hypothesis was that the students would rate their self-assessment confidence and skill levels higher after the implementation of an instructional self-assessment unit.

Definition of Terms

The following definitions were pertinent to the present study:
The operational definition of ‘self-assessment’ is defined as a process designed to enable students to understand and apply quality criteria to their work, freeing them from teacher dependence (Harris & Brown, 2013). The students’ self-assessment occurred when the students gathered information about and reflected on their own learning. It was the students’ own assessment that initiated their personal progress in knowledge, skills, processes, or attitudes. In this study, the self-assessment methods used were criteria-based assessment rubrics.

The operational definition of ‘confidence’ was identified as the students feeling certain with their ability to self-assess. An increased feeling of confidence was represented through the speed and accuracy of a completed self-assessment. A theoretical definition of ‘confidence’ would be a feeling of self-assurance that arrived from one’s appreciation of one’s own abilities or qualities.

The operational definition of ‘skill’ was identified as the ability to complete the self-assessment process accurately and critically. The students’ self-assessment ‘skills’ improved when they were able to identify two positive attributes and one goal to improve their writing after they referred to the criteria modeled by the teacher. The theoretical definition of ‘skill’ was the ability and the capacity acquired through deliberate, systematic and sustained effort to
smoothly and effectively carry out complex activities. The students would increase their ability to identify both strong and weak attributes within their writing. The students evaluated their own confidence and skill level using a survey. The survey ratings ranged from 0 – 10.

The operational definition of ‘goal-setting’ was defined as choosing a specific writing aspect to improve. After the students evaluate the positive and negative attributes of their personal writing it was important that they set new objectives for their future writing assignments.

**Brief Overview of Study**

The action-based research study was conducted to investigate the degree of increased confidence and skill regarding self-assessment after the implementation of an instructional self-assessment unit. An information meeting was available to inform the parents and guardians about the research question which was “To what degree, if any, did the level of confidence and skill regarding self-assessment increase after the implementation of a six-week instructional self-assessment unit as reported by Grade 4 and 5 students at an elementary school in Nanaimo BC?”

Three key points were made clear to the parents through an information letter (Appendix A). First, the self-assessment unit would be taught to all students. The second important point was the signed consent and assent forms (Appendix B and C) would be given to a third party isolationist at the office to be stored in a safe secure place. The third party would collect and store the consent and assent forms and minimize the bias between participants and non-participants. The third significant point was the purpose of the project was to improve my teaching practices.

Later, during regular instructional time all Grade 4 and 5 students in my class filled out a two-part pre-survey (see Appendix D) to report how they felt about their confidence and skill
level regarding self-assessment. The Grade 4’s and 5’s completed writing assignments and received instruction regarding self-assessment. At the end of the self-assessment instructional unit, all students completed the post-survey on confidence and skill again. After the unit was complete I gave all of the forms to the third party isolationist to ensure anonymity. The third party identified the participants and their names were transferred to numbers. The anonymized participants were the only data examined to measure and report the increased levels of confidence and skill gained after the instructional unit.
Chapter 2: Review of Research and Applicable Studies

Introduction

Within the last three years the BC Ministry of Education has made dramatic changes in the education system. British Columbia has a newly revised curriculum with new competencies and evaluation processes. When a major change happens in education with the BC curriculum in terms of assessment, there must be a change within the assessment practices within the classroom. As a result, School District 68 produced a new process of communicating student learning. The district created an information package for teachers that outlined the plans, timelines and criteria of the newly implemented assessment process (Nanaimo Ladysmith Public Schools, 2017). The reporting process was broken into two categories – ongoing communication of student learning and written summative reports. One specific criteria listed within the new process of “Communicating Student Learning” on an ongoing basis was titled Includes a Student Voice. The evaluation criteria was defined as:

Ownership of learning becomes more authentic when students use their own voice to communicate about their learning. Student voice is when the student can self-reflect and articulate what they are learning, why they are learning it, and identify where they are in the learning process (Nanaimo Ladysmith Public Schools, 2017, p. 8).

School District 68’s new report card process also included the student self-reporting of the core competencies. “It is important that students be able to identify their strengths and areas for improvement through self-reflection and self-assessment (student voice)” (Nanaimo Ladysmith Public Schools, 2017, p. 9). The core competences should be self-assessed by the students at the
end of the school year in June. The new student expectations initiated the question of students’ understanding and confidence about self-assessment and finding quick successful strategies, such as quick scale rubrics.

In this chapter, a student’s skill level and efficacy or confidence about self-assessment was reviewed through research literature. Specifically, empirical research studies about student self-assessment that focus on student writing are investigated. If students were confident and skilled at assessing their writing would they become better writers? Also I wanted to examine the assessment strategy of quick scale rubrics. Were rubrics considered a successful self-assessment strategy for Grade 4 and 5 students? Research investigating self-assessment, confidence and rubrics would influence the design of my action-based research study.

**Student Self-Assessment**

The process of student self-assessment is the polar opposite of the historical teacher summative assessment practices that have been employed for decades. The information and assessments students received from teachers determined if the students had the skills needed to succeed at school. These assessments provided information, which lead students to decide at a very young age whether their education was indeed worth investing in or being successful at (Stiggins & Chappuis, 2005). Often, students and parents believed they understood how the stand-alone grade or mark was judged. Stiggins and Chapuis from the Assessment Training Institute in Portland Oregon investigated classrooms for over a decade to find a deeper understanding of how assessment can assist all students to become confident learners (Stiggins & Chappuis, 2005). Teacher feedback has also been shown to be an effective form of assessment (Andrade & Valtcheva, 2009). However teachers rarely had enough time to share effective
feedback individually (Andrade & Valtcheva, 2009). Fortunately students themselves are a great source of personal feedback.

The definition of self-assessment has two components. Students examine and evaluate the quality of their work. The students also create a plan to improve their work between current and future performance (McMillan & Hearn, 2008). Criteria referenced self-assessment is a practice where students gather information about their own performance or progress. The students refer their work to clearly defined criteria, expectations or benchmarks and then revised the work to reflect improvements (Andrade & Valtcheva, 2009; Harris & Brown, 2013; McDonald, 2013; McMillan & Hearn, 2008). Student self-assessment should not count toward a final grade (Andrade, 2005; Harris & Brown, 2013). Self-assessment of the students as independent learners can set the direction for their learning (Andrade, 2005; Andrade & Valtcheva, 2009; Harris & Brown, 2013; McMillan & Hearn, 2008). McMillan and Hearn (2008) found that when students set goals for themselves the most learning occurred. Personal goal setting allowed teachers to offer a selection of activities to students within a predetermined set of criteria. This process allowed two effects to occur, individualized instruction and a sense of student autonomy (McMillan & Hearn, 2008). With repetition the students may see the self-assessment as a source of insight and support instead of a process of rewards and punishments (Andrade, 2005; Harris & Brown, 2013).

Harris and Brown (2013) studied three classrooms in New Zealand to research student perceptions of self-assessment. The results reflected that both teachers and students needed to be trained correctly to use self-assessment for learning purposes (Harris & Brown, 2013). When correctly taught and practiced student self-assessment can lead to intrinsic motivation, consistent
goal setting and deeper richer learning (McMillan & Hearn, 2008; Stiggins & Chappuis, 2005). The teacher is now a facilitator for learning and not the dictator of grades within the classroom.

The revised BC curriculum incorporates “Assessment for Learning”. Assessment for learning is the process of seeking and interpreting evidence for use by learners and their teachers to decide where the learners are in their learning, where they need to go and how best to get there (Assessment Reform Group, 2002; McMillan & Hearn, 2008). Assessment for learning is also identified as formative assessment. The Assessment for Learning movement encouraged teachers to use the information gathered from all assessments to guide and improve their future teaching practices (Harris & Brown, 2013).

Harris and Brown (2013) completed three case studies in Australia researching student-led assessment practices and if they positively affect student achievement. Harris and Brown (2013) found student self-assessment to be beneficial for several reasons. The self-assessment process engaged and empowered students, developed self-regulation, and improved communication (Andrade, 2010; Andrade & Valtcheva, 2009; Harris & Brown, 2013; McDonald, 2013). Most importantly self-assessment created a better understanding of the criteria used to evaluate students’ assignments (Andrade, 2010; Andrade & Valtcheva, 2009; Harris & Brown, 2013; McDonald, 2013). If students have a deeper understanding of the criteria and educational goals the teacher used to teach and assess their work there is a higher possibility for the students to produce better quality work (Harris & Brown, 2013; Stiggins & Chappuis, 2005). All three of Harris and Brown’s (2013) case studies found that students needed to be an active participant in the assessment process, and feel like they have influence over the next concepts to be taught (McDonald, 2013). Student involvement can include collecting examples of their
accomplishments, recording their progress and setting future goals (Stiggins & Chappuis, 2005). Under the influence of Harris and Brown’s (2013) case studies I ensured the students understood that both students and the teacher were equal participants in the self-assessment practice.

Two research teams McMillan and Hearn (2008) and Andrade and Valtcheva (2009) defined successful self-assessment as a three-part repeated cycle. One part was self-monitoring, when a student chooses one skill to observe and develop. The next step in the process was self-judgment to recognize if there was development towards the desired quality of work based on pre-set standards and criteria. As this step was refined, students are more likely to attempt challenging assignments, have confidence and take more responsibility of their learning. The third phase was to choose the next learning goal to improve upon. The students refer to the pre-set criteria to see how the assignment can be improved. As the students practiced the three steps the more they would improve and the more independent they would become at each phase (McMillan & Hearn, 2008). The same steps were followed through each phase of my research study.

Betty McDonald (2013), a professor from the University of Trinidad, completed a study researching the effects of formal self-assessment training on 256 high school students. The results were gathered through informal semi-structured interviews from 85% of the participants. The self-assessment process was presented to the high school students in a simple step-by-step format (McDonald, 2013). After the training was complete the students reported the training was useful to them. The students believed the programme allowed them to be self-determined, inspired, introspective, methodical and critical (McDonald, 2013). The training occurred at the beginning of the school year, which allowed substantial time for learning, practicing and
reinforcing the new method of self-assessment. McDonald (2013) concluded that self-assessment supported both teachers and students as the process transferred successfully to all subjects.

Similar to the previous studies the current study taught the self-assessment instructional unit in a step-by-step process. Similar to McMillan and Hearn (2008) I broke the instructional unit into phases. I scheduled time for the students to participate in the process and offered three more opportunities to practice the new method. I hoped the student would become more self-determined, inspired, introspective, methodical and critical as the students stated in McDonald’s (2013) study.

**Student Self-Assessment to Improve Student Writing**

Andrade and Boulay (2003) worked with groups of teachers in San Diego to create a definitive plan for self-assessment. Andrade’s study had many similarities to my study on students’ perceptions regarding self-assessment. The self-assessment process followed the process of students using an instructional rubric to take a sincere, critical assessment of their personal work. The study included 7th and 8th graders who wrote two essays. With guidance, students referenced instructional rubrics to assess their own writing. The students were given green markers and were asked to mark the criteria within the rubric that matched the information in their writing. The students quickly realized the information in their head was not necessarily written on the paper. It was found that the self-assessment process resulted in positive improvements and revisions on the majority of the students’ writing (Andrade & Delamater, 1999; Andrade & Valtcheva, 2009).
Orsmond, Merry, and Reiling (2002) completed a study asking first year biology students to complete a poster assignment. Orsmond et al. (2002) investigated the use of self-assessment as personal learning and to provide formative feedback. Orsmond et al. (2002) gathered information about the assessment process from questionnaires. The students filled out questionnaires to summarize the usefulness and success of the self-assessment process. Orsmond et al.’s findings indicated that with the use of self-assessment the first-year biology students demonstrated an increased understanding of both the assessment criteria and subject content. The self-assessment process appeared to assist the students to attain higher academic quality and to develop a deeper understanding of the curriculum. Orsmond et al. (2002) found that the use of self-assessment created a focus for informative feedback to the students. The final outcome of Orsmond et al.’s findings was that peer assessments were far more objective than self-assessments. Orsmond et al. stated this was because peers were able to assess in isolation of the process and the evaluation was less personal.

The current research followed a similar format of Andrade and Delamater (1999) and Andrade and Valtcheva’s (2009) research. The results of my study and their studies were comparable as they both examined improvements in writing. However writing skills were not the intent of my research question or theirs. Osmond et al.’s questionnaires were similar to the survey process I used to gather data. Their research results of increased understanding of self-assessment supported the outcomes I anticipated for my students.

**Confidence or Self-Efficacy regarding Self-Assessment**

Bandura (1997) described self-efficacy as a person’s belief in his or her capabilities to achieve a specific goal. For the purpose of the current study the term self-efficacy is considered
to be synonymous with students’ confidence. Self-efficacy is an important factor in a student’s ability to learn (Bandura, 1997). Pajares (2000) stated that self-efficacy was not only about students’ skills and ability but what the students believe their skills and ability to be. As students learned new concepts and the achievements were self-identified, the students’ self-concept showed an immediate positive shift (Stiggins & Chappuis, 2005). A cycle can be created achievement, then confidence and then achievement; therefore success must come before confidence (Stiggins & Chappuis, 2005).

