AN AUTO-ETHNOGRAPHY EXPLORING THE INFLUENCE OF FORMATIVE

ASSESSMENT ON STUDENT SELF-EFFICACY IN READING

by

Tawnie L. Hildebrandt

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APPROVED:

_____ (Faculty Advisor)

_____ (Director, Canadian Education Programs)

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Abstract

The aim of this study was to observe the changes in the self-efficacy of Grade 2 and 3 students when using formative assessment techniques in reading, including setting learning goals, self-assessment, and providing students with descriptive feedback. By engaging in an autoethnography, the researcher had the opportunity to reflect on how her involvement in implementing formative assessment affects student self-efficacy. The study was carried out over the length of a ten month school year, with the researcher journaling her decisions, reflections, observations of, and interactions with students. The journals were analyzed and coded to reveal four key themes: using formative assessment to set learning goals, developing trust, the effect of feedback on self-efficacy, and the effect of master experiences on self-efficacy. The results presented evidence that providing students with formative assessment including learning goals and descriptive feedback can have a positive impact on self-efficacy, especially in conjunction with mastery and vicarious experiences. The results correlated with literature exploring how self-efficacy can be influenced and the positive effects formative assessment can have on student achievement. A result that emerged but was not present in the literature was a fluctuation in self-efficacy that a student could have for a specific goal. The results provide an opportunity for the researcher to reflect and make changes to improve her practice to better facilitate student learning and self-efficacy in other subject areas. As well, the results of the study give other educators a window into the successes and struggles of a typical teacher, and invite them to reflect on their own practice and understanding of self-efficacy and formative assessment.

Keywords: self-efficacy, verbal persuasion, mastery experience, formative assessment, feedback, learning goals

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Chapter 1

The Problem

Introduction

Each day in classrooms students are asked to accomplish a variety of tasks that might require them to question their ability to be successful. For students to deepen their understanding of key concepts and improve their reading, writing, and math skills students need learning activities that are challenging enough to help them learn something new but not overwhelmingly difficult.   Many students are not confident in the belief that they have the ability to achieve success with even the most simple and straightforward tasks and learning goals. Bandura (1993) describes this belief as self-efficacy which is defined as a student's "belief about their capabilities to exercise control over their own level of functioning and over events that affect their lives" (p. 118). As a teacher, I may believe students have the capabilities to accomplish the learning task I have chosen for them, but if they do not believe it for themselves it can make the learning goal too overwhelming to even attempt.

As a classroom teacher I am encountering many students whose self-efficacy is affecting their progress in reading. I work with students who have limited access to books, are new to the mechanics of reading, and have parents with limited literacy skills themselves. Their image of themselves as a confident reader is often poorly developed at a very early age and not a true reflection of what they are capable of. What a student has not accomplished in the past can affect what they believe possible in the future and plant the seed of self-doubt (Bandura, 1993). For some students, ability is seen as a skill that can be improved with gaining knowledge and

competencies, and leads them to seek out challenges and the opportunity to learn from mistakes

(Bandura, 1993). One of the challenges of teaching is how to motivate students who resist

challenges and prefer to complete easy tasks so as to not encounter any mistakes.

The use of formative assessment in classrooms has helped students take ownership over

their learning, while also helping the teacher mold activities and learning goals to best target

areas that students need further development in (Black & Wiliam, 1998a). From personal

experience, having students assess their own learning has been an eye opening experience for

many students to clearly see their current achievement level. Structuring formative assessment

around three key questions of "Where am I going? Where am I now? And How can I close the

gap?" (Chappuis, 2005, p. 40) helps both teachers and students set targets for how they want to

improve their demonstration of learning. Black and William (1998b) link the importance of

constructive feedback and goal setting to improving self-perception. Is it possible that having a

student self-assess their learning and then providing them with descriptive feedback could affect

their self-efficacy in reading? From my research and personal experience, I am curious to see

how the role I play can affect a student's self-efficacy. This study explores how the role I play as

the teacher in teaching students how to self assess their reading progress and providing them

with feedback, can impact students' self-efficacy.

Background to the Problem

There are many studies exploring how self-efficacy is developed and nurtured, with

Albert Bandura (1993, 1997) writing extensively about it since the 1970s. What a student has

not accomplished in the past can affect what they believe possible in the future and plant the seed

of self-doubt (Bandura, 1993). Consider for a moment, if running across a field left you winded

and with a cramp in your hamstring. Would you have confidence in yourself to ever complete a

marathon? Similarly, a student who struggles to read and understand a simple sentence would likely see the task of reading an entire book too overwhelming to consider being within their realm of ability. This self-doubt can make it difficult to move forward with new learning goals and in some cases contributes to behavioral issues or learned helplessness. Through their research, Linnenbrink and Pintrich (2003) explain that students who struggle with confidence in their abilities are "… less likely to try hard and more likely to give up easily at the first sign of difficulty or try to get help that completes the task without helping them learn or master the task" (p. 129). There are numerous studies describing the correlation between high levels of self-efficacy and high achievement (see for example Määttä & Järvelä, 2013; Margolis & McCabe, 2006; see for example Nes Ferrara, 2005; Shell, Colvin, & Bruning, 1995; Usher, 2008) that support helping students develop a strong sense of self-efficacy.

When I receive students in grade two and three their self-efficacy has already been influenced by prior reading experiences and the interactions they have had with parents and teachers around reading. For young students who are still developing their self-efficacy and have limited experience to draw from, what their teachers and parents say about their abilities can have a significant effect. Undoubtedly students will have had experiences that both positively and negatively influenced their self-efficacy beliefs. Usher and Pajares (2008) argue that when students "…are not yet skilled at making accurate self-appraisals, students often depend on others to provide evaluative feedback and judgments about their academic performance" (2008, p. 754). Consequently, the beliefs a student holds about his or her abilities ultimately influences how they think, what they are motivated by, and how they behave (Bandura, 1993). It is important to have an awareness of the experiences a student may have had when developing the reading profile of a student in order to accurately assess their self-

efficacy needs. Considering the focus of my study, it is equally critical to be sensitive of how

my feedback to students can impact a student's beliefs about himself or herself and how my

comments will be interpreted based on their prior experiences.

Formative assessment has become increasingly important in how both teachers and

students monitor learning and understanding. Formative assessment is gathered as students are in

the process of learning. It allows teachers to make changes to how they are instructing as well as

how they are asking students to demonstrate their learning (Black & Wiliam, 1998a). For

students, formative assessment has two key components: first formative assessment helps

students be aware of the gap between what they currently understand and the desired final goal;

and secondly steps that can be taken to close the gap and meet the final goal (Black & Wiliam,

1998a). Black and William explain that "pupils who encounter difficulties are led to believe that

they lack ability, and this belief leads them to attribute their difficulties to a defect in themselves

about which they cannot do a great deal" (1998b, p. 142). There is extensive research on the

benefits of formative assessment, and it is beginning to emerge that it has a connection to a

student's self-perception and building a sense of self-efficacy.

Investigating how to build a student's self-efficacy is key to building resilient and confident

learners. Bandura (1993) believes that feedback focusing on students' progress rather than

deficiencies will highlight their capabilities and produce positive feelings about their ability.

Black and William (1998a) argue that by setting goals and providing students with feedback on

how to reach the goal it can improve a student's self-perception. When both the student and the

teacher recognize what needs to be done to close the gap and have the student meet the learning

target, they can work together to get there. Stiggins and Chappuis (2005) explain that for a

student to see that they are in fact capable learners, they need to witness a small success that is

measured against an assessment tool to encourage them to put more effort into their next

academic task. They argue that this will allow students to develop a positive academic self-

concept, similar to what Bandura (1993) and Black and William (1998a, 1998b) argue.

Research Problem

       The study is an auto-ethnography investigating how my ability to implement formative

assessment and provide descriptive feedback affects a student's self-efficacy in reading. The

studies that focus on how a high sense of self-efficacy can positively influence a student's

achievement is extensive (Linnenbrink & Pintrich, 2003; Lorsbach & Jinks, 1999; Nes Ferrara,

2005; Shell et al., 1995; Usher, 2008; Yurt, 2014) and are mostly quantitative or mixed method

studies focusing on achievement in writing and math. Within these studies there is limited

emphasis placed on changing a student's self-efficacy. There is research examining the

correlation between self-efficacy and self-assessment (Andrade & Valtcheva, 2009; Clark, 2008;

Cowie, 2005; Dweck, 1986; Margolis & McCabe, 2006; McMillan & Hearn, 2008; Miller &

Lavin, 2007; D. H. Schunk & Rice, 1993) and similarly much of this is focused on math and

writing, with only a few examining reading. A recent qualitative study exploring formative

assessment concluded that primary age students were highly engaged in self-assessment

practices and appreciated descriptive teacher feedback that positively influenced achievement

and students' belief in themselves as learners (Cowie, 2005). Studies that include the role of the

teacher in the development of a student's self-efficacy are limited and Schunk (1991) argues that

further research is needed on the effects of the teacher-student interaction on a student's self-

efficacy. This study would add to the literature that is currently available by providing

qualitative research on the role of the teacher in developing student self-efficacy while using

self-assessment.

Purpose of the Study

The purpose of the study is to complete an auto-ethnography observing the changes in the self-efficacy of Grade 2 and 3 students when using formative assessment techniques in reading, as well as reflecting on how my involvement in implementing and providing feedback affects student self-efficacy. I aim to observe how the way in which I implement self-assessment and the feedback that I give students affects self-efficacy. By journaling the actions I take and the observations I make, themes will emerge that I can reflect on and analyze to make changes to improve my own practice to better facilitate student learning and self-efficacy. This study will add a new perspective to the literature that is currently available.

Statement of Research Hypotheses

An auto-ethnographer seeks to blend elements of auto-biographers and ethnographers by including "personalized accounts that reflect on the ways in which the ethnographer interacts with the culture being researched" (Siddique, 2011, p. 311) and as such to predict the final outcome is not the purpose of the current study. The aim of the research is to better understand how to self-efficacy can change when using formative assessment and to evaluate the influence that I myself as a teacher have in the process. The evidence suggests that self-assessment can build the confidence of a learner and "with increased confidence comes the belief that learning is possible" (Stiggins & Chappuis, 2005, p. 12) so it is reasonable to hypothesize that students using self-assessment should see an improvement in their self-efficacy.

Importance of Study

An auto-ethnography is an opportunity for the researcher to develop a "…much more nuanced and detailed understanding than could be achieved merely through interviews" (Siddique, 2011, p. 315). Considering the personalized nature needed to contribute to the

development of individual student's self-efficacy, an auto-ethnography could provide a deeper and more reflective account of this process than other methodologies. The study will provide an account of how my influence as a teacher, not just as the researcher, influences students' self-efficacy and affects students' responses to self-assessment and constructive feedback. The study will provide other educators a window into how the actions of a teacher can affect student self-efficacy, allowing them to examine parallels in their own practice and encouraging them to reflect on how their own behaviors may be influencing students both positively and negatively.

The majority of the research examining the correlation between self-efficacy and self-assessment is quantitative or mixed method, with most of it focusing on writing and math. This qualitative study will provide an intimate look at how self-efficacy and formative assessment can impact a student's reading achievement. Schunk (1991) describes a need to explore the effects of providing students with feedback for an extended period. This study will provide a more narrative examination of the experiences students have with self-assessment and feedback, and how and when it impacts their self-efficacy over the course of a school year. Considering that learning to read is an ongoing process that is constantly increasing in difficulty to keep students moving forward, it provides this extended period of time that Schunk was referring to.

Definition of Terms

1. Self-Efficacy – in the simplest of terms, it is a student's "…sense of confidence regarding the performance of specific tasks" (Lorsbach & Jinks, 1999, p. 158) that is developed based on past successes and failures, as well as on feedback on performance of a specific task (Bandura, 1993). Self-efficacy can affect a student's achievement; students with a higher level of self-efficacy have increased engagement, greater ability to persevere

through challenges and are more likely to ask for help in understanding key processes and

strategies (Linnenbrink & Pintrich, 2003).