When self-assessment was taught by step-by-step instruction and was highly practiced it resulted in greater confidence and motivation (McMillan & Hearn, 2008). Student commitment to an activity was conditional to the students’ self-efficacy beliefs. Self-efficacy consisted of students predicting what they are capable of and the likelihood of completion. The process happened over time. As the gap between predicted success and actual success shrinks, students’ self-confidence or self-efficacy increased. Students connected their achievements and failures to reasons they believed caused the outcome (McMillan & Hearn, 2008). Students with a high level of self-confidence were more likely to commit to a task and students with low self-confidence tend to give up or not complete the task (Cowen, 2010).

McMillan and Hearn’s (2008) study found that successful student self-assessment should evolve into positive self-efficacy. Student self-assessment allows students to understand when they are learning. The self-assessment process communicates to the students the amount of effort and commitment needed for success (McMillan & Hearn, 2008). The ultimate goal was for students to attempt and succeed at slightly difficult or challenging tasks with success. The most important factor was that the students attributed their success to effort and hard work.
Student self-efficacy develops when students make internal celebrations of their successes and not to rely on external grades or outward praise (McMillan & Hearn, 2008).

Andrade, Wang, Du, and Akawi (2009) researched the relationship between self-efficacy and self-assessment rubrics. Andrade et al.’s (2009) study was also similar to the present study. The 268 participants within the study were Grade 3 and Grade 4 students. The study investigated whether using a rubric to self-assess draft writing samples would result in higher self-efficacy results. Andrade et al. (2009) used an adapted Writing Self-Efficacy Scale to measure the students’ self-efficacy. Andrade et al. (2009) predicted the students’ self-efficacy would increase after using the rubrics for self-assessment. When the results were averaged they reflected an increase in self-efficacy as the students progressed through the self-assessment writing process.

Andrade et al. (2009) referred to two main confidence variables. The first variable was the feeling of mastering an assignment possibly increased the students’ self-efficacy not necessarily the process of self-assessment. The second variable was gender specific. Girls were often more critical on themselves than boys. Therefore, the girls’ feedback may not have reflected the same level of growth. The boys’ self-efficacy survey results increased simply because they were less critical on themselves than the girls.

Andrade et al.’s (2009) study highly influenced the present study. It was detected that there were many connections. The similarities included the participants were close to the same grade level and therefore the same developmental level for understanding the concept of self-assessment. Also the study used writing as the format to teach the self-assessment process. However in the primary stages of developing the research question the original area of inquiry
was the skill of self-assessment. After reading Andrade et al.’s (2009) study, the significance of the students’ confidence regarding self-assessment was clearly identified. Therefore confidence was incorporated into the research question expanding the depth of the research.

A study completed by Lew, Alwis and Schmidt (2010) researched confidence from different perspectives. They presented a questionnaire to 936 first year university students inquiring about the students’ beliefs about the effects of student self-assessment and if student self-assessment improves their learning. The response to the survey questions divided the students into two groups those who believed self-assessment was advantageous and those who did not. The students were given approximately 80 self-assessments to identify each their learning styles. The students presented very weak self-assessment abilities. The overall result challenged the findings of the other researchers. Lew et al.’s (2010) study did not show a direct connection between the confidence of the effectiveness of self-assessment and the ability to complete their self-assessments correctly. They stated however a large limitation to their study was the students’ lack of self-assessment skills. The students had not received any instruction on the self-assessment process (Lew et al., 2010).

There were a few variables to be aware of regarding confidence. Students implemented accurate self-assessment skills when they were confident of the instructions. The instructions needed to include three parts - what specifically was being assessed, the process of assessment and also the purpose of the assessment (Harris & Brown, 2013). A safe relationship between the student and the teacher ensured there was no bias in the outcome of the self-assessment (Harris & Brown, 2013; Stiggins & Chappuis, 2005). The goal was for students and teachers to create and maintain a relationship as partners in their education (McDonald, 2013). When asked,
students were concerned about the validity of the self-evaluation process because of dishonesty, errors and lack of assessment guidance (Harris & Brown, 2013). Therefore the teacher continued to have the greatest impact on the success of the self-assessment process. The teacher needed to invest the time and in-depth instruction to ensure the students felt confident and adequately prepared to accurately self-assess their assignments (Harris & Brown, 2013; Stiggins & Chappuis, 2005).

In order to create a safe environment where authentic unbiased self-assessment could occur the current study ensured the instructions were specific and clearly informed the students of the expectations (Harris & Brown, 2013). Serious discussions occurred between the students and myself, the instructor about the purpose of self-assessment. The students appeared to be relieved once they realized no other adults (parents or guardians) would be informed of the assessments. Once the students understood we were all partners on a quest to improve their learning the students appeared to authentically assess their writing.

Harris and Brown (2013) and Stiggins and Chappuis (2005) also influenced the participants chosen for the study. After reading the two articles it was realized that in order for the surveys to have increased results the participants must have a safe and well-established relationship with the instructor. If the instructor had the greatest influence, based on time investment and availability for instruction, the participants must be from the class I am currently instructing. A six-week time frame was not enough time to create an authentic relationship between instructor and students outside of my current class.

Brown and Harris (2013) also question the validity of using student self-assessment to communicate the students’ progress to the parents and school officials. Student self-assessment
should not count toward a final grade (Andrade, 2005). Students tended to over estimate their self-evaluations when they counted toward summative grades (Andrade & Valtcheva, 2009). Throughout the current study as each lesson for the instructional unit was delivered to the students the definition of self-efficacy was present. Pajares (2000) stated that self-efficacy was not only about students’ skills and ability but what the students believe their skills and ability to be. Two studies influenced the choice to implement an instructional unit in the current study. One was Lew et al.’s (2010) study where the students lacked skill due to minimal instruction, which resulted in low confidence scores. The second was Andrade and Valtcheva’s (2009) where a great deal of time was invested instructing the students, which resulted in higher confidence scores. The instructional unit was broken into step-by-step detailed phases to ensure understanding of the self-assessment process. The goal was to increase both confidence and skill survey results.

Also to increase student’s confidence the lessons were short with a clear learning intent. The short lessons were meant to lead to an immediate feeling of success. The feeling of success should lead to increased student confidence (McMillan & Hearn, 2008). A safe student – teacher relationship was imperative to the success of building the students’ confidence. Therefore the students within the researcher’s class were the potential participants. The discussions dismissed marks and grades and confirmed all self-assessments would remain in the class. Throughout the research project, as both the students’ skill and confidence developed I predicted the students would have more intrinsic celebrations of their learning. As students took more ownership of their improved writing skills, their celebrations would no longer be based on the extrinsic marks and grades issued by the teacher.
Rubrics for Self-Assessment

Rubrics with clear criteria can be successful tools for self-assessment. Andrade and Valtcheva (2009) from the University of Education at Albany wrote an informative article comparing learning achievement and self-assessment. Andrade completed extensive research about the successes and drawbacks when using rubrics for student self-assessment. Rubrics have three main uses. Rubrics are simple, successful and immediate methods of communication to convey specific expectations for an assignment. They can also provide redirection as an assignment progressed. Lastly they can assign a final mark for a completed assignment (Andrade, 2005; Andrade, Wang, Du, & Akawi, 2009; De La Paz, 2009).

An assessment rubric is a one-or-two-page document that describes varying levels of quality from excellent to poor (Andrade, 2000). Students needed to see both the errors often made and samples of excellence (Andrade & Valtcheva, 2009). Rubrics are usually created for a specific project or assignment.

All complete instructional rubrics must include two parts. The first part was a list of detailed criteria or important factors specific to the assignment or project. The second part was three to four graduations of quality. Each graduation needed descriptions of excellence, medium and weak student work (Andrade, 2000; Andrade, 2005). Therefore, Andrade rarely gave the graduations labels or titles. Throughout her experience, successful labels and titles are difficult to create. However every student learned quickly the higher or preferred qualities of the rubric the students wanted to strive for.

A rubric was best used for instructional purposes (Andrade, 2000; De La Paz, 2009). Rubrics can be used to clarify the teacher’s learning goals and helped design future instruction
Andrade (2000) stated very clearly that there were two purposes for rubrics. The first purpose was to give students informative feedback of their writing in progress (Andrade, 2005). Rubrics were a quick and effective process to give immediate feedback to students. Feedback can be one of the most successful strategies to improve learning (Andrade, 2005; Micheletta, 2013). The second purpose was to give students detailed evaluations of their finished product (Andrade, 2000; Andrade, 2005).

Andrade (2000) described clearly and concisely why rubrics were a popular assessment tool for teachers. Instructional rubrics were simple to implement and explain to all stakeholders. Students, teachers and parents appreciated that they were short and concise filled with clear specific information. Rubrics made teachers’ expectations for an activity very clear (Andrade, 2000; De La Paz, 2009). The criteria and standards were no longer secretive but out in the open and shared to all stakeholders – students, teachers and parents. Teachers often expected the students to inadvertently know how to complete a project to the level of excellence. However, an instructional rubric allowed the teacher to communicate the specific qualities and factors needed to exude excellence. Also an instructional rubric provided the students with informative feedback about their strengths and identified the areas in need of improvement. A well-written rubric graduated from common errors up to areas of excellence. Andrade believed this formative feedback would be much more valuable information from the teacher than a summative letter grade or percentage (Andrade, 2000).

In 1996 Andrade investigated the effects of rubrics and self-assessment on learning with a group of 7th graders (Andrade, 2000). The students were given a classification task. Andrade (1996) gave half of the group an instructional rubric and throughout the assignment invited the
students to refer to the rubric for direction. The rest of the 7th graders were given the same assignment but without rubrics. At the end of the unit all of the students were given a quiz to assess understanding. The students whose lesson had an instructional rubric scored higher on the quiz and clearly had learned more content. At the end of study Andrade determined that using a rubric for self-assessment was directly related to the increase of content learning as it forced the students to acknowledge the qualitative criteria of project (Andrade, 2000).

Andrade (2001) also completed a study with eighth-grade students who used rubrics to self-assess their own writing skills. One group of 8th graders was given an instructional rubric of criteria; the other group was not. Andrade found the writing did improve. However the questionnaires filled out by the students at the end of the study revealed the students focused on the criteria as a source of evaluation and not necessarily for progress or goal setting (Andrade, 2001). Similar to the present study, the research focused on the students ratings of their confidence and skill level regarding self-assessment. The students also completed a set of lessons self-assessing their writing.

Andrade stated in several studies that a great deal of time and attention needed to be invested in the process of assessing the writing. The concept of time was similar to the current study, as the original lessons needed substantially more time than originally predicted. The students needed more time to understand and successfully complete the self-assessment activity. Including the students in the creation of the criteria for the rubrics was pivotal to the success of using rubrics for self-assessment (Andrade, 2001). Unfortunately, in the present study the students did not participate in the creation of their writing assessment. The primary reason was the ethics and school board application to complete the research needed the assessment tool well
before the students could create it. However for research purposes I did edit the adult oriented BC Ministry Standards quick scale rubric to a student-friendly writing assessment rubric.

The rubric in the current study was designed using the detailed instructions about how to create an effective instructional rubric (Andrade, 2000). Instructional rubrics took time to be created and were most effective when created with the students. Any discussion that occurred with students about the qualities of superb assignments and weak assignments could be powerfully educational (Andrade, 2000). In Andrade’s (2000) study, the teacher and students reviewed several samples of a project. The teacher and students needed to decide exactly what qualities separated the ‘good’ projects from the ‘weak’ ones (Andrade, 2000). As the qualities were chosen, the students created a list of criteria for the specific that individual project. After a long list of criteria was created and discussed, the students chose the criteria that should be evaluated for the project. The last step was to define the levels of quality for each criterion. One suggestion was to use ‘I’ statements that clearly state success at each level. Next, the teacher created a draft rubric. When an instructional rubric is created it should be a live fluid document that can be changed to meet the needs of the assigned project (Andrade, 2000). Andrade’s (2000) specific instructions were followed to create the rubric for the current action-based research.

Teachers also need to be aware of drawbacks of rubrics. Instructional rubrics may limit the teacher’s judgments and may have a negative impact on the learning process (Jeong, 2015). The teacher may only assess the criteria identified in the rubric and lose sight of the other quality material presented by the student (Jeong, 2015). Students often get focused on only presenting information listed in the rubric. The students may believe if the criterion was not in the rubric it
was not worth adding to the assignment (Wolf & Stevens, 2007). Students need instruction and practice to develop the skill of self-assessment using a rubric (Andrade, 2005; Turley & Gallagher, 2008; Wilson, 2007). Teachers need to allow and schedule time to develop the self-assessment process. There is also concern about the vague or unclear language that may be within an instructional rubric (Turley & Gallagher, 2008). The unclear language allows the assessment to be open for different interpretations by different assessors (Andrade, 2005; Knoch, 2009; Weigle, 2002).

In order to effectively use instructional rubrics teachers need to have instruction and training (Turley & Gallagher, 2008; Wilson, 2007). In order for rubrics to develop learning they need to clearly state the criteria needed for proficiency and not just percentages or grades. The instruction and training needs to include both teachers as facilitators and students as self-assessors (Andrade, 2005). Instructional rubrics do not replace quality instruction. Students continue to need exemplars, quality feedback and opportunities to seek support from the teacher (Andrade, 2005).

Jeong (2015) completed a study asking 40 teachers to assess a piece of writing. The teachers were asked to assess the piece of writing without a rubric and then assess the same piece of writing again this time referring to a rubric. The study concluded that teachers focused primarily on conventions without a rubric (Jeong, 2015; Kohn, 2006). When the teachers used a rubric the writing scored higher. The two contributing factors were the specific criteria language and the scale descriptors within the rubric. The research also showed the more training and experience the teacher had regarding assessing with rubrics the more accurate the writing assessment (Jeong, 2015).
In summary, rubrics can be quick, simple and effective assessment tools for both teachers and students. When the specific, attainable and detailed criteria are listed in each section of the rubric students can set realistic goals. Based on the student set goals the next concepts to be taught become obvious. Rubrics allow the expectations of the assignment to be available to all stakeholders – students, parents and educational assistants. When teachers allow students to create the criteria necessary at each qualitative level it allows the students to take ownership of their assessment. Lastly both teacher and student training are needed to ensure rubrics are used effectively.

Originally, rubrics were chosen as an assessment tool because the BC Ministry standards for all subjects are in the form of rubrics. Over my career, I had never received any training on how to effectively assess with rubrics. After reading several empirical studies for the current study I learned to always allow for time and a student voice to effectively use rubrics. Also rubrics are a formative assessment to give direction for future instruction.

**Conclusion**

Instruction and criteria based assessment can be interwoven to create an environment for successful learning. Self-assessment can be implemented for short-term projects or embedded throughout the year for all subjects. The following four components ensure the greatest success (Andrade & Valtcheva, 2009).

- Be sure the students have specific, clear and student-friendly criteria to assess with.

Therefore I adapted the BC Ministry Standards rubric to student friendly language using vocabulary commonly used in our classroom.
• Purposefully instruct the process of self-assessment to build confidence. Therefore, in the early lessons when we were assessing as a group the process was modelled to the students with lots of examples. Also when they predicted a correct qualitative level and could defend it the students’ example was used as a successful sample.

• Openly give the students positive and formative comments on their self-assessment. Consequently during the one-to-one conferences with each student the current writing goal was discussed and direction was given if needed.

• Assist the students as they set their new goals from the information attained from the self-assessment to build both skill and confidence. Goal setting was also reviewed during the one-to-one conferences, it was important that the student felt they personally selected the writing goal.

Lastly, as mentioned previously, allow substantial time for revisions and improvements after the self-assessment process has been completed. Consequently, in the current study self-assessment is best used for instructional purposes and not towards a grade.
Chapter 3: Procedures and Methods

Description of the Research Design

The current action research project examined to what degree, if any, the level of confidence and skill regarding self-assessment increased after the implementation of a six-week teacher modeled self-assessment unit, as reported by Grade 4 and Grade 5 students. The overall purpose of the project was to improve my teaching practice.

The instruments for the research were two paper-based surveys. The survey questions asked students to evaluate their confidence and skill level, with regard to self-assessment. The surveys were completed both before and after a teacher modeled self-assessment unit was taught. The survey-rating gauge was a visual analog scale (VAS) for measurement. The VAS was treated as a non-numeric instrument that attempted to numerate an attitude that was believed to range across a continuum of values that could not easily be measured (Gould, 2001).

The surveys were conducted in an effort to measure each of the students’ confidence level and skill level regarding self-assessment. The pre- and post-scores were compared to measure the improvement score. The improvement score was the increased (or decreased) level of confidence and skill due to the successful treatment of the teacher-modeled instructional self-assessment unit.

On November 2, 2017, twenty-one students within my class were introduced to the project. I used a script designed to introduce the project and described the process to the class. The script was designed to minimize the bias (Appendix E). After the script was read, the students were given a collection of notices to take home. The package included an invitation to a parent information night (Appendix F), a letter of description of the research project, a consent
form for the parents to sign, an assent form for the students to sign and an envelope. The envelope was for the signed consent and assent forms to be placed in and then taken to the third party isolationist.

I requested permission from the school’s administrator to complete the research project. After permission was granted, I proposed to hold an evening parent/guardian information meeting in the multi-purpose room. The meeting was organized for Tuesday November 7th from 6:00 pm to 7:00 pm. I remained at the school from 5:30 pm until 7:00pm on the scheduled meeting night. I had a script prepared to be sure the parents were ethically informed of the details of the research project and the anonymity of the participants. However, no parents or guardians attended the event.

I had to rely on the information package sent home with the students. I hoped the package informed the parents and guardians with enough details to allow their children to participate in the action-based research project. The package described in detail the purpose of the research was to improve my teaching practice. Specifically, the information letter described the participant expectations for the research project. The process of anonymity was described in the information letter in detail. The parents/guardians were asked to read and sign the consent form. The students were asked to read the information letter with their parents/guardians and sign the assent form. By signing the consent and assent forms both parties (the adults and students) acknowledged that the participant understood the research process, had permission to complete the surveys and have their data analyzed for the research project.

Both consent and the assent forms were to be placed in a sealed envelope. The envelope was to be taken to the elementary school’s office and given to the third party isolationist. The
third party isolationist was the elementary school’s secretary. She planned to keep the sealed envelopes in a labeled manila envelope and locked in a secure location at the office. I, as the researcher, would not be informed in any way who was participating and who was not. The message was repeated several times that the students could join or be removed from the study at any time. The end date of the project was December 12, 2018. Also, the parents were invited to ask questions and clarify any information at anytime throughout the study.

The information package clearly described both the survey process and the instructional unit portion of the research project in detail. To begin the study all students completed a survey, personally rating their own level of confidence and skill regarding self-assessment through the process personal writing. In order to self-assess, the students were asked to use an adapted student friendly BC Performance Standards writing rubric. I created an adapted student friendly writing standard rubric (Appendix G). The writing rubric mirrored the BC Ministry Performance Standards (Appendix H). All students referred to the writing standard rubric to choose a specific writing aspect to target when they wrote their next revised draft. A similar writing process was practiced three times – write, assess, goal set, edit and revise. After the instructional self-assessment unit was completed, the students completed the post-survey rating their confidence and skill level again.

The pre- and post-survey scores were compared, to measure the increased (or decreased) rating, to create an improvement score. After the unit was completed only the students with signed consent and assent forms had their data analyzed and quantified for the current research study.
Description of Participants

The potential participants were a sample of convenience, as they were comprised of students I taught. The potential participants consisted of Grade 4 and Grade 5 students attending an elementary school in Nanaimo, B.C. The elementary school had over 320 full time students. The Grade 4 and Grade 5 class of 2017/2018 had 21 students, 11 identified female students and 10 identified male students. Three Grade 5 students had been members of my Grade 4 class the previous year. Approximately seven students were of indigenous ancestry and two students were international students. Three students had individual education plans with specific goals with adaptations to ensure academic success. From this population seven anonymous students returned both the consent and assent forms to the third party isolationist and allowed their surveys to be used for the research project.

The Principal of the elementary school, identified many of the potential participants as vulnerable. The possible vulnerability was due to the following factors: poverty, inconsistent attendance, single parent families, specific learning needs or concerns based on behaviour, emotional or cognitive needs (xxxx, personal communication, September 7, 2017).

At the time of the current study, I had been a teacher at the current school for six years. The sampling criteria for the study required that the participants: 1) be enrolled in Grade 4 or Grade 5 at the elementary school and enrolled in my class; 2) had a signed consent form from their parents; 3) signed an assent form themselves 4) were willing to have the survey data analyzed; and 5) were aware that participation in the study was completely optional and they could withdraw at anytime during the study.
Description of Instrumentation and Measurement Procedures

All Grade 4 and 5 students registered in my class of 2017/2018 were given a survey to self-report their confidence and skill level regarding self-assessment. The surveys would be completed twice, before and after an instructional teacher-modeled self-assessment unit was concluded. The instrumentation for measurement was a visual analog scale (VAS) in the form of a survey.

The survey was a hardcopy sheet of paper with two simple and clear questions on it. The first survey question inquired, “How confident do you feel when I ask you to assess your own writing?” Underneath the question was a ten-centimeter line. The words “not confident” were under the line on the left hand side and ‘very confident’ was on the right hand side and also under the line. On the VAS line a 0 printed on the left end of the line with 10 printed on the right end line.

The second survey question inquired, “How good are you at assessing your own work?” In the same format as the first survey question, there was a ten-centimeter line drawn with the words ‘not good’ at the left-hand side and ‘very good’ on the right end of the line. As described for the first question, the VAS line had a 0 was on the left end of the line with 10 printed on the right end line again.

The Grade 4 and 5 students chose a location on the line that best represented their confidence and skill level. It was explained before each question that the rating range was from 0 to 10. The students marked a black dot on the survey line with a permanent marker. The score was measured from the left-hand anchor point of zero to the student’s mark on the right end of
the line. The measurement was made to the nearest tenth of a centimeter (for example 3.2 (See Appendix I for a sample).

The pre- and post-survey measurements were compared to identify if the students’ self-perception improved. Each participant’s ‘pre-survey score’ was subtracted from ‘post-survey score’ and the differences were calculated and compared. The changes in survey results were identified as the improvement scores.

**Description of Procedures**

**Research preparation.** In the role of researcher, I communicated with the elementary school’s administrator and booked the multipurpose room to have a parents information meeting. Unfortunately no stakeholders attended the information meeting. An information package, including an information letter, consent forms and assent forms, was sent home to all 21 students in the 2017/2018 class of Grade 4 and 5 students. The letter included the research question, outlined the process that was planned for the investigation, as well as detailed the information regarding informed consent. The letter also described the lesson plans for the six-week self-assessment unit. The letter informed that the unit would be taught to the whole class, regardless of participation in the research project. Lastly, the letter assured the parents/guardians that the instructional unit was a part of the Grade 5 BC Curriculum (curriculum.gov.bc.ca). All stakeholders were informed that participation was completely optional. It was clearly communicated there would not be any negative or positive in-class consequences for any decision, as I did not have knowledge of who were participants and who were not. The names of the students that had a signed consent and assent form were transferred to numbers. The transfer was in random order by a third party isolationist. Any data used in the research was identified as
numbers only. All signed forms were collected by a third party isolationist, kept in a secure location and were unseen until the data was analyzed after the unit was completed. The signed documents were a record that the parents/guardians understood that the child’s surveys were to be used and analyzed to complete an action research project for my Masters of Educational Leadership.

**Pre-survey research procedure.** All students were informed they would be completing a survey where they would rate their own confidence and skill level regarding self-assessing their own writing. The purpose of the pre-survey was to improve my teaching practice through reviewing how the students believed their skill-level to be. It was explained clearly that only data from the students who volunteered and had signed forms would be used for the research project. The Grade 4 and 5 students were given a paper copy of the survey. The first survey question regarding confidence was read out loud to the students. The students were instructed to place a distinct black dot along the line that best matched their level of confidence. As the researcher, I modeled placing a black dot on a replicated VAS line on the whiteboard.

I clarified the expectations and asked the students if there were any questions. I clarified the survey was about assessing and referred to an assessment rubric poster in the classroom. The rubric defined the four qualitative levels used for report cards for School District 68, “beginning, developing, applying and extending.” The black permanent markers were distributed. The students were invited to complete the first survey question. I walked throughout the class and supervised the students as I read the first question out loud. The question was read three times to be sure all of the students had finished the rating process. The students were asked to place the marker on the table after they completed the first survey question.
The second survey question regarding skill was read out loud to the students. They were instructed to place a distinct black dot along the VAS line that best matched their skill level. I clarified the instructions again and asked if there were any questions. The students placed a black dot on the VAS line at the location of their choice between 0 and 10.

The initial surveys were collected and stored in a locked filing cabinet until the instructional unit was completed. After the post-survey was completed the surveys were transferred to the third party isolationist. The third party isolationist returned the anonymized numbered surveys of those who had signed consent and assent forms.

**Teacher-modeled self-assessment unit - Phase 1: “Me” Lesson 1.** The treatment designed to improve the survey scores was a teacher-modeled self-assessment unit. The unit was created using the BC Ministry Performance Standards on Personal and Impromptu Writing. The first portion of the unit was teacher lead and modeled. Student success was eminent as the process was adult directed and completed as a group. The teacher, an EA and two pre-service teachers were available for student observation and assistance.

In the first lesson, the operational definition of ‘self-assessment’ was defined as a process of reviewing the attributes of good writing, reflecting on their own writing and setting a goal to improve their writing. The self-assessment process was introduced as write, assess, goal set, edit and revise. I presented the students with a sample of writing created by a student of the same developmental level. All students saw the writing sample as it was placed on the large classroom “Smartboard” computer. The writing sample was read orally to the students. The students were shown the writing assessment rubric from the B.C. Ministry Performance Standards. The B.C. Ministry Performance Standards contained four main attributes of writing – meaning, style, form
and conventions. The students were asked if they understood the criteria and the response was a clear negative answer.