2. Formative Assessment – assessment that is occurring while the student is in the process

   of learning conducted by both the teacher and the student. "… The assessment purpose is

   to provide teachers and students with information they need along the way, during the

   learning process, to make decisions that will bring about more learning" (Stiggins &

   Chappuis, 2005, p. 17). The evidence gathered of learning will be used to provide

   "feedback to modify the teaching and learning activities in which [students] are engaged"

   (Black & Wiliam, 1998a, pp. 7–8).

3. Self-Assessment – students assess their current ability level and achievement in reading

   based on pre-established criteria by "…collecting evidence of their achievements,

   charting their growth, and setting goals for future learning" (Stiggins & Chappuis, 2005,

   p. 17) which allows the student to understand who they are as a learner.

4. Feedback – provided to the student by the teacher, it involves descriptive and

   constructive statements that "…should be about the particular qualities of his or her work,

   with advice on what he or she can do to improve, and should avoid comparisons with

   other pupils" (Black & Wiliam, 1998b, p. 143).

Summary

The aim of this study is to complete an auto-ethnography observing the changes in the

self-efficacy of Grade 2 and 3 students when using formative assessment techniques in reading,

as well as reflecting on how my involvement in implementing and providing feedback affects

student self-efficacy. The study will investigate previous research that seeks to find a correlation

between self-efficacy and formative assessment, as well as the impact of self-efficacy on

achievement levels. The qualitative data gathered through writing an auto-ethnography will add

to the literature currently available on how to affect change in a student's self-efficacy, and the

influence self-assessment and feedback have on self-efficacy. By journaling my own actions and

observations of students, I will be able to reflect and discern themes that will be analyzed to

expose trends in my actions that may have both positively and negatively affected students' self-

efficacy. It will allow me to make recommendations for my future practice that may encourage

other educators to be reflective of their own practice and draw parallels.

Outline of the Remainder of the Paper

In the next chapter, literature will be reviewed regarding the sources of self-efficacy and

how self-efficacy can affect achievement. Literature will be presented that focuses on verbal

persuasion, a source of self-efficacy that this study will focus on. Then the literature will explore

how formative assessment impacts learning. Finally, research linking self-efficacy and

formative assessment will be presented. In chapter three, the research methodology will be

described including research design, participants and consent, ethical considerations, procedure,

data collection and analyses. Chapter four will include the results, describing the themes that

emerged from that data after it was analyzed and coded.   Chapter five will include a discussion

of the evidence, a summary, conclusion and implications for the current researchers future

practice.

Chapter 2

Review of literature

Introduction

Motivating and encouraging students who are learning to read can be a challenge task. Each student learns to read at their own pace, has their own areas for personal development, and needs to have the grit and perseverance to stay positive when they are making countless mistakes and struggling to not only read the words, but also make sense of what the author has written. Learning to read is messy, constantly a challenge even for the best reader, and a deeply personal accomplishment. When a struggling reader observers a peer in the same grade read a page from *Harry Potter and the Philosopher Stone* (Rowling, 2000) with fluency and expression, the struggling reader can often lose confidence that they will ever reach that caliber of reading when they struggle to read "Where is the cat going?" As a teacher, observing students who have the capabilities to read well and improve but do not believe it themselves is hard to witness, and sometimes even harder to change. So often students comment that, "I'll never be able to read well," instead of "I *want* to be able to read well." Investigating the role that a high sense of self-efficacy can play in a student's academic success is a possible way to address the dynamic process of learning to read.

Investigating the correlation between self-efficacy and achievement reveals that students with high levels of self-efficacy have higher achievement levels, with the majority of the research focusing on writing and math. Examining research on how a student's self-efficacy is developed, there are indications that there are ways to change and improve it. Providing students with feedback and involving them in formative assessment of their learning for the purpose of providing students with instructions for further improvements, is one of the ways the research

encourages changes to self-efficacy. Formative assessment, including self-assessment, goal

setting, and providing feedback, has been shown to improve a student's achievement as well as

their self-perception. Through the research disseminated for the current study, exploring how

formative assessment can support the development of a better sense of self-efficacy is critical,

since monitoring the actions and choices of the teacher in implementing formative assessment

practices is a focus of this auto-ethnography.

The purpose of the study is to observe the changes in the self-efficacy of grade 2 and 3

students when using formative assessment techniques in reading, while reflecting how my

involvement in implementing and providing feedback affects student self-efficacy. I aim to

observe how the way in which I implement self-assessment and the feedback that I give students

affects self-efficacy. The research collected and reviewed in this chapter examines how self-

efficacy is developed, the impact self-efficacy and formative assessment each separately have on

student achievement, and finally how formative assessment can affect self-efficacy.

Sources of Self-Efficacy

Bandura (1977) describes self-efficacy as the belief a person has in their perceived ability

and skill level to accomplish a task. Depending on how strong a person judges their self-efficacy

to be for a specific task, it will influence how "…people feel, think, motivate themselves, and

behave" (Bandura, 1993, p. 118). A person's self-efficacy is developed based on previous

experience, as successes and failures contribute to their overall belief system in how capable they

are (Bandura, 1977). Linnenbrink and Pintrich (2003) note that self-efficacy should not be

confused with self-concept when exploring a young student's self-efficacy. Self-concept

describes the large beliefs a person has about their overall competence level, such as describing

someone as being good at reading or good writing (Linnenbrink & Pintrich, 2003). Self-efficacy

is a judgment made by a student about their ability to accomplish a specific task, such as writing

a narrative paragraph or being able to comprehend a specific piece of text (Zimmerman, 2000).

There are four sources that Bandura (1977, 1997) argues shape a person's self-efficacy:

mastery experiences, vicarious experiences, verbal or social persuasion, and physiological states.

Performance accomplishments refers to mastery experience of a skill where students can observe

how successful they are with a specific task by attempting to complete it (Margolis & McCabe,

2004). Bandura (1997) argues that mastery experience is the most influential of the four sources

because "… they provide the most authentic evidence of whether one can muster whatever it

takes to succeed" (1997, p. 80). An example of a mastery experience would be a student

completing a difficult addition question correctly, writing a series of sentences with accurate

punctuation, or reading a paragraph and demonstrating comprehension of the main theme. In

their study exploring the effects of each of the four sources on student writing self-efficacy,

Pajares, Johnson, and Usher's (2007) results confirmed that mastery experience was most

influential on students' self-efficacy beliefs for both boys and girls, as well as students in

elementary, middle, and high school.

Vicarious experience involves students establishing their self-efficacy of a task based on

observing someone else modeling the skill first (Bandura, 1997). For a student, it may involve

watching the teacher model the skill or a even possibly a peer (Pajares et al., 2007). The more

alike the individual modeling the skill is to the observer, the more likely it is the observer will

believe themselves capable of the skill (Bandura, 1997). Bandura (1997) believes that a

vicarious experience does not have the same influence on perceived self-efficacy compared to

mastery experience, but that the two sources of self-efficacy often work in tandem. For example,

a child observing a peer tying their shoe, while attempting to do so at the same time, will create a

powerful mastery and vicarious experience that could create a high level of self-efficacy for tying one's shoes. It appears though that vicarious experience on its own does not have the impact on self-efficacy that the other three sources have. In the study completed by Pajares, Johnson and Usher (2007) exploring the impact of the four sources of self-efficacy on writing, as well as in a study by Yurt (2014) that tracked self-efficacy sources in mathematics, vicarious experience had less of an effect than the other three sources.

Verbal or social persuasion serves to provide a student with information or feedback about their performance that the student can then interpret and evaluate to influence their self-efficacy (Margolis & McCabe, 2006). When those of significant importance to the student, who are highly trusted, provide support and encouragement for a specific goal, it can strengthen the student's self-efficacy belief (Bandura, 1997; Margolis & McCabe, 2006). Bandura (1997) theorizes that verbal persuasion may have limitations to creating an enduring influence over someone's self-efficacy. For example, a student may doubt their ability to solve a three-digit addition question. A teacher could provide verbal persuasion by reminding the student of the success they have had with adding two digit equations, and encourage them to use strategies that made them successful with two digit equations. The influence of the verbal persuasion will most likely encourage the individual to attempt the task, after which the mastery experience of completing the activity will further influence their self-efficacy for the task. Verbal persuasion could negatively affect an individual's self-efficacy though if they actually are unable to complete the task causing their trust in the person who encouraged them to falter, and their own self-efficacy to be diminished (Margolis & McCabe, 2004).

Bandura (1993, 1997) outlines how performance feedback, that is providing an individual with a description of what they did to be successful in a task, is a critical aspect of verbal

persuasion. For example, after a student has successfully read and understood a paragraph, the teacher would point out that the student was successful because they sounded out difficult words and stopped to ask questions for clarification. Margolis and McCabe (2006) argue that if a student is struggling to improve their self-efficacy even after having minor success with a task, that providing him or her with descriptive feedback detailing what steps made them successful can build self-efficacy. For young students who may not have the metacognitive skills to know what they did to be successful, having someone point out these steps could be beneficial to establishing self-efficacy (Usher & Pajares, 2008). Schunk (1991) argues based on studies he has completed, that feedback based on ability rather than effort yields higher self-efficacy. By only complimenting or encouraging effort it does not provide the descriptive details necessary to help the student understand what they can do to continue to succeed or what they did to succeed in the first place. This descriptive feedback can be used to build self-efficacy for a future task of similarity. Similarly by providing students with feedback that is overly critical of what was done wrong instead of providing encouragement and descriptions to assist with further improvements, it can negatively affect self-efficacy (Pajares et al., 2007). As Bandura explains, by describing what a student did that assisted him or her in meeting a goal, it allows the student to see that ability is "…an acquirable skill, deemphasizing competitive social comparison, and highlight[ing] self-comparison of progress and personal accomplishments" (1993, p. 125).

     Physiological states, the fourth source of self-efficacy, refers to emotions felt prior, during, and after an event that could include anxiety, stress, arousal, fatigue and mood (Pajares et al., 2007; Usher & Pajares, 2008). These emotions and moods help an individual interpret their competence with the task, either positively or negatively affecting one's perceived self-efficacy (Margolis & McCabe, 2006). Physiological states are often critical when individuals are

building self-efficacy around activities that involve strength, stamina and health choices.

Physical activities where individuals experience fatigue, aches, and pains can lead to doubting

one's self-efficacy for the task. In their study exploring how the four sources of self-efficacy

influenced student's writing, Pajares, Johnson and Usher (2007) found that stress and anxiety

connected to writing contributed to lower self-efficacy in elementary and middle school students.

Bandura (1997) argues that moods can affect how people learn and recall things which affects

their perceived self-efficacy, stating people "… make positive evaluations when they are in good

moods and negative evaluations when they are in bad moods" (1997, p. 112). He explains that it

may be necessary to change what people attribute their mood to, if it is negatively tied to the task

being attempted.

Exploring how influential each source independently can be on an individual's self-

efficacy is a challenge. While Bandura (1993, 1997) and others have theorized and studied how

mastery experience provides the greatest influence there are areas, such as verbal persuasion and

physiological state, that are more difficult to accurately measure. Bandura (1997) argues that for

an individual to evaluate the influence of each source is difficult since they often converge. As

well, each situation may draw on different sources of self-efficacy. Zimmerman (2000) argues

that in many studies, verbal persuasion may have considerable less documented influence on

self-efficacy because the outcomes of the influence are not witnessed and need to be described

by the student.   In their exploration of the data gathered around the influence of each of the four

sources of self-efficacy, Usher and Pajares (2008) found that there was a large range of effect

sizes when searching for correlations between verbal persuasion and self-efficacy. This means

that the correlation coefficient statistic (Pearson's r) varied between research studies depending

on the number of participants creating inconsistencies. They attributed some of the inconsistent

results to the challenges participants may have had in describing and recognizing how much of an impact feedback and verbal persuasion really had on their self-efficacy. Many of the quantitative studies Usher and Pajares gathered, involve high school and college students being interviewed. They theorize that the students may have placed emphasis of influences on their self-efficacy incorrectly. Usher and Pajares also concluded that while there were correlations between self-efficacy and verbal persuasion, it was not predictive of self-efficacy levels in all subject areas.

Usher and Pajares (2008) suggest exploring verbal persuasion through qualitative investigations to gather a "rich understanding of the genesis of students' self-efficacy beliefs" (2008, p. 784) because it allows for the researcher to better focus on the influence different sources can have on self-efficacy. They recommend qualitative approaches implemented over a longer period of time, such as classroom observations, ethnography, and interview techniques.

In addition, studies that included the perspective of the teacher, especially when working with young students may provide insight into verbal persuasion. Schunk (1991) similarly recommends that further research needs to be completed exploring how attributional feedback can influence self-efficacy. He also argues that studies over a longer period of time may be able to reveal how students at different stages of skill development may interpret feedback differently. With the research suggesting qualitative studies spanning an extended length, the basis for the current auto-ethnographic study is supported.

Self-Efficacy as a Motivation for Learning

Self-efficacy plays an important role in a student's level of motivation for learning (Zimmerman, 2000). Bandura explains that "efficacy expectations determine how much effort people will expend and how long they will persist in the face of obstacles and aversive

experiences" (Bandura, 1977, p. 194). When attempting to predict a student's motivation for learning, self-efficacy has shown itself to be an effective predictor (Zimmerman, 2000). Students with strong self-efficacy beliefs are more likely to accept challenging tasks, show greater persistence, put more effort into problem solving, and ask for help to better understand the concept and not just to complete a task (Linnenbrink & Pintrich, 2003; Usher & Pajares, 2008; Zimmerman, 2000).   When considering the process of learning to read, students are constantly being challenged with more difficult text to continue furthering their reading ability and very rarely reach a level of accomplishment that they are allowed to simply rest at. Linnenbrink and Pintrich (2003) explain that students with lower levels of self-efficacy are more likely to put in less effort, give up quicker when things become difficult, and ask for help that simply helps them finish the task quicker, rather than asking for assistance that helps them better understand the concept. Such behavior would severely impact a student's reading progress.

The descriptions of students with both high and low levels of self-efficacy is what Dweck (1986) would describe as either adaptive or maladaptive behavior. Adaptive behavior involves the student seeking challenges and they have effective persistence when presented with an obstacle, where as a student displaying maladaptive behavior will avoid challenges and has a low level of persistence (Dweck, 1986). Dweck argues that students displaying both adaptive and maladaptive behavior often have no difference in intellectual ability, but their behavioral choices can have a significant effect on their cognitive performance. This research suggests that changing a student's maladaptive behavior based on an understanding of the four sources of self-efficacy may increase their motivation to learn, and positively affect their achievement.

Self-Efficacy and High Achievement

It has been theorized that self-efficacy is a predictor of performance (Zimmerman, 2000) and that students with high-self efficacy are more likely to accept challenges, try harder, and solve problems more successfully than students with low self-efficacy (Linnenbrink & Pintrich, 2003; Usher & Pajares, 2008), and there are numerous studies that support these theories.

Määttä and Järvelä (2013) completed a qualitative study to explore how students age six to eight years old perceived their self-efficacy in different classroom learning situations, to discover if there was a correlation between confidence and success among young children. They tracked 24 students, 12 girls and 12 boys, who had been chosen by their teachers and identified as either high or low achievers. Each of these students was filmed in a variety of activities that involved whole group discussions, small group activities, and independent work during literature, math, science, religion, history, and gym class. Researchers completed semi-structured recall interviews one-on-one with students, after students had completing different learning activities. Students were shown short video clips of them during an activity and interviewed about the learning activity. Students were asked questions about what had occurred during the learning activity, how confident they were that they would succeed and why, and finally how they were able to succeed. A coding system was devised to categorize student responses as low confidence or high confidence, as well as a coding system for what students attributed their level of confidence to.

Student responses were collected and analyzed, and the researchers found a statistically significant relationship between confidence and success. Students who indicated high to moderate levels of confidence succeeded well, and those who struggled to indicate their confidence level were more likely to have poor success. The study provided evidence that young

children are able to articulate and justify their level of confidence, with 91% of students able to

do so during the study (Määttä & Järvelä, 2013). A limitation of the study is that students were

asked about their initial confidence for completing the activity, only after they had already

completed it. It would have been an interesting research point to interview students prior to

completing the activity for a more authentic report of perceived self-efficacy compared to what

the activity actually proved they were able to accomplish. Interesting to note, that the majority

of students interviewed stated they had moderate to high levels of confidence although there was

a mixed range of student ability chosen by the teachers who labeled students as either having

high or low self-efficacy. Määttä and Järvelä (2013) explain based on their prior research, that it

is not abnormal for young students to have higher levels of self-efficacy when compared to older

students. It was disclosed that the majority of students were shown videos that were mostly of

students achieving success, which they recognize as another limitation of the study.

When asked to describe why they had indicated their specific level of confidence, 62% of

the time students cited emotional and physiological states, not mastery experience as might have

been predicted based on the theories presented by Bandura (1997). Mastery experience was

reported as a reason for being confident 27% of the time. Määttä and Järvelä (2013) theorize that

since the students are quite young, they do not have a lot of prior experience to draw on and so

use physiological signals to indicate their self-efficacy. Verbal persuasion was cited as a reason

for confidence only 11% of the time. When tracking how teachers responded to students, they

found that teachers provided students with low self-efficacy with less feedback than those with

high self-efficacy.   It was shown that students were quite dependent on positive feedback from

both peers and teachers, which when considering their age and limited experience, would

provide students with the needed acknowledgement of their skills to build a bigger bank of

positive prior experiences to draw from for building self-efficacy with future tasks. Määttä and Järvelä stressed the need for students with low self-efficacy to receive more feedback about their performance.

The relationship between self-efficacy and achievement was further explored in two separate studies, with one focusing on reading and writing of students in grade 4, 7 and 10 (Shell et al., 1995) and the other focusing on math for seventh grade students (Yurt, 2014). Both studies found that students with higher to moderate levels of self-efficacy, were higher achieving in the subject area being focused on, aligning with what Määttä and Järvelä (2013) found. The studies by Yurt (2014) and Shell, Colvin and Bruning (1995) both tracked older students than the study completed by Määttä and Järvelä (2013) and students were also asked to provide their perceived self-efficacy levels prior to completing a task by completing a survey. In Yurt's (2014) study focusing on self-efficacy in math, the results found that sources of self-efficacy in order of importance were personal experience, verbal persuasion, physiological states, and vicarious experiences. Määttä and Järvelä (2013) concluded that physiological states was the most influential source on self-efficacy in their study, but their students were also much younger and had less personal experiences to rely on to shape their self-efficacy. Social or verbal persuasion was a moderate source of influence in both studies.

In their study examining self-efficacy and achievement in reading and writing, Shell, Colvin and Bruning (1995) surveyed students to understand how much of a role effort played in their achievement. Both high and low achieving students rated effort as being important to success, but lower achieving students reported outside influences as contributing factors of their success including "receiving enough help," "luck," and if "the task was easy enough" (Shell et al., 1995, p. 396). For students who struggle with activities beyond their capabilities, they may

see these as factors that contribute to success because without them effort alone is not enough.

Shell, Colvin, and Bruning concluded that low achieving students should be presented with tasks

at their instructional level that will ensure success, so as to not undermine a student's effort.

Self-Efficacy and Low Achievement

Understanding why students with low achievement seem to have low self-efficacy is key

when attempting to change a student's perceived self-efficacy. Margolis and McCabe (2006)

argue that students who are low achieving and struggle constantly "…create self-fulfilling

prophecies of failure and learned helplessness that can devastate physiological well-being" (p.

219). Bandura (1997) theorized that mastery experience was one of the more influential sources

of self-efficacy. For students who struggle, successful mastery experiences could provide

powerful evidence of an ability that they may have doubted. As Lorsbach and Jinks (1999)

explain, what has happened to students in the past shapes what they expect to happen in the

future and as a result "each individual brings to a setting beliefs about the classroom roles for

themselves and others" (p. 158). While a student may start a new grade in a new classroom with

a new teacher, the beliefs that they have established about their abilities in past classrooms with

previous teachers will affect them in their new learning environment.

In a qualitative study, Usher (2008) explored how a student's self-efficacy was shaped

and affected their achievement in math. Usher interviewed eight students in grade eight with

different levels of self-efficacy, along with their teachers and parents. Students that had low self-

efficacy all had parents who indicated they struggled with math in school. Bandura (1993) notes

that parents who struggle with their own self-efficacy to help their children learn subjects that

they themselves were deficient in, will often project this deficit onto their children. In Usher's

(2008) study one student with low self-efficacy commented that he was frustrated when his

mother was unable to help him complete his homework, making him doubt his own ability to be successful. Bandura (1997) theorized that vicarious experiences such as watching a trusted individual model a skill can influence self-efficacy. Usher's study demonstrates how vicarious experience could result in negatively impacting a student's perceived self-efficacy; if a parent is unable to complete the homework, how could the student expect themselves to be successful?

While the teachers in the study did not appear to doubt their ability to teach the curriculum, Bandura (1993) does describe teacher self-efficacy as a contributing factor to a student's overall self-efficacy development. One student who had nearly failed math the previous year, attributed her newly developed high self-efficacy level to her new math teacher who set achievable goals and provided feedback, demonstrating the teacher's confidence in the student as well as demonstrating the teacher's understanding of the concept and knowledge of the student's abilities (Usher, 2008). Bandura (1993) cites evidence that "classroom atmospheres are partly determined by teacher's beliefs in their instructional efficacy" (p. 140) which could contribute to how the student had gone from failing math to earning high marks. The relationship between the teacher and the student, is also evidence of verbal persuasion (Bandura, 1997) where the student is provided feedback and encouragement from a trusted individual.

Self-Efficacy and Verbal Persuasion

For the purpose of this study the effect of verbal persuasion on self-efficacy is an area of particular interest, due to the exploration of how formative assessment and providing students with feedback can influence self-efficacy. Studies discussed previously (Bandura, 1993; Pajares et al., 2007; Usher & Pajares, 2008; Zimmerman, 2000) argue the limitations of verbal persuasion as a source of self-efficacy, and provide evidence that other sources of self-efficacy are by far more influential. There is however evidence that shows verbal persuasion does have a

significant impact on student self-efficacy and achievement. Joet, Usher, and Bressoux (2011)

completed a study to explore the influence of Bandura's (1997) theorized sources of self-efficacy

on academic achievement of grade three students. Their study showed that mastery experience

did have a significant impact across all academic areas that students were surveyed in. However

in math, verbal persuasion was also highly predictive of students' self-efficacy. As Bandura

(1997) explains, young students are more likely to seek encouragement for their abilities with a

new task, because they have little to no prior experience to draw from that helps them establish a

prediction for how capable they are.

In a case study by Nes Ferrara (2005) self-efficacy of a sixth grade student who was

reading below grade level was tracked, along with changes in her reading fluency. The student

received one-on-one reading support for eleven weeks, and the student graphed the number of

words she was able to read within a set time, and was taught to set tangible reading fluency

goals. Changes in the student's self-efficacy were assessed through interviews and by having the

student complete a self-perception scale once a week. The student's achievement and self-

efficacy both showed improvement. Nes Ferrara noted that the student's self-perception of her

abilities was linked to how she felt others perceived her. Nes Ferrara argues that while students

may start school feeling positive about their abilities, as time passes this attitude may diminish

with comments from peers and when evaluating their skills against others. It is important for

students to receive feedback on their goals to provide them with direction for further

improvement as well as to improve their self-efficacy (Nes Ferrara, 2005). By having the

student in the study track the number of words she read within in a set amount of time each

session, it provided her with feedback that showed she had improved and allowed the student to

be reflective about what she was doing that made her successful.   While the sources of self-

efficacy often work in tandem making it difficult to assess their individual effects on a student's

self-efficacy, the studies by Joet, Usher, and Bressoux (2011) and Nes Ferrara (2005) provide

some evidence that verbal persuasion has an impact on self-efficacy.