A copy of a revised writing assessment was distributed to the students. I revised the Grade 5 BC Ministry Performance Standards into a student friendly rubric. The vocabulary was simplified to age-appropriate language. The qualitative levels were changed to the vocabulary used for SD68 report cards – beginning, developing, applying and extending. Lastly the font was changed to comic sans which is a common font for elementary students.

Coloured highlighters were distributed to the students. The students and myself, as the educator discussed the first attribute Meaning of the writing assessment rubric. After we underlined some portions of the sample text it was decided as a group the qualitative level that best represented the attribute of Meaning was ‘developing’.

The students were invited to discuss the next attribute of Style in small table groups and decide which qualitative level represented the writing sample. The students discussed and assessed the writing sample slowly and with many questions. I walked throughout the classroom and purposefully sat with each group. I participated and modeled the discussion process with each group. After a few minutes, the groups checked in with the larger class to share the groups’ thoughts about the qualitative level that should be highlighted.

The next attribute category to review was form. The same process was followed. In their table groups, the students were asked to discuss which qualitative level best represented the writing sample. One group of students was surprised that the rubric could be highlighted in three different qualitative levels when assessing different attributes. The topic of assessing each
attribute individually was critically discussed as a class. The groups discussed each attribute’s criteria seeking the best qualitative match.

The fourth attribute of *conventions* was discussed in small groups again. I walked around the classroom and listened to the discussions. The students were stating opinions about each criteria and the qualitative level that matched and did not need an adult to guide the conversation. When the whole class was asked what qualitative levels were chosen for each criteria the group was correct.

At the next writing lesson, the same writing sample was placed on the “Smartboard” computer for the entire class to view. The highlighted writing assessment rubrics were returned to the students from the previous lesson. I instructed that the next step was to create a goal for our imaginary student. The first few suggested goals that were focused on conventions. I asked the students to dig deeper and review the other attributes. I read the qualitative level above each highlighted level to the students. It was then decided the goal would be *to provide at least one example for each idea*. The goal was printed in large capital letters on the white board for easy referral.

The class discussed the possible supporting examples for each idea in the writing sample. I used a “Smartboard” marker and printed an example over the typed writing sample. The students were asked to rewrite the writing sample and include the edited changes we made as a class. Before class ended the students were asked to choose their best or favourite piece of writing from regularly used program Google Docs and ‘share’ it with me. The purpose was to print the writing samples in hardcopy for the students to assess and edit the following week. All students edited the writing sample and ‘shared’ a favorite piece of writing with me to print.
Phase 2: “We” Lesson 2. The purpose of phase two’s lessons were to transfer the assessment process from a safe third party writing sample to a personal piece of writing. The self-assessment process continued to be instructor directed. Extra time was made available throughout this phase for questions and clarifications. Two pre-service teachers were now a part of our classroom and available to support and guide the students as they learned the self-assessment process.

The Google Doc personal writing samples previously selected by the students were distributed to the students. The students were instructed to read over the selected writing sample a few times. The student-friendly writing assessment rubrics were distributed to the students. The students were each given a yellow highlighter to identify their qualitative level of assessment. The qualitative levels were beginning, developing, applying and extending. Each attribute category (Meaning, Style, Form and Conventions) was read out loud to the students one-by-one. As each category was read and discussed, the students were invited to highlight the specific criteria level that best matched their writing sample. The two pre-service teachers and myself circulated and answered any questions the students had. Many students needed the rubric criteria read and discussed with them personally for support.

The next step introduced the goal setting and editing process. Post-it notes were distributed to the students. The students were instructed that conventions were a banned attribute category from goal setting. The remaining attribute categories to choose from were meaning, style and form. The instructions to the students were to choose an attribute category and then select a specific criterion from a qualitative level as a goal for improvement. The next task was to print the goal on the post-it note for easy referral. The post-it note was placed above the paper
as a reminder of the targeted improvement goal. A coloured marker was used to edit the writing sample; the students were instructed to make at least ten changes to their writing.

As the students edited their work, the students were individually invited to a table for a short mini-conference or check-in with myself, the instructor. During the mini-conference, the self-assessment process was discussed asking for examples from the selected writing sample that supported the chosen highlighted qualitative levels. The specific writing goal was also discussed. The goal was printed or printed over in permanent marker on the post-it note and then placed on the hardcopy writing sample. Most students had not chosen a writing goal prior to the conference. Some students took their writing samples to their desks to continue editing, while others left the edited piece with me.

The students returned both the self-assessment and edited writing piece with the post-it note attached. It was noted that the scheduled time for the lesson was 60 minutes with an instructor and an educational assistant, however the lesson took over 90 minutes.

**Phase 2: Lesson 3.** The students’ edited and self-assessed writing samples were returned to the students. The documents had the post-it notes attached with the student selected writing goal printed clearly on them. The students opened their chrome book computers to their personal Google Docs account. They quickly found the selected writing samples they had chosen and began editing. They made the changes to the assignments and then ‘shared’ the newly updated documents with me to print. I quickly printed the improved documents for the students. The marked rough drafts and the updated edited versions were stapled together to reflect the progress made between the two samples. Each post-it note was attached to the front of the stapled
papers. As the students handed in the assignments, they were asked if the writing goal had been implemented.

**Phase 2: Lesson 4.** The purpose of week four was to introduce some independence for the students. The process continued to be teacher led, but absolute control began to be released. The students were asked questions to assess retention of the self-assessment steps. The process of “write, assess, goal set, edit and revise” was reexamined. The class continued to work together as a whole reviewing the assessment rubric, however small portions of independence was being initiated and supported.

The post-it notes that contained the personally chosen goals were returned to the students. The students were asked to choose one of two options for the next writing session. The first option was to choose a piece of writing from their Google Doc file and build on it. The second option was to begin a new piece of writing on any topic of their choosing. The students wrote for approximately 40 minutes. At ten-minute intervals the instructor asked the students to stop and refer to their personal writing goals. “Sorry to interrupt you, students, but please refer to your goal and do a quick re-read of your writing. Are you writing with your goal in mind?”

When the students were finished writing their ideas, they once again shared the document with me through Google Classroom. I printed each student’s document ready to be edited at the next lesson. The writing goal post-it notes were returned and were placed onto the newly printed sample.

**Phase 2: Lesson 5.** The highlighted writing assessment rubrics were returned to the students. They were given a different coloured highlighter to use for the new assessment lesson. Next the printed hardcopy writing sample was returned to each student. The class followed the
same procedure as the previous week to self-assess their written work. I reviewed each writing attribute of Meaning, Style, Form and Conventions to the class as a whole. The criteria for the qualitative levels of ‘beginning’, ‘developing’, ‘applying’ and ‘extending’ were defined and discussed. The students were asked to highlight the specific criteria they felt reflected their writing.

The students were instructed that they were going to set a new writing goal. The goal targeted specific writing attributes and criteria from the self-assessment rubric. Students had a one to one conference with an adult to review their new writing goal. The adults included two pre-service teachers, the educational assistant and myself, the instructor. Two topics were discussed, the student’s personal self-assessment process and their new writing goal. The new goal was printed on a different coloured post-it note.

While the conferences were happening, the other students were given a coloured felt marker to edit the printed writing sample. At the end of class, the students returned the edited papers to myself. The students were asked to return all materials. The items included the assessment rubric, the edited writing sample and the individual goal printed on the post-it note.

**Phase 2: Lesson 6.** The students were instructed to edit the selected Google Doc sample using a chrome book. The edited hardcopy writing samples were distributed to the students. The students finished making several edits. Again, they shared the edited document with me to be printed as a hardcopy. The students were asked the same question, “Did you implement your writing goal?” Later in the day the edited samples were printed.

**Phase three: “You” Lesson 1.** The purpose of next session was to have the students complete all of the self-assessment steps with minimal teacher direction and instruction. This
was the final phase of the self-assessment unit. The instructional unit was carried out in a short timeframe to assist with recall and retention.

The chrome book computers were distributed to the students. The instructions were to create an original piece of writing on any topic of their choice. The post-it notes were returned to the students and placed on the table on the right hand side of the chrome book. The students ‘shared’ their completed documents with me through Google classroom. Throughout the day, I printed off the ‘shared’ documents to be ready for the students to self-assess and edit the next lesson.

**Phase 3: Lesson 8.** Before the lesson began the following items were distributed to the students: a different coloured highlighter, the writing assessment rubric and a printout of their writing sample. They were told to use a third coloured highlighter to show the difference in each piece of creative writing. The self-assessment process was quickly reviewed. I asked the students what the steps were to self-assess the writing to assess the students’ recall of the process.

The students were instructed to begin the self-assessment practice of their writing sample independently. The students read over and assessed their writing samples using the student-friendly writing assessment rubric. After the self-assessment was completed, they were asked to use a coloured marker and edit their writing samples. The students were instructed to make a minimum of ten changes. As the editing took place, each student was invited to have a quick writing conference. The writing goal was written on a post-it note again for easy reference. Similar to the previous lessons, the students completed both the self-assessment and the editing much quicker. The activity was completed in a 30-minute block.
Phase 3: Lesson 9. The edited writing samples and the ‘goal’ post-it notes were returned to the students. The students were asked to open the Google Doc program on their chrome book computers. The students were instructed to read the post-it note to refresh their memory about the targeted writing goal. The next step was to type the edits into their original documents and then ‘share’ them with me through Google Classroom to be printed.

Phase 3: Lesson 10. The students were given a fresh, clean and unmarked student-friendly writing assessment rubric based on the BC Ministry Personal, Impromptu Writing Quick Scale rubric. The students were instructed to choose a coloured highlighter. The students re-read their writing samples. The students were instructed to independently review their work and assess their writing playing the role of teacher. The students were given minimal instructions. After I collected the self-assessments I placed the hard copies in a different pile.

Post-survey research procedure. After the instructional self-assessment unit was completed, the post-survey was distributed to the students for completion. The students were asked to print their name and date lightly on the paper with a pencil. The two survey questions were read orally to the students. I ensured understanding of the task and asked the students if any clarification was needed. The black felt markers were given to the students. I read the first question to the students “How confident do you feel when I ask you to assess your writing?” The students placed a black dot on the 10-centimeter line regarding confidence. As the students finished question one of the post-survey they raised the black marker above their head to communicate completion.

When all students were ready for the second survey question, it was orally read “How good are you at assessing your own writing?” They also placed a black dot on the 10-centimetre
line regarding skill. The surveys were collected from the students. All of the students were thanked for earnestly completing the survey.

I matched each student’s pre- and post-survey. The pre- and post-surveys were quickly reviewed to observe if there was any general improvement between the two surveys from a teacher’s perspective. The review allowed the pre-and post-surveys to be an instructional tool. The review process was to improve my future teaching practice.

The surveys were given to the elementary school secretary as the third party isolationist. The third party isolationist was the only person with access to the signed parent or guardian consent forms and the signed student assent forms. A list of instructions to ensure anonymity (Appendix J) was affixed to the stack of surveys. The first instruction stated to number the consent and assent forms in the order the envelopes were opened. Next she was asked to match the signed form to the completed surveys. The student names were to be blacked out and the numbered surveys were placed in an envelope labeled “Research”. After the matching and numbering process was completed, the third party isolationist placed the signed consent and assent forms in a sealed envelope. The envelope remained sealed and was stored in a secure location at Vancouver Island University. The pre- and post-surveys that were not matched with a form were placed in a different sealed envelope so they could not be referenced. All envelope seals were signed to increase accountability.

The envelope of anonymous numbered pre- and post-surveys were returned to myself, as the researcher. Seven students had all the necessary forms signed to become participants in the research project. Seven pre-and post-surveys were available to research, analyze and compare. Each survey rating was measured to a tenth of a centimeter. The measurements were printed on
each survey. The data from the survey measurements were analyzed individually and as a group to investigate the degree to which the instructional self-assessment unit was successful.

Discussion of Validity

The purpose for the action-based research was to improve my future teaching practices. Therefore, it was important that both the procedure and the analysis reflect validity. One prominent validity factor was the process of student anonymity. The third party isolationist confirmed there was minimal bias or coercion upon the students to participate. The numbered anonymity of the surveys supported the authenticity of the research project. Both the parents/guardians and students were given the opportunity to withdraw from the research portion at any time. The clear communication to both the students and parents/guardians ensured understanding that the surveys and instructional unit would benefit all students and improve the teaching practices of the instructor.

To increase the validity of the research I had clear definitive time frames of when I was a researcher and when I was an instructor. Specifically, I was a researcher during the pre- and post- surveys and when the data was analyzed. I was an instructor during the six-week teacher modeled instructional self-assessment unit. As an the instructor I followed the three-part repeated cycle the two research teams of McMillan and Hearn (2008) and Andrade and Valtcheva (2009) defined as successful self-assessment. The students chose a specific goal for improvement, edited the writing and then reviewed the piece of writing to be sure the goal was implemented.