Formative Assessment and its Impact on Learning

Assessment is gathered in classrooms as evidence of student progress and achievement.

Assessment is typically considered to be either summative or formative in nature. Summative

assessment provides "… evidence of student achievement for the purpose of making a judgment

about student competence or program effectiveness" (Chappuis, 2009, p. 4). It is often used to

determine a final grade or final performance level. Formative assessment is defined as

"…activities undertaken by teachers, and/or by their students, which provide information to be

used as feedback to modify the teacher and learning activities in which they are engaged" (Black

& Wiliam, 1998a, p. 7). Formative assessment is gathered as students are in the process of

learning that allows for teachers to make changes to how they are instructing as well as how they

are asking students to demonstrate their learning (Black & Wiliam, 1998a). Formative

assessment is as much for the student as it is for the teacher though, as Stiggins and Chappuis

(2005) argue that "…formative assessment can and should be done for and by students" if

students are going to become effective learners (p. 15).

Chappuis (2005) argues that formative assessment should be established around three key

questions: "Where am I going? Where am I now? and How can I close the gap?" (p. 40). Hattie

and Timperley (2007) further elaborate on these three key questions by asking: "What are the

goals? What progress is being made toward the goal? and What activities need to be undertaken

to make better progress?" (p. 86). The answers to these questions should be shared with

students so they can have a strong connection to their individualized learning goals, which would

allow students to receive meaningful feedback (Chappuis, 2005). There are many different

formats that formative assessment can take to best address these three questions. Formative

assessment strategies include sharing learning goals and criteria for success with students,

examples of products that show both strong and weak work, providing descriptive feedback with

the goal to further learning, having students set goals and self-assess their progress to take

ownership over their learning, and designing classroom lessons and discussions to display

student understanding (Black & Wiliam, 2009; Chappuis, 2005).   There are a number of studies

that explore the impact of specific formative assessment strategies on student achievement.

  In a mixed methodology study, Fletcher and Shaw (2012) aimed to explore the effects on

student engagement when students were presented with clear learning goals and plan to meet the

goals. In the study, the researchers referred to the formative assessment strategy used as student

directed assessment. Researchers (Andrade & Valtcheva, 2009; Black & Wiliam, 1998a;

Chappuis, 2005; Stiggins & Chappuis, 2005) have suggested that providing students with clear

and attainable learning goals is an effective formative assessment strategy. In Fletcher and

Shaw's (2012) study students were presented with learning goals for a writing assignment and

then asked to make a plan for how they would achieve these goals. There were 256 students in

the study in year 4 and 6 at a school in New Zealand, who were either part of the treatment group

or the comparison group. Sixteen students were interviewed after completing the student

directed assessment and the writing activity, along with ten of the participating teachers. The

researchers interviewed participants to generate information on how they perceived and

experienced the student directed assessment, and to supplement the surveys used to measure

student and teacher experiences using student directed assessment, along with the analysis of the

writing samples.

The quantitative results showed that the year 4 treatment group had similar achievement levels to the comparison group, although the teachers did report better engagement in learning amongst the treatment group. The students in the year 6 group however, did produce a higher quality of work than the comparison group. It was noted that the year 6 teachers had been teaching for longer than the year 4 teachers, and were more confident in implementing the student directed assessment. During the interviews, many teachers stated that it was difficult for students to understand how to describe the steps required to achieve their learning targets. It could be argued that younger students need more thorough metacognitive guidance than older students. Also, if the teachers in the year 4 group were not feeling confident in implementing the treatment, this could have also affected the outcome. Bandura (1993) argues that teachers with low self-efficacy may not be able to provide the necessary instruction for students to succeed in the skill they are teaching and limit the mastery experience students might have that influences their self-efficacy.

The interviews of students and teachers of both year 4 and year 6 showed that students in the treatment group had increased engagement in learning and took more responsibility to ensure their writing assignment was completed correctly. There was a high level of motivation observed and enjoyment in the student directed assessment process. It was argued by Black and Wiliam (1998b) that students can only assess their progress "…when they have a sufficiently clear picture of the targets that their learning is meant to attain" (p. 143). Fletcher and Shaw's (2012) study supports this claim, with the researchers concluding that by setting up the learning goals and steps for achievement prior to writing, it "helped students become aware of the intended learning goals… [and] helped students realize how their inputs and efforts would contribute to their overall achievement in the assessment" (p. 258).   Fletcher and Shaw's mixed

methodology study provides an important perspective on the benefits and some of the challenges when implementing formative assessment in elementary school.

Self-assessment is a formative assessment strategy that involves students comparing their own progress or performance against a previously established criteria or standard, often presented in the form of a rubric (Andrade & Valtcheva, 2009). A rubric is list of criteria describing different levels of quality. It describes common mistakes while also highlighting positive aspects of the work or performance (Andrade & Valtcheva, 2009). Andrade and Valtcheva (2009) argue that the purpose of self-assessment is not to establish a grade, but to provide evidence of areas of strength and areas for further development that the student and teacher can then make a plan to improve upon. Other researchers (Black & Wiliam, 1998a; Stiggins & Chappuis, 2005) support this argument, with Stiggins and Chappuis (2005) explaining that when students are involved in assessment they participate in building a vision for their learning and academic success and "the result will be classrooms in which there are no surprises or excuses" (p. 13) and students will be motivated to achieve at a high level.

By establishing a rubric with a clear set of criteria to describe the quality of work ranging from poor to excellent it allows students to set goals prior to engaging in activities and reflect upon their achievement afterwards without necessarily needing the opinion of the teacher. Andrade and Valtcheva (2009) believe "students who set goals, make flexible plans to meet them, and monitor their progress tend to learn more and do better in school than students who do not" (p. 13). When students achieve success it often leads to greater confidence and "with increased confidence comes the belief that learning is possible" (Stiggins & Chappuis, 2005, p. 12) which will encourage students to accept challenges and promote deeper learning.

In their quantitative study exploring writing achievement for students in grade 3 and 4, Andrade, Du, and Wang (2008) aimed to investigate the effect of generating criteria with students based on a writing model, and then having students self-assess their own writing according to the rubric that was created and based on the criteria. The study involved 116 students shared between seven elementary school classrooms in either grade 3 or grade 4, with some of the students in a control group. Each of the classes was asked to complete a writing assignment connected to a topic related to their current curriculum. In the treatment classrooms, students were shown a writing model and asked to discuss its strengths and weaknesses, which led to creating a rubric for an effective story or essay. Students received the rubric and used it to self-assess the first draft of their writing assignment. The comparison group was not exposed to the writing model nor did they receive a rubric, but they did brainstorm qualities of an effective story or essay. After completing their first draft, they were simply asked to consider options for improving it and did not self-assess it.

When researchers scored the writing samples, the results showed that the treatment group had higher scores overall than the comparison group. There were students in the treatment group who had used rubrics previously, but these students' scores showed no difference from other students. A limitation of the study is that it only involved one isolated writing activity, so to see the bigger impact on student achievement it would need to be carried out over a longer period of time. The results were encouraging enough for Andrade, Du and Wang (2008) to recommend that "elementary school students ought to be actively engaged in critiquing sample pieces of writing, in thinking together about the criteria that are in the rubrics by which their writing will be evaluated, and in self-assessment of their works in progress" (p. 9) because of the writing improvements that occurred. Their findings support arguments made by other researchers

(Andrade & Valtcheva, 2009; Chappuis, 2005; Stiggins & Chappuis, 2005) that using examples of strong and weak work, having students involved in creating criteria related rubrics, and implementing student self-assessment can have positive impacts on student achievement.

In their study on the importance of feedback for students, Hattie and Timperley (2007) describe feedback as "…information provided by an agent (e.g., teacher, peer, book, parent, self, experience) regarding aspects of one's performance or understanding" (p. 81). Hattie and Timperley explain that providing students with feedback is a way to close the gap between what is already understood and what needs to yet be understood. They argue that feedback is most effective when it includes specific information about progress that has been made, providing "…information on correct rather than incorrect responses and when it builds on changes from previous trails" (Hattie & Timperley, 2007, p. 85) to continue moving forward to deepen a student's understanding. Margolis and McCabe (2006) and Bandura (1993, 1997), also argued that feedback should be phrased positively to provide descriptions of why a student achieved success for their self-efficacy to be positively developed.

Hattie and Timperley (2007) recognize that feedback has an impact on self-efficacy, and explain that teachers need to be careful in how and when they provide students with feedback because "the ways and manners in which individuals interpret feedback information is the key to developing positive and valuable concepts of self-efficacy about learning" (p. 101). Black and Wiliam (1998b) link the importance of descriptive feedback and goal setting to improving self-perception, which supports aspects of Bandura's (1993) theory on how to build a student's self-efficacy. Ideally students should be taught and encouraged to ask of themselves where am I going, where am I now, and how can I close the gap so that they do not rely solely on teachers to direct their learning and provide feedback (Hattie & Timperley, 2007).

In a qualitative study, Cowie (2005) interviewed students and teachers between grade 7 and grade 10 to gather evidence about how teachers provide feedback and how students responded to the feedback. Interviews were conducted with 31 students and 10 teachers to hear their views on formative assessment, and then observations in classrooms were completed to witness classroom assessment practices. Afterwards 75 students and their teachers were interviewed to hear how students felt their teachers had found out about and responded to their learning, as well as the students' overall experience with assessment. It was revealed that students desired descriptive feedback on how they had done well, instead of a generic comment that they simply had done well. They preferred to receive this feedback during one-on-one or small group interactions. Since Cowie's study focused on older students they were able to describe the impact of formative assessment that younger students may not be able to articulate. Students revealed formative assessment impacted "…how they felt about themselves as learners and knowers, and the ideas and actions they came to see as having merit" (2005, p. 150) in their learning. Cowie notes that it is important for teachers to be aware of the importance formative assessment can have on a student's perception of themselves as learners. Bandura (1997) has discussed both the positive and negative affects feedback can have on students' self-efficacy and Cowie's interviews reveal this to be true for a number of students.

Exploring the impact of different formative assessment strategies reveals that formative assessment does impact student achievement positively, although to varying degrees. A number of studies alluded to the impact it had on student confidence and self-efficacy and the following section will provide further evidence to this claim.

Self-Efficacy and Formative Assessment

Motivating students to be engaged in learning, put in their best effort, and accept challenges to promote deeper learning can be difficult. As discussed earlier, Dweck (1986) described two motivational behaviors: adaptive and maladaptive. Students with adaptive behavior will seek challenges and have high levels of persistence when presented with an obstacle, whereas students with maladaptive behavior are more likely to display helpless characteristics, avoid challenges, and will have a low level of persistence (Dweck, 1986). Dweck argues there may often be little to no difference in intellectual ability with students exhibiting either of these behaviors, but it can affect students' cognitive performance. Dweck explains behaviors are shaped by how students view intelligence. If they believe intelligence to be a fixed trait, it will draw them towards a performance goal that sets out to gain positive judgments of ability and avoids chances of negative judgment or failure. For example, a student who believes intelligence to be a fixed trait will only care about solving a multiplication question correctly, not valuing the strategy they used to find the answer. If the question is too difficult and they suspect they will not get the correct answer, they would most likely not attempt it. If however a student believes intelligence is malleable then learning goals, which are designed to increase overall competence, will motivate them. A student with this perspective on intelligence will put emphasis in understanding how multiplication is similar to repeated addition and be less focused on the getting the answer correct. They will be more likely to attempt a challenging multiplication question because they have a strategy that might be applicable and know they will learn from any mistakes they make.

Presenting students with formative assessment strategies will demonstrate how intelligence and ability is malleable and possibly produce more adaptive behaviors. McMillan

and Hearn (2008) argue that "self-assessment plays a significant role in developing self-perceptions that lead to greater motivation" (p. 44). When students self-assess it helps them see where they are in the stages of understanding and how the effort they have put in is connected to the progress they have made. When students finally achieve the level of understanding they were aiming for, it demonstrates their true ability and builds their self-efficacy (McMillan & Hearn, 2008).

Bandura's (1997) four sources of self-efficacy are all experienced through the wide variety of formative assessment strategies that have been discussed thus far. When a student is provided with a writing model to establish criteria for success they are participating in a vicarious experience. When they self-assess their progress and receive feedback for what made them successful, they are provided sources of verbal persuasion. When a student repeatedly self-assesses their progress and finally demonstrates clear understanding of a concept they have participated in a mastery experience. When students are provided with models of work and criteria for success that can lower stress and negative emotions about the assignment, students experience a positive physiological state. Stiggins and Chappuis (2005) summarize the relationship between formative assessment, effort, and perceived ability:

> If these students are to believe in themselves as productive learners, then they must first experience credible forms of academic success as reflected in the results of what they understand to be rigorous assessment. A small success can spark confidence, which, in turn, encourages more effort. If each attempt brings more success, their academic self -concept will begin to shift in a more positive direction. Our goal then is to perpetuate this cycle. (p. 12)

The studies presented in this section describe the relationship between different forms of formative assessment and self-efficacy, with a variety of results presented.

Setting specific goals for learning is a formative assessment strategy that often works in collaboration with criteria based rubrics and self-assessment. In one study (Kitsantas, Robert, & Doster, 2004), researchers wanted to explore how presenting high school students with a process goal and self-assessment strategies could influence their self-efficacy. Students were split into two groups, with one group receiving a process goal and the other receiving an outcome goal. A process goal is similar to what Dweck (1986) referred to as a learning goal, with the emphasis on the student learning a new skill. An outcome goal is similar to a performance goal, with the student focusing on the final product. A portion of each group in the study completed self-evaluations while the other did not (Kitsantas et al., 2004). The students were engaged in an hour-long session focusing on learning to animate slides through presentation software, after which they were asked to complete a test showing their ability to complete the task.

Students who were part of the process goal group, had better overall performance than the students who were focused on the outcome goal (Kitsantas et al., 2004). They also had higher levels of self-efficacy and were more satisfied with their performance. However, students in the outcome goal group that completed the self-evaluation had higher achievement than students in the process goal group that completed self-assessment. It was theorized that self-assessment benefited the students in the outcome group more than the process group, because as they evaluated themselves they were able to make corrections to improve their final product, which was their main objective. For students in the process group, they were focused on understanding the steps to success, which led to higher self-efficacy when they had to complete the post-test. They may not have been as reliant on a self-assessment like the outcome group

was, because they were confident in their overall understanding of the process to produce the

finished product that was required. The study was only carried out on a one-hour session with

students, and if it had been for a longer duration there may have been a greater effect on student

achievement in the process goal group that completed the self-assessment. This study presents

an interesting argument in favor of using process goals and self-assessment to build self-efficacy,

although the study showed a benefit to achievement when using self-assessment with an outcome

goal.

In a study seeking a correlation between rubric related self-assessment and self-efficacy,

students in grades 3 to 7 completed a self-efficacy assessment three times, along with self-

assessing their first draft against a rubric that was created after examining a writing sample

(Andrade, Wang, Du, & Akawi, 2009). The comparison group only completed the self-efficacy

assessment. The results showed self-efficacy improved regardless of whether students had

received the treatment or not (Andrade et al., 2009). The researchers argue that students' self-

efficacy in both groups was affected by what Bandura (1997) would consider to be a mastery

experience, because student's had general success with their writing assignment regardless or not

they self-assessed their writing. When the results between the control and treatment groups were

compared there were significant increases in the self-efficacy of students who were considered to

be low or high achieving, whereas students who were medium achieving showed no significant

gains (Andrade et al., 2009). The study was limited in duration and with a longer time frame and

further exposure to the treatment it could have affected the outcome. Given the quantitative

nature of the study completed by Andrade et al. (2009) qualitative data was not collected that

could have illuminated their findings.

Miller and Lavin (2007) implemented a mixed methodology study with primary age students to examine a connection between formative assessment and positive changes to self-esteem. Self-esteem is different than self-efficacy, however Miller and Lavin draw similarities by using a two dimensional definition of self-esteem that includes self-worth and self-competence. Miller and Lavin's data showed significant gains in self-competency after students had used formative assessment techniques over a five-month period. Unlike previous studies (Andrade et al., 2009; Kitsantas et al., 2004) where the formative assessment techniques did not have the expected impact on self-efficacy and was only implemented for a short period, Miller and Lavin's (2007) study was longer in duration. When tracking data of low, medium, and high achieving students, Miller and Lavin's study showed an increase in self-efficacy of low and high achieving students, corresponding to what Andrade et al. (2009) discovered. The two studies provide an impetus for further examination of the self-efficacy of different academic achievement groups and formative assessment used for a longer duration of time.

Summary

Developing a student's self-efficacy is a delicate and complicated task with many layers. Bandura (1977) argues an individual's self-efficacy level will "determine how much effort people will expend and how long they will persist in the face of obstacles and aversive expectations" (p. 194) and as such needs to be built carefully and skillfully. Research shows there is a positive correlation between self-efficacy and achievement (Määttä & Järvelä, 2013; Margolis & McCabe, 2006; Shell et al., 1995; Yurt, 2014). There is further evidence that formative assessment, including providing descriptive feedback, does have an impact on self-efficacy although the degree to which it is influential does vary (Andrade et al., 2009; Cowie, 2005; Hattie & Timperley, 2007; Joët et al., 2011; McMillan & Hearn, 2008; Miller & Lavin,

2007; Stiggins & Chappuis, 2005). There are many formative assessment strategies and teachers need to be aware of how the strategies they choose can have both positive and negative effects on self-efficacy. By setting goals, establishing criteria for success, and providing descriptive feedback it can improve student motivation and build self-efficacy (Black & Wiliam, 1998a). These formative assessment strategies correspond to research on how verbal persuasion can affect self-efficacy especially when the individual providing the feedback is a trusted individual of significance to the student (Bandura, 1997; Margolis & McCabe, 2006; Nes Ferrara, 2005). There are numerous studies that recommend further qualitative studies be undertaken to better understand the nuances of how student's self-efficacy is developed, especially with younger students, and the role the teacher plays in this process (Dale H. Schunk, 1991; Usher & Pajares, 2008; Zimmerman, 2000). The current study is an auto-ethnography aimed to provide a personalized account of the influence that I play as a teacher in changing a student's self-efficacy in reading by using formative assessment strategies. The next chapter will describe the methodology of the study including the research design, ethical considerations, data analyses, and limitations.

Chapter 3

Method

Introduction

Part of a teacher's role is not simply to instruct students in new concepts and strategies, but to encourage students to believe in their abilities to overcome challenges, and achieve success with targeted tasks. A student's perceived self-efficacy for a specific task will affect how much effort they put into a task and how long they are willing to expend the energy needed to achieve success when struggling (Bandura, 1977). There is evidence that formative assessment, as a form of verbal persuasion, has an influence on self-efficacy (Andrade et al., 2009; Cowie, 2005; Hattie & Timperley, 2007; McMillan & Hearn, 2008; Miller & Lavin, 2007; Stiggins & Chappuis, 2005), and that high levels of self-efficacy are linked to improved achievement (Määttä & Järvelä, 2013; Margolis & McCabe, 2006; Shell et al., 1995; Yurt, 2014). Through writing an autoethnography, the current study explores how the actions and decisions the researcher makes when implementing formative assessment, can affect students' self-efficacy in reading.

Rationale and Description of Research Methodology

An autoethnography is a combination of elements from an autobiography and an autoethnography (Ellis, Adams, & Bochner, 2010). Through writing an autobiography, the author often reflects on past experiences that had a strong impact on their life that would be most commonly be called epiphanies (Ellis et al., 2010). An ethnography is written by a researcher who becomes a participant rather than just an observer of a culture or a group to provide descriptions and interpretations of behaviors within the culture (McMillan & Wergin, 1998). Combining these two forms of writing, an autoethnography focuses on "…epiphanies that stem

from, or are made possible by, being part of a culture" (Ellis et al., 2010, para. 8). These are

moments that cannot be quantified or exposed on a questionnaire or discovered during an

interview. They are moments that "…long to be used rather than analyzed; to be told and retold

rather than theorized and settled; to offer lessons for further conversations rather than debatable

conclusions" (Ellis & Bochner, 2000, p. 744). Qualitative research that highlights theses

moments to better understand how teachers impact young students' self-efficacy is what

researchers have made recommendations for (Dale H. Schunk, 1991; Usher & Pajares, 2008;

Zimmerman, 2000).

  As a classroom teacher I am immersed in a dynamic and fast paced culture of learning,

making numerous decisions all day often quicker than I may like. Teachers work mostly in

isolation, with very little direct supervision of daily instruction by a supervisor. Feedback from a

supervisor on decisions that are made during instruction is only provided during teacher

evaluations every three to five years, with teacher's relying on their own reflective nature as

informal feedback. As Duncan (2004) rationalized in her autoethnography, she needed a way to

"…externalize [her] inner dialogue of decisions to find and develop fully the central themes and

outstanding questions that were emerging" (p. 3). Given the isolation teachers work in, engaging

in an autoethnography that would encourage taking time to track and reflect on actions and

decisions, and how they influence students' self-efficacy, could positively impact the practice of

a teacher.

  The nuances of learning to read are difficult to measure both quantitatively or

qualitatively, even through interviews and questionnaires. Learning to read is a deeply personal

learning experience that can have a lasting effect on a young reader. If a student perceives him

or herself to be a "bad" reader from their first reading experience and there is not a credible and

trusted teacher to provide verbal persuasion that they actually are going to be a capable reader, this could have lasting consequences. Consider how often the things we do not like to do are the things we are bad at. For example, after my first experience snowboarding I quickly came to the conclusion that not only was I bad at snowboarding, I severely disliked it. Despite having an instructor with me, I spent the majority of the time crashing into the snow rather than carving into it with the snowboard. It frustrated me that others were naturals on the ski hill the first time they snowboarded. I grew resentful and am to this day, certain that my natural ability to ski or snowboard is non-existent. I have yet to return to the ski-hill for a second attempt at snowboarding and have avoided every other kind of outdoor skiing sport since. Could my instructor have provided better descriptive feedback to build my self-efficacy? Did he start me on a hill that was too advanced for my first run? Did he overestimate my natural ability and not recognize the low self-efficacy I had in myself because of the brave face I was trying to keep?

Apply this scenario to a student who has struggled to learn to read, yet watches everyone around him or her appear to read with ease. It is the role of the teacher, just as it was the snowboarding instructor, to recognize the limited self-efficacy of the student based on his or her behavior. It is the job of the teacher to provide intervention and support to positively affect the self-efficacy of the student to ensure the end result of learning to read is not negatively affected by the student's poor perception of their abilities. No reader is alike and each has had different exposure to reading and reading instruction, just as each individual learning to snowboard will have different strengths and areas of growth to be addressed if they are to be successful in staying up on the board. By completing an autoethnography and tracking the wide variety of decisions that need to be made on a case-by-case basis for each student it provides a more

introspective research opportunity to better understand how a teacher can impact a students' self-efficacy.

Method

Research Design

The auto-ethnography is a qualitative, phenomenological research study with the researcher completing a reflective narrative inquiry. The researcher of the current study was also the participants' classroom teacher. The researcher recorded observations of students, and she also recorded her own actions and decisions regarding implementation of formative assessment, while reflecting on the perceived impact she had after observing changes in students' self-efficacy and reading.

Research Participants

The researcher was the main participant of the study, given the personal nature of an autoethnography. The researcher is a Caucasian female, between the ages of 25-40. She has been an elementary school teacher since 2003, and has taught grades 1 through 4 as well as Learning Support Services with a focus on supporting at-risk readers. She has been at her current school since 2007, and has taught grade 2/3 since she started at the school.