The survey process strived to have minimal bias or persuasion. The use of a measured VAS survey instrument to collect the data was another validity factor for the study. The VAS
was treated as a non-numeric instrument that tried to numerate an attitude that was believed to range across a continuum of values that could not easily be measured (Blackwell Publishing, 2017). The two survey questions were created using student friendly language. The questions were clear and simple. The process of placing a black dot on a line between two numbers with simple vocabulary was an age appropriate expectation. The students placed a black dot on the line without the bias of quantitative values to influence their decision.

The writing assessment rubric used during the instructional unit was based upon the Quick Scale of BC Ministry Performance Standards for Grade 5 Personal Impromptu Writing and was designed for instructors and teachers. An assessment rubric is a one-or-two-page document that describes varying levels of quality from excellent to poor (Andrade, 2000). I translated the professional teacher vocabulary into language a ten-year child should understand. When students had a deeper understanding of the criteria and educational goals the teacher used to teach and assess their work there was a higher possibility for the students to produce better quality work (Harris & Brown, 2013; Stiggins & Chappuis, 2005). Therefore, the qualitative levels were given the same SD68 language used in the students’ report cards. Lastly, the font was changed to be more receptive for students. An assessment rubric was academically successful when used for instructional purposes (Andrade, 2000; De La Paz, 2009). Rubrics were used to clarify the teacher’s learning goals and helped design future instruction (Andrade, 2005; De La Paz, 2009).

I was aware of a possible bias. Three Grade 5 students, who had been in my class for Grade 4, might rate themselves higher on the initial survey as they had been exposed to student self-assessment the previous year. I have often taught students a second year. The teacher needs
to invest the time and in-depth instruction to ensure the students felt confident and adequately prepared to accurately self-assess (Harris & Brown, 2013; Stiggins & Chappuis, 2005).

Therefore the participants were students in my current class. Under the influence of Harris and Brown’s (2013) case studies I ensured the students understood that both students and the teacher were equal participants in the self-assessment practice. Harris and Brown’s (2013) and Stiggins and Chappuis’s (2005) research supported that in order for the surveys to have increased results the participants must have a safe and well-established relationship with the teacher.

**Description and Justification of the Statistical Techniques Used**

The data gathered was examined using quantitative procedures. Each survey produced two scores, a self-reported ‘degree of confidence’ and ‘degree of skill’ level regarding self-assessment. The surveys were given before and after a self-assessment instructional unit was taught to all Grade 4 and 5 students.

Only the data from the seven participants with signed consent and assent forms were entered into an excel spreadsheet to be analyzed. The first column identified the participants using the numbers allotted by the third party isolationist. The next five columns were categorized as ‘confidence’. The five subtitles were pre-score, post-score, improvement score, group mean and improvement percentage. The next five columns were categorized as ‘skill’ with the same five subtitles as ‘confidence’. The pre-survey score was subtracted from the post-survey score and the improvement score was calculated. The columns were totaled and divided by the number of participants to create the group mean. The individual’s personal rating was divided by the improvement score and multiplied by 100 to create the individual improvement percentage.
Three tables presented the summative data using the pre- and post-survey scores for both confidence and skill. The tables included raw data, group mean, and improvement percentage. In Table 1 the raw data and the students’ improvement scores were presented. In Table 2 the group mean compared each participant’s improvement score with the group mean improvement score. Table 3 calculated each participant’s pre-score to post-score improvement percentage. The tables presented the data in a structured and organized format.

Two comparative bar graphs were a visual comparison of each participant’s pre- and post-survey score alongside the improvement score for confidence and skill. The purpose of the graphs was to create a pictorial representation of the increase or decrease in both improvement scores.

Descriptive survey statistics were best represented using a box and whisker plot. A box and whisker plot is a standardized way of displaying the distribution of data based on the five number summaries: minimum, first quartile, median, third quartile, and maximum (whatis.techtarget.com, 2017). Along the vertical axis were the scores ranging from zero to ten. Along the horizontal axis were two box plots; one was for the pre-survey scores and one for post-survey scores. The minimum and maximum pre- and post-score were represented through the whiskers extending from the bottom and top of the rectangle. The mid quartile range of both scores were represented in the solid plot, the top line of the rectangle identified the third quartile and the bottom line of the rectangle identified the first quartile. The median average of the scores was represented with a thick dark line in the body of the box-plot. The information in the data analysis reflected improvement for both confidence and skill categories.
The defined level of success was based on the improvement score. An improvement score with the mean of 0% - 3% was minimally impactful; an increase of 3.1% - 7% was notably impactful and 7.1% - 10% was very impactful.
Chapter 4: Data Analysis

Introduction

The data gathered was examined using quantitative procedures. Each survey produced two scores, a self-reported ‘degree of confidence’ regarding self-assessment and a ‘degree of skill’ level regarding self-assessment. The surveys were given before and after a self-assessment unit was taught to all of the Grade 4 and 5 students. Only the data from the students with signed consent and assent forms were entered into an excel spreadsheet for analysis. The participants were identified using the numbers allotted by the third party isolationist. The data identified as “pre-survey” referred to the survey the participants completed prior to the self-assessment instructional unit. The data identified as “post-survey” referred to the survey the participants completed after the self-assessment instructional unit was completed. All of the raw data was placed into two categories ‘Confidence’ and ‘Skill’. Both categories were analyzed separately and compared.

Confidence

The data regarding confidence were measured and identified. The pre- and post- survey scores were compared. The increased (or decreased) improvement score was calculated. The improvement score was created when the pre-survey score was subtracted from the post-survey score.
Table 1

*Confidence Raw Data*

<table>
<thead>
<tr>
<th>Student #</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-survey</td>
<td>5.4</td>
<td>0.8</td>
<td>6.7</td>
<td>4.5</td>
<td>6.7</td>
<td>8.3</td>
<td>7.2</td>
</tr>
<tr>
<td>Post-survey</td>
<td>5.5</td>
<td>6.3</td>
<td>3.2</td>
<td>4.8</td>
<td>7.6</td>
<td>8.4</td>
<td>10</td>
</tr>
<tr>
<td>Improvement score</td>
<td>0.1</td>
<td>5.5</td>
<td>-3.5</td>
<td>0.3</td>
<td>0.9</td>
<td>0.1</td>
<td>2.8</td>
</tr>
</tbody>
</table>

After the scores were compared a few conclusions were made. As shown in Table 1 the data reflected improvement between six out of seven participants. The data appeared to reflect an overall increase in score after the self-assessment instructional unit was taught. I predicted an improved post-survey score to reflect the success of the self-assessment instructional unit. The pre-survey row reflected most participants in general believed they had mid-range (3-7) confidence levels prior to the instructional unit. After the instructional unit, when the participants had a better understanding of self-assessment, most scores reflected improvement. All post-survey scores are mid-range or higher. The improvement score had a range of -3.5 to 5.5 as seen in Row 3 of Table 1.

Table 2

*Confidence - Individual Compared to Group Mean Improvements*

<table>
<thead>
<tr>
<th>Student #</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improvement Score</td>
<td>0.10</td>
<td>5.50</td>
<td>-3.50</td>
<td>0.30</td>
<td>0.90</td>
<td>0.10</td>
<td>2.80</td>
</tr>
<tr>
<td>Group Mean</td>
<td>0.89</td>
<td>0.89</td>
<td>0.89</td>
<td>0.89</td>
<td>0.89</td>
<td>0.89</td>
<td>0.89</td>
</tr>
</tbody>
</table>

Table 2 compared the individual improvement score with the group mean score. The improvement scores from Row 1 were totaled and divided by the number of participants to create the group mean. The group mean was compared to each student’s improvement score. The
group mean was found to be 0.89 as Table 2 reflected. The group mean of 0.89 converted to 8.9% on the VAS scale, which was 10 centimeters

Table 3

Confidence - Percentage of Improvement

<table>
<thead>
<tr>
<th>Student #</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improvement score</td>
<td>0.1</td>
<td>5.5</td>
<td>-3.5</td>
<td>0.3</td>
<td>0.9</td>
<td>0.1</td>
<td>2.8</td>
</tr>
<tr>
<td>Percentage</td>
<td>2</td>
<td>688</td>
<td>-52</td>
<td>7</td>
<td>13</td>
<td>1</td>
<td>39</td>
</tr>
</tbody>
</table>

Table 3 identified the percentage of improvement. The improvement score was divided into the pre-survey score to calculate the percentage of improvement. These percentages reflected a wide range of scores in regards to the participant’s confidence. The percentage of improvement ranged from -52% up to 688%. The improved percentage was far greater than the decreased percentage.

Figure 1. Pre-, post-survey score and improvement score compared.

Figure 1 represented a comparative bar graph regarding confidence. A comparative bar graph is a visual comparison of each participant’s pre- and post- survey score regarding
confidence. The first bar was the pre-survey score and second bar was the post-survey score. The improvement score was the third bar. The second bar in the graph visually reflected overall improvement of the participants’ confidence. The third bar clearly represented positive improvement scores. The single decrease was easily identified. Overall, Figure 1 reflected consistent improvement regarding confidence.

![Graph showing pre and post survey scores](figure.png)

**Figure 2.** Box and whisker plot of pre- and post-survey score for confidence levels.

The quantitative survey statistics were best represented using a box and whisker plot. A box and whisker plot graph is a standardized way of displaying the distribution of data based on the five number summaries: minimum, first quartile, median, third quartile, and maximum (whatis.techtarget.com, 2017). Along the vertical axis are the scores ranging from zero to ten (from VAS).

Along the horizontal axis are two box plots; one was for the pre-survey scores and one for post-survey scores. The inter-quartile range was represented in the solid plot, the top line of
the rectangle identified the third quartile and the bottom line of the rectangle identified the first quartile. The minimum and maximum pre- and post-score were represented through the whiskers extending from the bottom of the rectangle. The median of the scores was represented with a thick dark line in the box-plot.

The following process was used to create the confidence pre-survey box and whisker plot. The bottom whisker was the lowest confidence pre-survey score of 0.8. The top whisker was the highest confidence pre-survey score of 8.3. The coloured inter-quartile range was the region bounded on the upper end by quartile 3 and on the lower end by quartile 1. Quartile 3 was created by taking all of the data and reorganized the scores from lowest to highest [0.8, 4.5, 5.4, 6.7, 6.7, 7.2, 8.3]. The next step was to remove the first half of the set [0.8, 4.5 and 5.4]. The highest score [8.3] was removed next. A new subset remained [6.7, 7.2]. The mean of the new subset was found to be [6.95]. The newly calculated mean was the 3rd quartile score. Quartile 1 was created following the same process. The same confidence survey data was used and the lower scores were removed, which left a subset [4.5, 5.4]. The mean of the new subset was calculated [4.95]. The newly calculated mean was the 1st quartile score. The inter-quartile range were all of the confidence pre-survey scores from quartile 1 – 3 [4.95 – 6.95]. The data represented in the box and whisker plot for the confidence pre-survey results was therefore, represented as [min, Q1, med, Q3, max], or the following calculations [0.8, 4.95, 6.7, 6.95, 8.3]. The whiskers reflected the wide range of confidence pre-survey scores. The high median of 6.7 reflected that most participants scored themselves with high confidence ratings. The colored interquartile range created a clear visual image for comparison.
The same process was followed for a post-survey box and whisker plot. The bottom whisker was the lowest confidence post-survey score of 3.2. The top whisker was the highest confidence post-survey score of 10.0. The coloured inter-quartile range was the region bounded on the upper end by quartile 3 and on the lower end by quartile 1. Quartile 3 was created by taking all of the data and reorganized the scores from lowest to highest [3.2, 4.8, 5.5, 7.6, 8.4, 10]. The next step was to remove the first half of the set [3.2, 4.8, 5.5]. The highest score [10] was removed next. A new subset remained [7.6, 8.4]. The mean of the new subset was found to be [8]. The newly calculated mean was the 3rd quartile score. Quartile 1 was created following the same process. The same data was used and the lower scores were removed, which left a subset [7.6, 8.4]. The mean of the new subset was calculated [5.15]. The newly calculated mean was the 1st quartile score. The inter-quartile range were all of the confidence post-survey scores from quartile 1 – 3 [5.15 – 8]. The data represented in the box and whisker plot for the confidence post-survey results was therefore, represented as [min, Q1, med, Q3, max] or the following calculations [3.2, 5.15, 6.3, 8, 10].

Figure 2 revealed the following conclusions. The whiskers reflected a smaller range of post-survey scores than pre-survey scores. The median score of 6.3 was in the center of the plot, which reflected a minimally biased inter-quartile range. The colored interquartile range created a clear visual image for comparison.

When the box and whisker plots of the confidence pre-and post survey scores were compared it was found the inter-quartile range of the post survey was greater that the pre-survey. This can be interpreted as a successful instructional self-assessment unit because more students fell into the greater inter-quartile range in the post-survey. It can also be noted that the bottom
whisker of the post-survey score was substantially higher than the bottom whisker of the pre-
survey score. The post-survey scores’ whiskers were shorter which reflect the participants had a
smaller range of confidence scores.

Skill

Tables 4, 5 and were created using an excel spreadsheet. The tables were created to
analyze the data from the skill pre-and post-survey question. Table 5 had the same three subtitles
as confidence. The data reflected how the students rated their skills concerning self-assessment.
The subtitles included the pre-and post-survey score and the calculated improvement score. The
same process was followed to calculate the skill improvement score as the confidence
improvement score. The skill pre-survey score was subtracted from the skill post-survey score to
compute the improvement score. Table 4 presented the raw data from the skill surveys.

Table 4

<table>
<thead>
<tr>
<th>Student #</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-survey</td>
<td>7.3</td>
<td>1.4</td>
<td>3.7</td>
<td>4.7</td>
<td>5.3</td>
<td>7.9</td>
<td>5.5</td>
</tr>
<tr>
<td>Post-survey</td>
<td>8.0</td>
<td>7.1</td>
<td>1.7</td>
<td>4.8</td>
<td>5.2</td>
<td>7.4</td>
<td>8.4</td>
</tr>
<tr>
<td>Improvement score</td>
<td>0.7</td>
<td>5.7</td>
<td>-2</td>
<td>0.1</td>
<td>-0.1</td>
<td>-0.5</td>
<td>2.9</td>
</tr>
</tbody>
</table>

After comparing the skill pre- and post-survey scores in Table 4 a few conclusions were
made. The data reflected that participant #2 and participant # 7 made note-worthy improvement.
Only participant #2 rated lower than a 3 in the skill pre-survey and participant #3 in the post-
survey. Participants #1, #4, #5 and #6 rated almost identical skill pre-and post survey scores.
The similarity of the scores reflected the integrity and sincerity of the participants as they made
their ratings. Overall, I predicted an improved skill post-survey score to reflect a successful self-assessment instructional unit.

Table 5

**Skill – Individual Improvement compared to the Group Mean Improvement**

<table>
<thead>
<tr>
<th>Student #</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improvement Score</td>
<td>0.7</td>
<td>5.7</td>
<td>-2.0</td>
<td>0.1</td>
<td>-0.1</td>
<td>-0.5</td>
<td>2.9</td>
</tr>
<tr>
<td>Group Mean</td>
<td>0.97</td>
<td>0.97</td>
<td>0.97</td>
<td>0.97</td>
<td>0.97</td>
<td>0.97</td>
<td>0.97</td>
</tr>
</tbody>
</table>

Table 5 compared the participants’ improvement scores with the group mean improvement score. The data from Row 1, the individual skill improvement scores, were totaled and divided by the number of participants to create the group mean skill improvement score. The group mean was found to be 0.97. The group improvement score reflected 9.8% improvement on the VAS scale, which is 10 centimeters. The group mean was compared to each student’s improvement score. The pre-survey score was subtracted from the post-survey score. When the skill mean was compared to each student’s improvement score, the data reflected four participants scored lower that the mean score of 0.97. Two participants scored higher than the overall mean score of 0.97. Table 5 reflected minimal differences between the group mean and five of the participants’ individual scores.

Table 6

**Skill – Individual Percentage of Improvement**

<table>
<thead>
<tr>
<th>Student #</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improvement Score</td>
<td>0.7</td>
<td>5.7</td>
<td>-2.0</td>
<td>0.1</td>
<td>-0.1</td>
<td>-0.5</td>
<td>2.9</td>
</tr>
<tr>
<td>Percentage</td>
<td>10</td>
<td>407</td>
<td>-54</td>
<td>2.0</td>
<td>-2.0</td>
<td>-6.0</td>
<td>53</td>
</tr>
</tbody>
</table>
Table 6 identifies the percentage of improvement for each participant. Each improvement score was divided into the pre-survey score to calculate the percentage of improvement. These percentages reflected a wide range of percentages in regards to the participant’s confidence. The percentage ranged from -54% up to 407%, which indicated that prior to instruction some of the participants lacked self-assessment skills.

![Figure 3](image)

**Figure 3.** Improvement scores compared with pre- and post-survey scores for skill level.

A comparative bar graph offered a clear visual comparison of each participant’s pre- and post-survey score regarding skill-level. The first bar was the skill pre-survey score and second bar was the skill post-survey score. The skill improvement score was the third bar. The third bar was a clear visual communicator of the quantity of skill improvement. The decreased improvement scores may be a reflection of over-estimating their skill level prior to the self-assessment instructional unit. It was noted that four participants rated themselves higher in their post-survey and three participants rated themselves lower in their post-survey. However the trend was towards improvement.
Figure 4. Box and whisker plot graph comparing the skill pre-and post-survey scores.

The same procedure was followed for skill data analysis as was used to analyze confidence data. The quantitative statistics were best represented using a box and whisker plot. A box and whisker plot is a standardized way of displaying the distribution of data based on the five number summaries: minimum, first quartile, median, third quartile, and maximum (whatis.techtarget.com, 2017).

Along the vertical axis were the scores ranging from zero to ten (from VAS). Along the horizontal axis were two box plots; one was for the skill pre-survey scores and one for skill post-survey scores. Again, the interquartile range of both scores was represented in the solid plot, the top line of the rectangle identified the third quartile and the bottom line of the rectangle identified the first quartile. The minimum and maximum skill pre- and post-score were represented through the whiskers extending from the bottom and top of the rectangle. The median of the scores was represented with a thick dark line the box-plot.
Calculating the minimum, first quartile, median, third quartile and maximum from the skill pre-and post-survey results created the box and whisker plots. The data represented in the box and whisker plot for the skill pre-survey results were represented as [min, Q1, med, Q3, max], or [1.4, 4.2, 5.3, 6.4, 7.9]. The data represented for the skill post-survey results was also represented as [min, Q1, med, Q3, max], or [1.7, 5.0, 7.1, 7.7, 8.4]. The calculations were reflected quantitatively through the box and whisker plot for comparison.

In Figure 4, the skill post-survey inter-quartile range reflected a clear improvement over the skill pre-survey inter-quartile range. The improvement reflected a successful self-assessment instructional unit. The median skill pre-survey score was 5.3 and our median skill post-survey score was 7.1, which revealed a significant improvement after the instructional unit was completed.

Conclusion

Overall, the results of the pre-and post-surveys indicated that the instructional self-assessment unit was successful. The data indicated that both self-assessment confidence and skill improved. The improvement was predicted as a hypothesis prior to the research. Further research and surveys are required to support the theory that confidence and skill level regarding self-assessment can be developed and improved through a reflective creative writing unit.
Chapter 5: Conclusions and Recommendations

Overview

As I reflected on the research project, I recognized the amount of growth and development made by both myself as an educator and the students. As the instructional unit progressed and the students grew to be independent self-assessors, I was pleased with the overall results. The instructional unit followed the original plans relatively accurately. There were limitations, adaptations and interruptions throughout the current study. However the results reflected that the students learned the process of self-assessment and goal-setting to improve their learning.

Surveys

The surveys that were completed by the students before and after the instructional self-assessment unit reflected positive results. The majority of student improvement scores in both categories were positive calculations. The confidence group mean score improvement score of 0.89 reflected a very impactful level of success. The skill group mean improvement score of 0.97 also reflected a very impactful level of success.

Instructional Unit

The instructional unit was successful as a process of improvement for my personal instructional practice. For many years, I taught with the philosophy that the teacher should always adapt to the learning needs of the students. One teaching model that has proven itself successful is the “me, we, they” process. In the first phase, for the writing sample I tried to model the self-assessment procedure in a manner the students believed they had input with or
ownership of. Andrade’s (2006) studies influenced the adaptation of this first phase from strictly an adult delivered program. Andrade (2006) discovered through her research that the more ownership the students believed they had, the more successful they were in their learning.

I reflected on the experiences of teaching the instructional unit and various observations, adaptations and recommendations were noted. I reflected on each phase of the instructional unit seeking lessons that were successful, could be improved or were adapted from my original plan. All three phases reflected progress for both the students’ writing and self-assessment.

Throughout phases one and two, the instructional unit included a very controlled step-by-step process of self-assessing a previously written document. I asked the students to choose a previous writing sample on purpose. As the research project was planned, I wanted the students to not be burdened with the task of writing something new for each phase. I predicted the students might be overwhelmed with these newly introduced writing attributes and criteria. Throughout September and October the class had written several samples. The research project was planned for November and I wanted the students to have several writing samples available to select from.

For phase two, I continued the progression of “we” and lead the students through the self-assessment process by reading each attribute to the class and discussing the criteria of each qualitative level. It appeared to be effective to teach the students as a whole group and monitor the assessment criteria being highlighted. The students were occasionally asked to explain their reasoning. If the student needed direction, the instruction or guidance was a quiet one-to-one conversation. If the students were correct and successfully self-assessed an attribute of the writing sample, the whole class would be included in the conversation. During the individual
conferences I reviewed the accuracy of the students’ self-assessments and gauged the students’ readiness for more independence. Many students were accurate with most of their self-assessment. Several students even arrived to the conference with a chosen writing goal and had made a few edits that reflected the chosen goal. Therefore, the next lesson would offer the opportunity for independence and reflect the results of the conferences.

As the students edited their writing samples I asked if they referred to the set writing goal on the post-it note. Most students responded positively and stated they had referred to the goal as they edited the writing sample. Interestingly, the students’ writing conventions showed improvement. Clear sentence structure was improved through increased use of capitals and periods, even though conventions were not a writing goal. After the steps for phase two were reviewed it was observed that the students needed adult support, extra time and clear instructions for each step of the process.

Phase three of the procedure was a combination of “we” and ‘you” model of teaching. After the mini conference occurred, if the students appeared confident and began the self-assessment process without direction they were granted more independence. The students were observed for a few minutes and then I invited the students who appeared to require further instruction or guidance to a table with me. As a group we walked through the writing assessment rubric again. If the student was unsure I coached them through assessing a specific attribute. It should be noted that several of the students at the table needed academic adaptations in all curricular academic areas.

During the writing lesson in phase three, there were several variables that appeared to (minimally) impact the students’ written output. First the school’s Wi-Fi failed, therefore the
students could not open their Google drive to retrieve previous documents or create a new piece of writing. Second, simultaneously with writing time, the pre-service teachers completed different tasks with the students. Thirdly, the weather was horrid; therefore the class did not complete the regular daily fitness of a few short laps around the school field. The daily routine fitness time allowed for a break of exercise and social time. Lastly, the school had an upcoming “lock down” drill later in the day. Several of the students showed concern about the approaching drill. In spite of all of the listed distractions the students completed the writing samples at the qualitative levels of developing and applying.

During next lesson of phase three, the students reacted when the two highlighters’ colours overlapped. Some students noted phase two’s writing assessed lower in a specific attribute category than the previous week. The different coloured highlighter initiated comparison of the self-assessments successfully. About half of the students chose an effective writing goal prior to the mini-conference between student and teacher.

The students appeared to have confidence making changes to their writing samples, as they had minimal questions or clarifications about the process. Many students compared their rough draft samples with the freshly edited documents. As I reviewed the edited writing samples, I detected the students continued to target the conventions attribute. However, more importantly it was noted that some students expanded their descriptive vocabulary. Both writing quantity and quality displayed improvement for most students.

The plan for the final phase was for the students to be purely independent. However there were a few students who continued to need support. For me, personally and professionally, the final lesson was a celebration. The students opened their Google Doc account quickly and
asked questions related to the self-assessment process, specifically goal-setting. All students produced at least ten lines of writing to be self-assessed the next lesson. The quick mini-conferences reflected the students self-assessed, goal-set and edited with minimal direction. Most students brought realistic writing goals to the mini-conference. As the edited writing samples were ‘shared’ with me, I observed students who had added descriptive vocabulary. They had also replaced simple words or replaced words to prevent repetition. Writing conventions continued to show improvement with more students. The final phase reflected improvements in all areas of the self-assessment process – writing, assessing, goal-setting and editing.

During the self-assessment instructional unit I took the role of instructor or teacher seriously. There was a clear plan I wanted to put forth from beginning to end. The instructions were clear, simple direct statements. The self-assessment and goal-setting purpose was clear evident to the students during the mini-conferences. Without exception the two topics were consistently and strategically discussed. The underlying purpose of this valuable time was for the students to gain self-assessment confidence and skill.

**Beyond the Instructional Unit**

The purpose of the research project was to improve my teaching practice of self-assessment. However an unpredicted success occurred, the students’ writing improved in both quality and quantity. Three writing improvements were identified. The first was how quickly two paragraphs to self-assess could be created and shared. The second improvement was the development of richer and more descriptive vocabulary. The students clearly edited their writing with that goal in mind. At a later date after a snowfall, the class wrote theme stories titled
Blizzard. They were so original, descriptive and creative that I printed the stories and bound them into a book and put the compilation in the school library. The third improvement was conventions. All through the instructional unit many students wanted to have their writing goal be something simple such as the use of capitals and periods. I repeatedly denied that conventions could be writing goals. However, even though conventions were not identified goals, they were clearly targeted goals by the students. Spelling, capital letters and punctuation were all evident improvements as the phases progressed.