The study was carried out in a grade 2/3 classroom at an inner-city elementary school in Abbotsford, BC. Participants were part of a convenience sample, as they were all part of the researcher's class for the 2015-2016 school year. Twenty students were part of the study, with ten of the students in grade 3 and ten students in grade 2. Of the ten students in grade 3, nine were part of the researcher's classroom when they were in grade 2. All students in the class were offered the opportunity to be part of the study, no matter what their current reading achievement level was. Of the twenty students who participated, approximately 65% of the students were

reading below grade level expectations at the start of the study, with two students on individualized education plans.

Participant and Parental Consent

The parents or guardians of each student received an informed letter of consent by hand outlining the details of the study and that students were participating on a voluntary basis. It was made clear that if parents did not want their child to be part of the study, they needed to sign and return the letter otherwise their child would be considered part of the study. Parents were reminded that at any time they had ability to remove their child from the study. All parents ($n = 20$), consented for their child to be part of the study and likewise, all students agreed to participate in the study with the knowledge that they could withdraw at any time.

Ethical Considerations

Prior to beginning the study, the researcher submitted a proposal to the Institutional Review Board of City University Seattle that was approved with minimal risk to participants. The Abbotsford School Board was consulted and approved the study. Parents and guardians were made aware in writing that the study was voluntary for all participants and that they could remove their child from the study at any time during the year. Every effort was made to ensure the confidentiality of all participants. Students were assigned a number, which was used in the observation notes of the researcher rather than the students' names. Any identifying features or characteristics were not included in any of the observations. Electronic data was kept private via password protected files and it was stored off school property. Any paper copies of the research and observations were kept in a locked filing cabinet.

Procedure

  The study began in September 2015 and was carried through till June 2016 at an inner-city elementary school in a grade 2/3 classroom. Students were introduced to the concept of setting goals and completing self-assessments in other curricular areas prior to the study beginning so they were familiar with both forms of formative assessment. Students were met with two to three times a week, both one-on-one and in small groups with no more than three students at a time. The researcher tracked the individualized goals that were set for each student, the feedback that was provided to the student by the teacher, and the self-assessment the student completed that indicated their perceived self-efficacy with the task. The researcher tracked the observed behavior of students when presented with new learning goals or with descriptive feedback, and then reflected on the observation and considered what future steps should be taken. Observations and reflections were made within twenty-four hours of the interaction between the researcher and the student.

Data Collection

  The researcher gathered data from Sept 2015 till June 2016. The researcher kept a journal of her observations, actions and decisions made regarding formative assessment, along with the reactions students had to her decisions so she could reflect on them. Goals that were set and shared with students were recorded, along with descriptive feedback the teacher provided. Observations and reflections were made within twenty-four hours of the interaction between the researcher and the student.

Data Analyses

  Upon conclusion of the study, a thematic analysis of the journal entries was conducted. The contents of the journal were analyzed by creating a coding system that allowed for the

themes within the journals to be categorized. The journals were coded by hand, using different colors of highlighter to indicate when phrases, behaviours, and reflections appeared in the text that provided evidence of recurring themes. The journals that had been complete were coded in December, March and then June. A second thematic review of all journals was conducted in July. Consistent themes emerged that exposed important patterns or relationships for the researcher to drawn conclusions about (McMillan & Wergin, 1998). A teacher familiar with self-efficacy and formative assessment coded ten percent of the journals to ensure reliability.

Summary

Through this qualitative autoethnography, the researcher in the role of the classroom teacher evaluated her impact on students' self-efficacy when implementing formative assessment during reading instruction. By keeping a journal tracking the actions and decisions she made regarding formative assessment, along with observations of students' behavior and reactions to the formative assessment, the researcher was able to draw conclusions based on themes that emerged from analyzing and coding the data. The following chapter discusses the results that were found.

Chapter 4

Results and Discussion

Introduction

In a busy classroom taking time to reflect on decisions I have made as a teacher, and how these decisions have impacted students is a challenge. This autoethnography allowed me to become a researcher by keeping a journal tracking the actions and decisions I made regarding students' progress in learning to read, along with observations of students' behavior and reactions to my decisions. Through analyzing and coding my journals, I was able to explore how the actions I took and decisions I made based on formative assessment, could affect students' self-efficacy in reading. The following chapter describes the themes that emerged after the contents of the journals were analyzed and coded.

The journals span the full 10 months of the school year, with a high concentration of entries occurring between October 2015 and March 2016. While reading instruction occurs throughout the year, the structure of these meetings and lessons is adapted as the needs of learners changes, which is why there are less journal entries after April 2016. Students who were part of the study will be referred to as Student 1-20. Students' reactions, behaviours, and comments were integral to the formative assessment that was gathered and used for making decisions about how I could impact self-efficacy. As the journals were analyzed and coded, the themes that emerge also presented themselves as foundational steps that were necessary to influence a students' self-efficacy. The themes are subsequently presented in the order of steps that were necessary to begin to impact student self-efficacy, as each one is integral to the next. Four key themes emerged with supporting subthemes that are detailed in Table 1. These themes are described in detail in this results chapter.

Table 1 – Overview of Themes

Themes	Subthemes
Using Formative Assessment to set Learning Goals	• Physiological response as a form of assessment for setting learning goals • Student initiated learning goals
Developing Trust	• Making mistakes • Building a teacher-student relationship
Impact of Feedback on Self-Efficacy	• Effects of feedback on a long term goal • Feedback to small groups • Impact of peer feedback on self-efficacy • Vicarious experience through peer feedback
Impact of Mastery Experience on Self-Efficacy	• Impact of prove-it notes on self-efficacy • Improve perseverance

Theme 1: Using Formative Assessment to set Learning Goals

The formative assessment I collected helped me understand where students currently were in their reading, where I wanted to them to end up, and then how I was going to get them there. I planned to move students forward in their reading by setting individualized learning goals for each student. Setting specific and measurable learning goals for students was an opportunity to lay groundwork for making changes to self-efficacy. All students had their learning goals written on a bookmark to keep with them when they read, along with post-it notes (referred to as prove-it notes) to put next to words or pages when they had attempted to use the strategy that was part of their learning goal.

When I began assessing students' reading I observed many students struggled when they encountered a word they could not read: "Seeing such limited decoding strategies indicates to me that for a large majority of students I will be focusing on teaching them specific accuracy strategies to build their self-efficacy in believing they can solve tricky words when they

encounter them" (Lines 29 – 33). I reflected on which accuracy strategy would be most effective

for students to start with before their goals were personalized:

> To start with all students have the same target of 'I can blend and stretch to solve
>
> tricky words which is basically just sounding out the word. I chose for all
>
> students to start with this because it is easy and very foundational (Lines 120-
>
> 123).

This was the first decisions I made using formative assessment to set learning goals. I

believed that when students used a familiar strategy and flagged words that they had used the

strategy on with their prove-it notes that it would help build their self-efficacy for decoding

words independently. After students had time to try to use this strategy "I will examine what

kinds of words students are flagging when I meet with them one-on-one and this will give me

further indications of their reading ability and how well they are using the decoding strategy"

(Lines 146-149). The cyclical nature of asking where students currently are in their reading,

where do I want them to go, and how am I going to get there, was a part of understanding how I

could use feedback. The goal would be for the feedback to affect their self-efficacy and help

improve their reading.

By early November my journals showed how formative data was going to be put into

action: "Now that I know them better as readers I can provide them with a goal that is both

realistic while challenging and personalized" (Lines 328-330). My journals highlighted that I

was beginning to be cognizant of how the decisions I make can impact student self-efficacy: "I

need to set small, attainable goals that don't take a long time to reach" (Lines 342-343). I

reflected that if students did not receive success with their first goal in a timely manner it might

negatively affect their self-efficacy and make moving forward in their reading challenging.

Physiological response as formative assessment for setting learning goals.

My journals included many observations of student physiological responses to reading that was used as formative data to help make decisions about students' learning goals and to better understanding their current level of self-efficacy.

On my first day of reading assessment in September I observed:

> So far I have only had 2 students out of 10 come up and be excited to read. These kids were bouncing as they came to the table to read and were curious about the book I gave them. They as it turns out, had better decoding skills that the other students who came to the table. Watching them read was more encouraging. These students were also reading closer to grade level expectations (Lines 40 – 45).

This physiological response to reading and the connections I made to a student's self-efficacy and reading ability may have been over generalized at the time, but it made me aware of how reading a student's physical and emotional response to reading might affect their success or ability to show their true reading ability. By the time I had finished my reading assessment in the first week of October I had reflected that:

> For about 80% of my students they appear to freeze when they come to something they can't read and have no confidence that they will solve it without me, and they want to leave the reading table as soon as they get there (Lines 102-105).

Changing these behaviors and attitudes was overwhelming to think about. It did provide me with formative assessment that led to choosing a learning goal that many student were already familiar with that would like be achievable with the goal to change their physiological response to reading.

There were a few positive physiological responses to reading early on in the year though. For example, Student 24 realized that her perceived reading level was actually much higher than she had forecast. I observed "With each book she read, [Student] 24 sat a little taller and was nearly giggling with excitement as she saw the books getting more challenging but that she was reading them well" (Lines 58-60). This was the physiological response I wanted other students to experience.

Student initiated learning goals.

When analyzing my journals for learning goals, a subtheme appeared involving student initiated learning goals. As I analyzed the learning goals that were being set for students, student input into their learning goals became more prevalent, especially in second term. The first evidence of this is on October 9 when I recorded this interaction with Student 17 after I changed her learning goal because she had mastered her previous one:

> I changed her target to using the first and last sound of a word to help solve the word, and then use blend and stretch if necessary. We tested it out and she seemed satisfied. She then told me – I DIDN'T EVEN HAVE TO ASK – that she wanted to be able to read a level 13. I was taken aback and told her that if that's what she wanted we would have to work really hard and that she would have to be okay with making a lot of mistakes cause for every mistake she made, she'd learn more, and if she learned more she'd get better at reading" (Lines 237 – 245).

When I saw how committed Student 17 was to reaching her self-imposed goal I considered having all students set a goal to reach for their just-right reading level (a reading level range that is not too hard and not too easy). So at the end of November each student set his or her just-right reading level goal to be reached by March. The goals they chose were all

appropriately challenging and would require most students to really push themselves to reach the

goal. "I was impressed with the jump that kids think they can achieve; it was quite similar to

where I have set goals for them" (Lines 709 – 711) with only a few students setting easily

attainable goals that I would have set higher. But I had to respect these goals, as it gave me

insight into their self-efficacy for being able to improve their reading level.

Within a week of setting their goals, I saw the benefits of the decision I had made to give

students control over their learning goals:

> After they set their goals last week, many of [the students] wanted to know if I
>
> was going to change their levels. They are eager to improve their reading and I
>
> am seeing more of them be attentive to the reading goal they have that is intended
>
> to support their reading develop and help move their reading level up (Lines 767-
>
> 771).

After two months of working to achieve their just-right reading level goal I reflected on my

decision: "I think that kids need to set a number to try to reach as their just right reading level as

a reason for why they should try to master the strategy that is their learning goal" (Lines 1053-

1055). By allowing students to set the just-right reading level goal it invited discussion and

feedback on the learning goals that would help them close the gap from they currently are

reading to the level they want to achieve.

I observed the impact student set goals had during my interactions with two students in

January. Student 13 had a strong connection to her just-right reading level goal: "Her reading

level is important to her – she said she does not want to read the lower numbers and wants to get

high. 'That's why I'm here – to read high books!' she stated seriously" (Lines 1170-1173).

Student 17 had an equally intense commitment to the just right reading level goal when I asked

her how she felt about her progress towards reaching it:

> She answered that seeing her target reading level written in the corner of her
>
> bookmark to remind her of where she wants to get to 'makes me confident' and
>
> that it 'makes her want to read to get there.' I was astonished at how she was
>
> talking about this motivation. She must have known it by the look on my face
>
> because she went on to say 'It gives me a thousand reason to read when I see it'
>
> (Lines 1199-1205).