After Andrade (2006) referred to the importance of students having input into the creation of the assessment rubric, I have not created another rubric in isolation as the instructor. In future studies, I recommend the use of an assessment rubric template with the criteria list down the left hand column and the school district qualitative levels across the top. Since the research project finished the class has created several rubrics for various assignments. As a class, we filled in the boxes in no specific order. The assessment-rubrics were then printed in hard copies. The group rubric was created before the research project was completed. This allowed the students time and opportunity to change and improve their assignment. The student generated assessment rubric placed even more ownership and autonomy of their education.

**Formative Assessment**

Another impactful change in my teaching practice was to always ensure the students know that the assessment was formative. ‘Student self-assessment’ is most successful if it is implemented specifically for personal formative assessment (Orsmond, Merry, & Reiling, 2002). Students needed to know the assessment was feedback designed to set goals for their future learning (Andrade & Valtcheva, 2009). Once the students relinquished the marks and grades the
learning atmosphere in the classroom changed similar to Andrade’s (2000) study. One student asked for an extra copy of the student friendly writing assessment rubric. She cut the last two columns of “applying and extending” into strips and taped them onto the inside of her binder for reference.

One of the greatest errors I made during the project was giving the students the final writing assessment rubric. Even though I had not informed the students it was a summative assessment; I believe that was the message sent because we didn’t set new goals or edit to improve the writing. It was a poignant moment for me both as a researcher and a teacher.

**Student Engagement**

Another general conclusion was that the writing goals were more likely to be implemented by the student if the student personally created them. During the writing conferences, if the adult created the writing goal, the writing rarely reflected the specific writing goal. The students who arrived to the one-to-one conference with a clear idea of the writing attributes they wanted to improve were the students who targeted the writing goal. Also the goal was simpler to create during the conference. The student appeared to be more engaged in the whole self-assessment process, including goal setting and editing.

Overall I believe my teaching practice improved due to my action based research project. Students were active participants in all forms of their assessment. I changed my teaching practice in three main areas. The purpose of assessment changed from summative marks and grades to only formative assessment to give direction for future teaching practices. All assessment rubrics were created as a class and are generated to focus on a specific assignment.
Time was always made available to allow one-to-one student mini-conferences to give clear direction to each student.

**Relationships**

The mini-conferences were direct conversations that targeted self-assessment and goal setting. The students appeared to enjoy the scheduled one-to-one time with their teacher. They appeared to be engaged and participated in the educational conversations. The goal was for students and myself to create and maintain a relationship as partners in their education (McDonald, 2013). As the lessons progressed, generous and over-zealous qualitative self-assessments became less evident. The students realized the assessments were not summative marks or grades. Through serious academic conversations, a safe relationship was built where honest self-assessments were completed. The relationships created an environment where the assessments were not an ending… but a beginning.

**Limitations**

**Students.** During the project, I encountered a few limitations. The first drawback was the number of students in my class who could be possible participants. At the initial stage of planning the research project in the fall of 2016, I had 30 students in my class. Many changes happened to teachers’ contract language regarding class size and composition. In the fall of 2017 my class size diminished to 21 students. The smaller class size had many educational benefits, however it provided 30% fewer possible participants for the research project.

A bias or preconception I was aware of was that I had previously taught three of the Grade 5 students in Grade 4. The first concern was that the three students might feel committed
to the project because they had a connection with me as their previous teacher. Another concern was that I had chosen my research topic the previous fall in 2016 and had conversations with colleagues about my planned self-assessment research when these students were present. In the winter of 2017, I introduced self-assessment, reflection and goal-setting activities to that class of students. Therefore, the three students from the year before already had an introduction to the concept of self-assessment. The three Grade 5 students’ pre- and post-survey results would not be based on the same self-assessment perspective and exposure as the other 18 possible participants.

**Time.** Time was a great limitation. The first few lessons took a lot longer than planned. The lessons were scheduled for 60 minutes and took 90 minutes at least. I had two extra adults in the classroom supporting the educational process and it still took longer than planned. However, each student was engaged and interested in the self-assessment process, which could be viewed as successful. Each personal conversation during the mini conferences took a great deal of time. The conferences were planned to be 3-5 minutes. However, most were closer to ten minutes each. The conversations I rushed needed more support later on in future lessons. Also, I needed to consider the schedule pragmatics of the chrome books. I had only reserved the chrome book computers for one hour each day. The extra time needed provoked sensitive and awkward conversations with colleagues.

During lesson four, I felt the students were successful in spite of many distractions and interruptions. Extra time was needed for this lesson for a variety of reasons. The distractions and interruptions were mentioned previously however the unplanned events increased the amount of time needed for the lesson. In review, the lesson went as follows. The WiFi Internet provider in
the school failed. The Google Doc program used within School District 68 needed Internet access in order to retrieve the writing samples to edit and then email to myself to print in to a hardcopy. On this specific day I had two pre-service teachers in the classroom. I had scheduled the extra two adults to support the students with their writing. However they arrived with a different plan. After discussion, one pre-service teacher agreed to support the self-assessment writing project while the other student teacher completed the other task. On the same day the weather was windy and pouring rain. The class’s regular daily routine was to go outside before the self-assessment writing project begins and walk or run around the school field for ten minutes. The morning block in the daily agenda was from 8:45 to 11:45 am. This was a large amount of time to be mostly sitting in a stationary classroom. Lastly, there was a scheduled ‘lock down’ drill planned for later on in the day. The students vocalized their concern about the lockdown procedure and if the students would be asked to exit the building without jackets and boots. All of these distractions amplified the amount of time required for self-assessment instruction.

Another factor of time was the students’ attendance. For research purposes it was challenging judging if a student needed more time to build confidence with the self-assessment process because they needed extra support or if it was because they missed the lesson when a specific self-assessment aspect was taught. In the early stages of the research project I attempted to keep track of lessons missed and tried to reteach the absentees. It quickly became too complicated when one student went on an extended vacation and returned mid-way through the project. Two new students also joined the class part way through the instructional unit. In further studies I recommend having a clear plan addressing attendance.
Survey. The survey questions were limited and only offered two categories to be analyzed. In retrospect, I would have added a goal-setting question. I could also have added more questions to give more data to compare and analyze. Andrade (2006) referred to a Writing Efficacy Scale I could have invested more time and research into its availability.

As the action based research project was being completed I often wondered if I should have created an instructional project instead. The improvement of the students’ writing had a greater impact on my teaching practice than the survey results. The instructional unit evolved into an easily replicated sequence of effective steps.

Implications and Recommendations for Practice

After study was completed my general teaching practices changed significantly, I believe for the better. I implemented four new teaching strategies, use formative assessment, generate student created assessment tools, teach with a ‘big picture’ idea and allow time for growth. I suggested teachers reflect on their own teaching practices and consider the following recommendations.

The first recommendation was to identify the purpose for assessment. Student learning happened through immediate one-to-one formative feedback. When students set goals and received immediate suggestions or instructions they appeared to learn the targeted concept easier. Summative assessment reflected an ending to the learning. Formative assessment reflected the ongoing process of learning.

The second recommendation was to give the ownership and responsibility of the assessment to the students. When students created the qualitative levels and criteria they felt success was attainable. Also, when the students saw the criteria needed for the next level of
success, for example “use rich vocabulary for description”, it was the student who decided they can “use the richer vocabulary” not the teacher. They gained confidence in their abilities as each personally set goal was attained. The student created assessment tool used developmental and age appropriate vocabulary. The students took more ownership of their learning and felt the assessment was authentic.

The third recommendation was to break large abstract concepts similar to student self-assessment into small step-by-step lessons within a specific instructional unit. The first phase of the unit was teacher lead with many supports. As the students learned the skills, more independence was offered to them. Students listened to the feedback and set realistic goals successfully when it was presented in a personal one-to-one fashion. Quick student-teacher conferences provided that opportunity effectively.

The last recommendation was for my colleagues to allow time for true and authentic academic growth. All three of the previously mentioned teaching practices took time. However once the time was invested the learning appeared to be exponential. The confidence the students gained ignited an excitement for learning.

The study was completed in the fall, however implemented the teaching strategies created for the research study into daily practice. The four suggested teaching practices enhanced student success beyond writing. The results of this study influenced changes in my teaching in all subject areas including math, science and social studies. My current and future students benefited from the professional growth I gained from completing this study.
Conclusion

The entire research process was an in depth educational journey. I discovered and identified several assessment biases I had. Originally, I claimed assessment was the final act of the education process meant for only adult stakeholders. However, I have redesigned my teaching practice to incorporate successful formative assessment and the most important stakeholders are the students. The foundation of all students’ learning is based on the skills and abilities they personally believe they have.
References


doi:10.1177/0265532215590847

https://www2.gov.bc.ca/assets/gov/education/administration/kindergarten-to-grade-12/performance-standards/writing_g5.pdf

https://curriculum.gov.bc.ca/

https://bctf.ca/uploadedFiles/Public/AboriginalEducation/AboriginalWaysofKnowing.pdf


Appendix A

Letter to Parents and Guardians

Dear Parents and Guardians;

Currently, I am completing my second year of my Masters of Educational Leadership program. My research project is about studying if the students’ confidence and skill level will increase after an instructional self-assessment unit is taught. The plan for the students’ success is fairly simple. The students will be given a survey to rate their confidence and skill level regarding self-assessment. I will then teach the self-assessment unit over a six-week period. The students will be given writing samples and the whole class will use a Grade 5 assessment rubric to identify the level and writing aspects that match the sample. They will also set a specific writing goal. After the self-assessment unit is complete the students will complete the same survey again. Microsoft excel will be used to analyze my data.

After the unit is complete the study will begin. The difference between the survey taken prior to the unit taught and survey taken after the unit will be calculated. The improvement scores will be analyzed. Parents and Guardians, this portion is completely optional for your child to participate in. The assent and consent forms will be delivered to the office and kept in a sealed envelope ensuring that the same time and energy will be invested to each student as the unit is taught.

Thank you for supporting my research project. I am excited to research the progress of the students’ self-assessment. Please feel free to contact me any time with any questions or concerns you may have.

Thank you, Mrs. Noreen Keen
Appendix B

Letter of Consent

Student Self-Assessment – Confidence and Skill

Principle Investigator

Noreen Keen

Master of Educational Leadership

Vancouver Island University

Student Supervisor

Dr. Rachel Moll, PhD.

Department of Education

Vancouver Island University

rachel.moll@viu.ca

I am a student in the Masters of Education in Educational Leadership program at Vancouver Island University (VIU). My research, entitled “Student Self-Assessment – Increasing Confidence and Skill” aims to increase students’ confidence and skill level regarding self-assessment after a six-week unit on self-assessment has been taught. My goal is that my research will contribute to the future teaching practices of Education students at VIU.

Research participants are asked to complete a two-question survey two times. One survey will be taken prior to a self-assessment unit taught by the teacher and the same survey will be taken again after the self-assessment unit has been completed. If you agree, the participant would be
asked survey questions concerning your confidence and skill level regarding self-assessment. With your permission, the survey results will be collected. The pre- and post-survey results will be compared to evaluate the levels of improvement. Your child’s participation would require nothing outside of regular class time. The unit will be taught to the entire class whether they are a part of the study or not.

To ensure the participants do not have a feeling of being obligated to participate in the research project the consent forms will be returned to the office without the researcher’s knowledge. The researcher will educate all students as if they are participants. All students will complete both surveys. Only the results from the participants who have a signed consent form will be collected and analyzed for the research project.

If you choose to participate anonymously, all records or your participation would be confidential. Only my supervisor and I will have access to information in which you are identified. With your permission, the participants’ survey results will be collected and analyzed. Any electronic data will be stored on a password-protected computer. Signed consent forms and paper copies of interview transcripts will be stored in a locked file cabinet at the school. The documents will be collected by a third party at the school office. They will be placed in a sealed envelope. The envelope will be placed in the locked filing cabinet until the self-assessment unit has been taught and both surveys completed. Data will be deleted and shredded at the end of the project, approximately May 31st, 2019.
The results of this study will be published in my Master’s thesis, and may also be used for conference publications, presentations, and published in peer-reviewed journals. There will be minimal information connecting or relating your child to the research.

The student’s participation is completely voluntary. The letter of consent may be sent at any time over the six-week self-assessment unit. The student may withdraw from the study at any time where practicable, for any reason, and without explanation.

I have read and understand the information provided above, and hereby consent to participate in this research under the following conditions:

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>I consent to the researcher collecting the results of the student’s survey.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I consent to the results of the two surveys being compared and analyzed.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I consent to the survey results being used for self-assessment research.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Participant Name ____________________

Parent/Guardian Signature____________________________

I, Noreen A. Keen, promise to adhere to the procedures described in this consent form.

Principal Investigator Signature __________________________ Date _______________

If you have any concerns about your treatment as a research participant in this study, please contact the VIU Research Ethics Board by telephone at 250-740-6631 or by email at reb@viu.ca. Participants were provided a copy of the consent form.
Appendix C

Student Assent Form

Student Assent Form

Student Self-Assessment – Confidence and Skill

To what degree, if any, will the level of confidence and skill regarding self-assessment increase after the implementation of a six-week teacher modeled self-reflection unit as reported by students?

September 2017

Noreen Keen
Graduate Student
Masters of Educational Leadership
Vancouver Island University

Rachel Moll PhD. Supervisor
Faculty of Education
Vancouver Island University

This research study will investigate the increase of confidence and skills levels about self-assessment as reported by Grade 4/5 students. The research study will involve your child’s class and will be conducted between September and November 2017. This research study is being conducted in partial fulfilment of the requirements of a Master’s in Educational Leadership Degree and the results will be presented in a thesis that may be published online in VIU’s library.
You are being invited to participate in this study because you are a Grade 4/5 student in my class. As a student in this my class, you will complete a survey to self-assess your levels of confidence and skills regarding self-assessment before and after a 6-week unit. All students in your class will be taught a 6-week unit on the process on self-assessment.

As a student in this class you will participate in all of the learning activities, but to participate in the study you are being asked to provide permission to me, the researcher, to use your survey scores as research data. Your participation in the study and your results will be anonymous to me. If you and your parent/guardian give me consent, then only your scores will be provided to me for use in writing my Thesis. Your name will not be made public or be used in any part of my research and I will not be told at any time whether you choose to participate or not. I will administer and collect all student surveys, then pass them along to my research assistant who will create an anonymous data set, which will only include the scores from participating students who have given their assent and received parent/guardian consent.

I am hoping that most students (18 or more) will choose to participate by allowing me to use their survey scores in my research. However, your participation in this research study is completely voluntary. There is no direct benefit for choosing to participate in my research study, and there will also be no penalty if you choose not to participate in my research study. You can also withdraw from the study at any time by contacting my research assistant and she will withdraw your scores from the anonymous data list. If you choose to participate in this study, you will not be identifiable to me, or your classmates, or your teacher as surveys will be administered to and collected from every student in this class.
If you or your parent/guardians have any questions or concerns about your treatment as a participant in this research study, please contact the Vancouver Island University Ethics Officer at (250) 740-6331, or by email at reb@viu.ca.

Thank you,

Mrs Noreen Keen
To participate in this study, please circle ‘YES’ when you respond to the statement below, sign the form, and return it the school’s front office.

If you do NOT wish to participate, please circle ‘NO’ when you respond to the statement below, sign the form, and return it to the school’s front office.

Name of Student (please print)

I have read the above Assent Form. I understand what will happen during this research study and I understand that only my scores will be used. I understand that my participation in this research study is completely voluntary. I understand that I can choose to withdraw from this study at any time, even though I have granted assent.

I agree to participate in this research study.      YES      NO

Signature of Student                          Date
Appendix D

Survey

Name _________ Date ________

How confident do you feel when I ask you to assess your writing?

0_________________________________________ 10

not confident

How good are you at assessing your own writing?

0_________________________________________ 10

not good

very good
Appendix E

Script to Students

I am completing my second year of my Masters of Educational Leadership program. My research project is about studying if the students’ confidence and skill level will increase after a writing unit focusing on student self-assessment and goals are taught. The plan for your success is fairly simple. You will be given a survey to self-report what you perceive to be your confidence and skill level is regarding self-assessment. I will then teach the self-assessment unit over a six-week period. You, the students will be given writing samples and the whole class will use a Grade 5 assessment rubric to identify the level and writing aspects that match the sample. You will also set a specific writing goal to work on when they write the next draft. After the self-assessment unit is complete you will complete the same survey again. Microsoft excel will be used to analyze the data.

It is after the unit is complete where the study begins. The difference between the survey taken prior to the unit taught and survey taken after the unit will be calculated. The increases will be analyzed. Students, this portion is completely optional for your child to participate in. The consent and assent forms will be delivered to the office and kept in a sealed envelope ensuring that the same time and energy will be invested in each student as the unit is taught.

Thank you students, for supporting my research project. I am excited to research the progress of your self-assessment after the unit is taught. Please feel free to ask me any questions about the surveys, the instructional unit or the research. I am now going to hand out a package for your parents. Please sit down with your adults and review it.
Appendix F

Invitation to Parents

Information Meeting

Please come to an information meeting about the research project Mrs. Keen is completing on student self-assessment.

Who: Parents and Students please attend

Where: Multi-purpose room

When: Tuesday November 7, 2017 at 6:00 pm to 7:00 pm.

What: Information about Mrs. Keen’s Research project on student self-assessment

Why: Mrs. Keen is completing the Master of Educational Leadership degree at Vancouver Island University

We will be attending the information meeting on Tuesday November 7, 2017 at 6:00 pm to 7:00 pm.

__________________________________ Student’s name

** The students will have 100% anonymity and will receive the same education if the consent form is signed or not. The student or adults may decide to withdraw at any time throughout the project.
# Appendix G

## Grade 5 Student Assessment Rubric for Journal or Personal Writing

<table>
<thead>
<tr>
<th>Aspect of the Writing</th>
<th>Beginning level of Writing</th>
<th>Developing level of Writing</th>
<th>Applying level of Writing</th>
<th>Extended level of Writing</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Meaning</strong></td>
<td>- Topic not clear</td>
<td>- Retelling what happened, may give some opinions</td>
<td>- some analysis (deep thinking) and reactions</td>
<td>- Has a point of view with an opinion - Well-developed ideas</td>
</tr>
<tr>
<td>- ideas</td>
<td>- Not many details</td>
<td>- Few details, reasons &amp; explanations</td>
<td>- some supporting details, reasons, &amp; explanations (ex. How you felt, etc.)</td>
<td><strong>-</strong></td>
</tr>
<tr>
<td>- details</td>
<td>- Details are copied or not on topic</td>
<td>- Used only the ideas from the class brainstorming</td>
<td><strong>-</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Style</strong></td>
<td>- Uses basic language and vocabulary &amp; may use incorrect vocabulary</td>
<td>- Simple language or vocabulary</td>
<td>- Clear, direct language/vocabulary</td>
<td>- Uses variety of language, tries new words</td>
</tr>
<tr>
<td>- words</td>
<td>- Sentences need work</td>
<td>- Simple and Compound sentences, not many different kinds</td>
<td>- Some different kinds of sentences</td>
<td>- Sentences flow smoothly &amp; different kinds are used (variety)</td>
</tr>
<tr>
<td>- sentences</td>
<td><strong>-</strong></td>
<td><strong>-</strong></td>
<td><strong>-</strong></td>
<td><strong>-</strong></td>
</tr>
<tr>
<td><strong>Form</strong></td>
<td>- confusing beginning</td>
<td>- topic is clear</td>
<td>- introduces the topic</td>
<td>- introduces the topic in an interesting way - ideas are on topic and very well organized - smooth transitions, uses many different connecting words - has a proper clear conclusion</td>
</tr>
<tr>
<td>- beginning</td>
<td>- Ideas are not about one topic - Very short</td>
<td>- middle is a list of ideas or events loosely related to the topic - very short - uses the same connecting words over and over, or leaves them out sometimes</td>
<td>- middle has a list of reasons, examples, and details, but they could be developed more</td>
<td><strong>-</strong></td>
</tr>
<tr>
<td>- organization</td>
<td>- No connecting words (or too many “ands” and “thens”)</td>
<td>- ending may be missing</td>
<td>- uses different connecting words - has an ending, but it might be abrupt (could be smoother)</td>
<td><strong>-</strong></td>
</tr>
<tr>
<td>- connecting words</td>
<td>- Ending is missing or doesn’t make sense</td>
<td><strong>-</strong></td>
<td><strong>-</strong></td>
<td><strong>-</strong></td>
</tr>
<tr>
<td>- ending</td>
<td><strong>-</strong></td>
<td><strong>-</strong></td>
<td><strong>-</strong></td>
<td><strong>-</strong></td>
</tr>
<tr>
<td><strong>Conventions</strong></td>
<td>- many errors, repeated over and over</td>
<td>- several errors, some parts are hard to follow - most simple sentences are correct</td>
<td>- some errors, but they do not affect the meaning - most sentences are complete, not many run-on sentences</td>
<td>- Minimal errors - challenging words - complete words - long complex sentences with few errors</td>
</tr>
<tr>
<td>- complete sentences</td>
<td>- Writing is difficult to understand</td>
<td>- many incomplete or run-on sentences</td>
<td><strong>-</strong></td>
<td><strong>-</strong></td>
</tr>
<tr>
<td>- spelling</td>
<td>- Many incomplete or run-on sentences</td>
<td><strong>-</strong></td>
<td><strong>-</strong></td>
<td><strong>-</strong></td>
</tr>
<tr>
<td>- capitals</td>
<td><strong>-</strong></td>
<td><strong>-</strong></td>
<td><strong>-</strong></td>
<td><strong>-</strong></td>
</tr>
<tr>
<td>- punctuation</td>
<td><strong>-</strong></td>
<td><strong>-</strong></td>
<td><strong>-</strong></td>
<td><strong>-</strong></td>
</tr>
<tr>
<td>- grammar</td>
<td><strong>-</strong></td>
<td><strong>-</strong></td>
<td><strong>-</strong></td>
<td><strong>-</strong></td>
</tr>
</tbody>
</table>
The BC Performance Standards can be found at
http://www.bced.gov.bc.ca/perf_stands/writing_g5pdf
## Appendix H

### Ministry Rubric

#### Quick Scale: Grade 5 Personal, Impromptu Writing

The Quick Scale is a summary of the Rating Scale that follows. Both describe student achievement in early March - early April of the school year. Personal, impromptu writing is usually expected to be checked for errors, but not revised or edited.

<table>
<thead>
<tr>
<th>Aspect</th>
<th>Not Yet Within Expectations</th>
<th>Meets Expectations (Minimal Level)</th>
<th>Fully Meets Expectations</th>
<th>Exceeds Expectations</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SNAPSHOT</strong></td>
<td>The writing is often hard to understand. The writer may need frequent help.</td>
<td>The writing offers some ideas that are related to the topic; may be flawed by frequent errors.</td>
<td>The writing is easy to follow; ideas are relevant and logical.</td>
<td>The writing is focused, easy to read, and shows insight.</td>
</tr>
<tr>
<td><strong>MEANING</strong></td>
<td>- ideas are not developed; often very brief</td>
<td>- some relevant ideas; little analysis</td>
<td>- relevant ideas with some analysis; shows individuality of the writer</td>
<td>- strong point of view, reaction, or opinion; shows individuality</td>
</tr>
<tr>
<td></td>
<td>- few details or explanations</td>
<td>- examples or explanations may be repetitive or illogical</td>
<td>- logical explanations or examples clarify and develop the ideas</td>
<td>- develops ideas clearly and logically with details, examples, and explanations</td>
</tr>
<tr>
<td><strong>STYLE</strong></td>
<td>- simple language; may be inappropriate or incorrect in places</td>
<td>- simple language; may be somewhat vague and repetitive</td>
<td>- language is clear with some variety</td>
<td>- language is clear, varied; some attempts to be specific, precise</td>
</tr>
<tr>
<td></td>
<td>- poorly constructed sentences; little variety</td>
<td>- repeats a few basic sentence structures</td>
<td>- includes a variety of sentence lengths and patterns</td>
<td>- flows smoothly; variety in sentences</td>
</tr>
<tr>
<td><strong>FORM</strong></td>
<td>- introduction may leave reader wondering what the writing is about</td>
<td>- introduces topic, but often loses focus</td>
<td>- opens with a clear intention or purpose</td>
<td>- effective opening</td>
</tr>
<tr>
<td></td>
<td>- some attention to sequence</td>
<td>- sequence is generally logical; may be some breaks</td>
<td>- logical sequence; linking words help to make connections</td>
<td>- sequenced; related ideas are grouped together; linking words show connections</td>
</tr>
<tr>
<td></td>
<td>- ending may be omitted</td>
<td>- end may be sudden</td>
<td>- logical ending</td>
<td>- strong ending sums up writer's views</td>
</tr>
<tr>
<td><strong>CONVENTIONS</strong></td>
<td>- repeated errors in basic sentence structure, spelling, punctuation, or grammar often make the writing hard to understand</td>
<td>- some errors in sentence structure, spelling, punctuation, or grammar; errors may make parts hard to follow</td>
<td>- few errors in basic sentence structure, spelling, punctuation, or grammar; errors do not interfere with meaning</td>
<td>- correct basic sentence structure; grammar, spelling and punctuation, may include some errors in complex structures</td>
</tr>
</tbody>
</table>

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GRADE 5 PERSONAL, IMPROMPTU WRITING
Appendix I

Example Survey

How confident do you feel when I ask you to assess your writing?

0 1 2 3 4 5 6 7 8 9 10
not confident very confident

How good are you at assessing your own writing?

0 1 2 3 4 5 6 7 8 9 10
not good very good
Appendix J

Third Party Isolationist List

Thanks so much for your help! The process is as follows –

1. As you open the signed consent and assent forms place a number on the form in the order you open them. For example the first envelope opened is #1

2. Match the signed forms to the completed surveys

3. Place the same number on the surveys

4. Black out the names on the surveys

5. Place the consent and assent forms in an envelope and seal it. Label as signed forms.

6. Place the unmatched pre and post surveys in an envelope and seal it. Label as unmatched surveys

7. Place the blacked out anonymous forms in an enveloped labeled surveys for research.