These statements were confirmation that allowing students to set goals invited discussion about

how to help them improve, encouraged them to persevere, and learn that through a challenge can

come a great reward. I saw that my responsibility was to help students reach this just-right

reading level goal.   I was concerned how not reaching the goal could negatively impact their

belief that they were capable of meeting challenging goals.

Theme 2: Developing Trust

Developing trust with students was a prominent theme in the first three months of my

journals. I realized early in the year that it was important to develop trust and build reader

profiles of each student to provide them with specific feedback if I wanted to be able to

positively affect their self-efficacy. Prior to meeting with students, they were asked to choose

books that they considered to be at their just-right reading level. These books were used as the

basis to developing my understanding of a student's perceived reading ability. I observed many

students who were nervous to read, upset when they made mistakes, and who generally chose

books that were much too easy for them. As I recorded my observations of and interactions with

students, I noticed positive changes in their reading and our discussions after the first couple of

months that led me to reflect in November that "I wonder how many of these kids really trust me at the beginning though; and believe what I tell them about their reading? If I don't know them well, how qualified am I to provide them feedback and set goals?" (Lines 337 – 340).

I began to see that building trust with students was not only important to them believing the feedback I was giving them, but that the trust being built could easily be broken if I did not know them well enough: "I had to be really careful with what I asked students to try to accomplish – if I over estimate what they can do and they don't have success their trust in my feedback will diminish." (Line 340 – 342). Building relationships to better understand students and to help them embrace mistakes were subthemes that emerged from within the journals.

Making mistakes.

Making mistakes was the first visible representation of lack of trust that I observed between students and myself. During the first day of reading assessment in September I observed that "A number of kids looked at me as soon as they made a mistake, not in a 'Help me out!' kind of a way but more in a 'Uh, oh I made a mistake' way. This concerns me and so I was very gentle in how I responded" (Lines 24-27). I reflected, "I think many of them were quite hesitant and worried about making a mistake in front of me." (Lines 318 – 319). Students were unsure of how I would react because they did not know me well enough.

To be willing to take a risk when reading a difficult word in front of a teacher requires a lot of trust. I needed for students to understand "… that tough is okay and tough is what makes their brain grow and tough is how they will get better. You don't get better when things are easy" (Lines 580-582). I had to work to build this belief with each student and ensure my responses reflected this belief when they did make a mistake. I knew there was a change beginning to occur though when after discussing the importance of mistakes with a student she

responded with "If I make mistakes I'll get better?" (Line 246).   That became the simplest way

for me to encourage students to embrace their mistakes and build trust with them.

       Building a teacher-student relationship.

       Wanting to know my students as readers was a theme that emerged in the first few

months of my journals. Learning to read is a different experience for each student and they each

have such different needs. On November 18 I wrote:

> I feel like I'm now just getting to know and understand my students as readers. It
>
> took about 6 weeks but I feel like we are finally in a routine, I know what they
>
> need, they are showing progress and they KNOW they are showing progress
>
> (Lines 496-499).

       When teaching reading, there are some students who are constantly struggling to use

what you have tried to teach them accurately. At times it can be frustrating when students do not

appear to be using what you have tried to teach them over and over. I realized on November 18

that I had a huge responsibility:

> The idea of 'Why is this so hard for you?' is a teacher's worst enemy if you aren't
>
> willing to be reflective about WHY it really is so hard for students! They don't
>
> know why it's tough – it's MY job to figure out why it's tough and help them
>
> through it (Lines 576 – 580).

Part of the relationship I built with students was to make them overtly aware that reading was

going to be a struggle but that I was aware of this and willing to help. In developing trust and

building a relationship with students, I consistently told them that I would never ask them to do

something if I did not believe they were capable of it. This did not mean it would be easy, but it

would be possible. My interaction with Student 24 demonstrates this.

My initial reading assessment with Student 24 revealed that she was actually reading about 10 levels higher than she had perceived herself able to. She was reluctant to read a book that she had to struggle to be successful with. After I had been able to show her what she was capable of by asking her to read a Level 16:

> I did warn her that not all her reading was going to be as easy as this in the next couple of weeks because to be a better reader it needs to be a little tricky for our brain to learn new words and get better at harder words. She accepted this and was eager to try harder books now that she had shown her ability to not just me, but to herself as well (Lines 62-67).

Recognizing individual student needs was a huge part in developing my relationship with each child, realizing that it might have an affect on their self-efficacy. For example, I saw one student had very low self-efficacy for being able to accurately solve difficult words. I recognized this well before trust had been established with her so this influenced my decisions regarding how I would start reading instruction with her:

> I have purposefully given her a lot of time to read on her own, and very little instruction so far. I don't want her to meet with me until she is feeling confident. I made sure her just-right reading levels are low enough that they should be really easy (Lines 216-220).

Building a strong relationship with each student to understand why reading is difficult for him or her was foundational to learning more about his or her level of self-efficacy for being able to read. All students are provided with a range of reading levels called their just-right reading levels based on assessments I do regularly. These assessments help me make decisions of what

levels students should read and what strategies they need instruction on to improve their reading

achievement. I reflected on the choices I make regarding what students read:

> Being mindful of what I'm asking students to read is so critical. Not only should
>
> it hold their interest but also the difficulty level is key. If it is too easy, students
>
> don't learn anything because they do not have the chance to use the strategies they
>
> are learning. However, if it is too hard this can really kill their motivation to read
>
> if they are at all wavering in their sense of self as a reader. It is a very fine
>
> balance of being within the zone of proximal development that also coincides
>
> with their self-efficacy level (Lines 398 – 405).

Building trust and developing a relationship with students provided background to understanding

each student's self-efficacy level helped me decided on the feedback I was going to give them to

hopefully influence their self-efficacy. Once students were reading with less hesitation and

greater trust in me, I was able to see what they were truly capable of and provide them with the

positive, descriptive feedback they needed.

Theme 3: Impact of Feedback on Self-Efficacy

Descriptive feedback is a formative assessment strategy that provides students with

specific information of what they are doing to contribute to their success. It sometimes includes

providing constructive feedback about what could be done to further success. The theme of

feedback was one of the most prominent themes to emerge when analyzing and coding my

journals. It became clear that building trust and establishing relationships with students was

required as a platform to provide feedback. Setting clear and attainable learning goals for

students meant there was something to provide feedback on. I reflected on this in November by

stating, "Why work so incredibly hard if you don't know that you are doing better?" (Lines 500-501) and continued on to clarify:

>It's MY job to not only teach [students] and coach them, but it's also my job to very deliberately and bluntly tell them that they are improving. It's MY job to tell them that when they do X, Y, and Z it makes their reading better and as a result they are getting their reading level bumped up…In looking at the feedback I'm providing students about their reading, it shows their effort is valued but that it's not just 'general' effort – it's effort on a specific strategy for a specific end result (Lines 508-519).

When I realized that students did not always have the metacognitive abilities or background experience to recognize what they were doing to make them successful it helped guide the feedback I was providing to build a student's perceived belief in their reading abilities.

For example, when working with Student 14 in October I saw her struggling to decode words that I knew she could solve. Being early in the school year I was worried how struggling for too long could affect her self-efficacy. "When she stopped at the next difficult word I asked her if she thought she could solve it. She shook her head no immediately" (Lines 189-190). This confirmed what I suspected about her self-efficacy so "I told her that she was actually using blend and stretch really well, even though it wasn't helping her solve the tricky word. She looked very skeptical but somewhat relieved" (Lines 190 – 193). I wanted her to know she was using the strategy accurately but that sometimes there are other strategies that could work better. So I taught her to chunk a word up into smaller parts and then sound these small parts out. "Her and I used chunking on a bunch of more words together; I chose intentionally semi-easy words that I suspected she would know to build her self-efficacy in being able to use the strategy"

(Lines 197 – 199). I wanted this descriptive feedback to convey that not accurately solving a word is not a reflection on her ability, but rather the struggle could just mean she needs to choose a new decoding strategy.

In January I worked with a group of students who were learning to summarize who benefitted from descriptive feedback. "All 4 [students] were very hesitant to try and they all indicated they didn't think they would be successful" (Lines 982-984). I gathered a rubric that provided descriptive details of different levels of achievement for writing a summary and had them work in pairs. I was careful in how I provided feedback, starting with positives:

> I went through the summaries they wrote and highlighted the statements that supported their summaries. I then pointed out the sentences that did not fit with the summaries and gave them suggestions on how to change it. I have let them cross out the sentences they don't want with a pen… and write in sentences that better summarize the plot (Lines 1016-1021).

The students wrote another summary the next day to take advantage of the feedback they had received. They demonstrated a higher level of self-efficacy and their summaries showed that they were applying the feedback they had received.

A journal from February 3 provided evidence of how quickly feedback could improve the self-efficacy of a student who was struggling. I was reading one-on-one with Student 27 and when I asked if felt he could be successful with the book he had been given:

> He hesitated and indicated he thought he might be successful… I asked what he would do to solve the difficult words, and he was able to list two strategies (even though he knows at least 4) (Lines 1475-1478).

I was concerned he may easily give up and not persevere with the decoding strategies he knew. As I feared he was really struggling to successfully use the accuracy strategies. I gave him prompts of which accuracy strategies to use on the first few pages. He continued to struggle but was now beginning to fix his errors, showing he was relying on my previous prompts. As soon as I saw he had successfully used a few strategies on his own, I provided him with descriptive feedback about his choices. His reading continued to improve, he struggled less, and used the strategies with greater accuracy. I stopped him after successfully reading a page to discuss:

> I asked him how successful he was in reading it. He indicated he thought he had been really successful and I agreed. I gave him specific, descriptive feedback of the five strategies I had observed him use: tracking, blend and stretching the sounds, calm and controlled, use the picture, and looking at the first and last sound of the trickier words. He added that he had also used chunking. These were all strategies that I had commented on or prompted him to use in the first half of the book (Lines 1493 – 1500).

He read the remainder of the book with very few errors and used a wide range of strategies without any assistance. "He was sitting up straighter as he read, began to read with more expression and less hesitation, and seemed more eager to continue reading" (Lines 1501 – 1505) which was not how he had started the book. I was encouraged by the change his reading underwent as he progressed through the book. So I chose to only respond to what he had been successful with and provided no constructive feedback on what he could have done differently because of the limited self-efficacy I had seen him display at the start at the book.

Effects of feedback on a long term goal.

This theme emerged when I saw that over a few months, I had tracked the feedback for a few specific students. My interactions with Student 18 are representative of the impact of repetitive feedback, the slow progression of self-efficacy, and the struggles I had in providing effective descriptive feedback.

On October 20, Student 18 was having difficulty using her prove-it notes to indicate that she had used a decoding strategy to solve a difficult word as part of her learning goal. She was rereading the same books and hesitant to move onto new titles of her choice from within her just right-reading levels. I reflected on the situation:

> I need to provide her with more positive feedback about how she is successfully
>
> solving difficult words; maybe I'm not providing her with enough positive
>
> feedback for her to believe that she's capable of new books and more challenging
>
> words (Lines 260-263).

This interaction was occurring while I was still getting to know Student 18 and develop trust with her as well. I took her struggle as a reflection as to how I was facilitating her learning and the trust that had not been built between us yet, not that she was being stubborn and resistant.

On November 4 I met with Student 18 again and this time she had new books in her bag, with some prove-it notes next to a few difficult words. I reflected that maybe "…she thinks flagging words that are tricky will demonstrate she is not a good reader, and is making errors" Lines (297 – 299). I saw this as an opportunity to change her thinking on what prove-it notes represent:

> I found a word she hadn't flagged (pupa) and asked her to read the sentence that
>
> contained the word. She did in fact need to flip the vowel sound the second time

she read it to accurately read it. When she was successful with solving a tricky

word, I gave her instant feedback that she had changed the vowel sound of a new

word when she sounded it out, in order to get it right. That by flagging it, she

wasn't indicating a mistake but rather indicating that she was able to solve a

tricky word on her own (Lines 299 – 306).

This reframing of what prove-it notes meant did help her use more but she was still not

displaying higher levels of self-efficacy that I had hoped for. I knew that she was using the

strategy well because her accuracy was improving and her reading level had already slightly

improved, which was all feedback that I gave her.

I decided to change her learning goal and focus on developing her comprehension by

having her learn to retell what she has read. On November 19, we looked at the descriptions of

retelling on a rubric, practiced retelling together, and then I provided her with positive

descriptive feedback once she had done a retelling on her own. When we assessed her retelling

on the rubric, she was fully meeting expectations. Her self-efficacy still only gradually improved

when I asked if she thought she would be successful next time we practiced. My reflection was

not focused on what could be wrong with the student, but focused on what else I could do to help

improve her self-efficacy because I believed she was very capable of the learning goal:

When I think about how to help this student, rather than just overwhelm her with

things I know/want her to achieve, choosing one very specific area to improve on

and improve her self-efficacy with might be more important (Lines 594-597).

I asked her to read the next chapter in the book before we met again in a few days.

We met on November 23 for her to retell me the next chapter and I observed that "She sat

up straighter, spoke with more confidence and was quick to retell me the important parts. Her

nervousness and timidness about saying the wrong thing was gone" (Lines 573 – 576). The retelling she completed this time had improved by one entire achievement level on the rubric and her physiological response was much more positive; she was smiling and eager to keep reading the next chapter in her book. This pattern of positive behavior and improved self-efficacy carried through to a meeting we had on December 2. Reflecting on the situation, I was able to make changes to my behaviours with the goal of positively impacting her self-efficacy, rather than blame it on shortcomings of the student. I struggled with how to provide her with the feedback she needed, but as our relationship grew and I made careful observations of her it helped to better understand who she was as a reader.

Feedback to small groups.

When I met to provide students with reading instruction, it was sometimes in groups with two or three students. Providing students with feedback in these small groups had an interesting side effect of creating vicarious experiences, as witnessed on January 21. Student 17 and Student 11 had both been given the same book at a higher level the day before, and were both focusing on the same learning goal. I decided to listen to both of them read. After reviewing what the learning goal was and practicing it, the students began to read in whisper voices at their own pace. As I began to observe their reading Student 17 was displaying maladaptive behaviours in her reading that confused me, as these were not typical reading behaviours for her:

> She was sounding words out that she hasn't needed to sound out in many months. She was reading at a very increased almost frenzied pace. She was guessing at unknown words based on the initial letter even if the sounds of the words she said did not match what was written. When she did stop and try to self-correct she continued to guess rather than use a strategy (Lines 1244 – 1249).

I stopped her to provide some descriptive feedback about some of the strategies I was seeing her try to use, as well as constructive feedback on how she could be more successful when using them. However when she began to read again nothing had changed. I was concerned that maybe she was not trusting the constructive feedback I was giving her or trusting my decision that she was capable of reading at this new, higher level. Meanwhile Student 11 was reading the book successfully by using the range of strategies she knew, including the new one that was part of the learning goal.

At the end of the book I asked Student 17 to stay and debrief the reading experience with me. When I asked her how successful she felt her reading had been her response provided me with a wealth of formative data:

> She was not feeling confident because she had not read it prior to coming to the
>
> table. She was hesitant to read it on her own because it was a higher number,
>
> even though she was excited to be reading at a higher number. (Lines 257 – 260).

I realized that Student 11 who had read fluently and used a range of decoding strategies for the few words that were difficult, had read the book prior to coming to the table. Student 17 had not. Watching and hearing Student 11 be more successful with a new book at a higher level had inadvertently turned into a vicarious experience for Student 17 that was negatively affecting her perceived belief in her ability to read at a new book at a higher level. I suspected that "Even though she was whispering, hearing Student 11 be successful with the book and turn the pages quicker, caused Student 17 to become less confident and she was rushing to try to keep up with her" (Lines 1261 – 1264).

I could not let Student 17 finish our session with a low sense of self-efficacy as I suspected it would deeply impact her, and I was confident she could read the book well. I felt

responsible to show Student 17 that she was capable of successfully reading this book because of my decision to have them read at the table together, and not take into account that one of them had pre-read the book. I was also concerned if she was going to trust in my decision to raise her reading level. So I encouraged her to read the book again and show herself that she could read this book if she took her time with the strategies she had tried before. This time:

> …She demonstrated that she was highly capable of reading this level when she used her strategies. She demonstrated she had been developing a grit or perseverance needed to reread tricky words numerous times which will help her move quicker between levels (Lines 1270-1274).

I was thankful I decided to take the extra time to follow up with the changes I had seen in Student 17's reading as it could have negatively affected her self-efficacy and subsequently her reading progress. Not all peer feedback experiences resulted in negative vicarious experiences, some in fact turned out to be incredibly successful and led to students taking initiative to provide one another with feedback.

Impact of peer feedback on self-efficacy.

Students providing feedback that an influence on a peer's self-efficacy emerged as a theme mid-way through the year and became more prevalent as the year moved on because I was seeing more students in small groups. For example, as a follow up to the January 21 meeting with Student 17 and Student 11, I decided to meet with them again. This time the goal was to have them provide each other with positive descriptive feedback. Seeing how influenced Student 17 was by Student 11, I decided to see if Student 11's feedback could have a positive impact on Student 17's self-efficacy.

Student 17 asked to read first while Student 11 tracked what Student 17 was reading with the purpose of giving feedback of how Student 17 had been successful when reading. Student 17 made a number of errors that she did not fix until I prompted her to. When Student 11 was asked to give feedback I observed:

> Student 11 provided feedback that Student 17 had used a bunch of reading strategies to solve the tricky words successfully. She did NOT comment on the fact that Student 17 had made mistakes; the way Student 11 was encouraging and positive about what she had done well caused Student 17 to smile a little as she kept her head down (Lines 1370-1376).

It was incredible to watch Student 11 provide her peer with only positive feedback and completely ignore the errors Student 17 had made. When it was time for Student 11 to read I was concerned that this could end up as another negative vicarious experience for Student 17. However when Student 17 took her next turn there was a change in her reading:

> She made 2 mistakes: the first mistake she self-corrected and vocalized her thinking while she did so. The second mistake she also tried to self-correct but was struggling to find the accurate letter sound. So Student 11 prompted her to try a different vowel sound and this helped Student 17 be successful. Student 11 quickly pointed out afterwards that Student 17 seemed to read more easily and with less mistakes because she was using the strategies to read the words the first time, instead of just guessing (Lines 1383 – 1390).

Student 17 showed more adaptive behavior while she read this time, and the feedback that Student 11 provided her sounded just like something I would have said.

Given trusting relationship that had been established, I decided to ask them how they felt about giving and receiving feedback from a peer once they had finished reading:

> Student 17 said it made her feel happy when Student 11 gives her a tip – she feels
> more successful because the tips do help her. I asked if the feedback is only
> useful when she reads at the table with the group, or if she uses the feedback/tips
> when she reads on her own. Student 17 said she thinks she does better when she
> reads on her own because she does think about the tips (Lines 1396-1401).

Hearing that the feedback is used long term in Student 17's reading was a powerful motivator to have students continue to provide one another with feedback.

I began to have more and more teams of students provide one another with feedback because of the positive results it garnered. I was however surprised when Student 28 requested to join a one-on-one meeting because she thought she could provide Student 26, who was reading, with good feedback and support. When I asked why, Student 28 explained that she had read the book Student 26 was working on and that she could give her feedback on what to do if she got stuck because she had solved all the words. I decided to let Student 26 decide if she wanted to agree to Student 28's request. She eagerly agreed and instantly there was a change in her reading "As soon as Student 28 sat down, Student 26 began to read with a louder, more confident voice" (Lines 1436-1437).   Student 28 provided descriptive feedback that matched what I would have said and was very gentle and encouraging when giving constructive feedback. As a result, "Student 26 continued to read with a clear voice, she used word attack skills with confidence, and was sitting up tall rather than hunched, which I often see" (Lines 1448-1450). Seeing that Student 28 was giving quality feedback, I had the two students continue their reading

meeting without me. I observed from a distance away and they continued to both benefit from the experience.

Vicarious experience through peer feedback.

When analyzing my journals for peer feedback, there were frequent observations of vicarious experiences occurring at the same time because students began to naturally demonstrate the feedback that they were providing to their peers. For example, Students 19 and 21 provided feedback to one another as they took turns reading from the same book. Student 21 demonstrated a number of decoding strategies in his reading, and Student 19 was able to include these strategies in her descriptive feedback of what had made Student 21 successful. I added constructive feedback afterwards, suggesting he might consider pausing longer at periods. What was interesting is that when Student 19 became the reader, he was very deliberately stopping at punctuation. Student 21, who was now providing feedback, highlighted the pauses Student 19 had taken at punctuation. The situation became an unintentional vicarious experience as Student 19 decided to take action on what I had advised Student 21 could work on. When Student 21 had to read again, he demonstrated better pauses at punctuation and Student 19 was able to provide feedback about this.

I had Student 21 join in on feedback again a week later but this time with Student 24. Student 24 began reading while Student 21 was to provide feedback afterwards. I observed:

> [Student 24] read with expression and excellent accuracy. She however did not
>
> stop at the punctuation all the time. This is something that Student 21 had been
>
> working on I wondered if he would catch this and provide her with descriptive
>
> feedback about it. And in fact he did! He told her that it was what he was
>
> working on and he had heard her run right over the periods (Lines 1331-1337).

When it was Student 21's turn to read, "he demonstrated many positive reading strategies that made him successful: he stopped at punctuation, he self-corrected, and he used the flip the vowel strategy" (Lines 1340 – 1343). Peers providing feedback and engaging in natural vicarious experiences appears to have had a positive affect on each students reading and their self-efficacy.

Theme 4: Impact of Mastery Experience on Self-Efficacy

As my journals began to focus less on developing trust and student-teacher relationships, there were more observations of how the communication of a student's mastery experience was changing self-efficacy. There was evidence that the positive descriptive feedback I had been providing students was now metacognitively being used to recognize a mastery experience. More students were reading with a positive attitude and required less encouragement because they were exhibiting evidence of self-motivation and moving quicker to more challenging reading levels. What started to appear were the building blocks that I predicted in October would be necessary for mastery experience:

> I can't even get [students] to attempt a higher reading level without providing them with feedback and clear learning targets of what to do to improve their reading in order to provide them with a mastery experience that proves to these students they ARE capable of reading higher levels that are more challenging (Lines 109 – 113).

In November, some students were just beginning to develop metacognitive skills that allowed them to be aware of mastery experiences and this built their self-efficacy. More students began to be able to recognize mastery experiences as the year progressed and they received more feedback.

The first mastery experience that appeared in my journals was in November about six weeks after I began reading instruction. I gave a small group of students a book at a new, higher reading level. When I showed it to them their reaction provided a glimpse of their self-efficacy:

> They all looked at each other and smiled from ear to ear and nearly squealed. I asked how they felt about getting a harder book, and they all said excited and happy. I asked if anyone was feeling like it might be too challenging or overwhelming. There wasn't. I asked WHY they felt that they would be successful with this book, and immediately the strategies they were using were given as a reason (Lines 435-441).

Their prior experience using strategies connected to their learning goals was positively impacting their self-efficacy for reading at a higher level.

A similar mastery experience provided Student 26 with the self-efficacy to believe she was also capable of reading at a higher level. In January, when asked if she would be successful reading Level 13:

> She quickly stated that she would absolutely be successful. Her reasoning was that she had been reading Level 14s from our class book bins and she felt she was doing well with them, so this Level 13 book shouldn't be difficult. She also said that she knew how to use chunking as a strategy to solve new words (Lines 1085-1090).

Spending time in the first three months of school to build trust, develop student-teacher relationships, set learning goals and just-right reading level targets, and provide descriptive feedback appear to have all contributed to helping students encounter and recognize mastery experiences.

Metacognition of accurate reading ability was influential in helping students decide on their just-right reading goal that all students set in November. For Student 21 his mastery experience of improving 10 reading levels from the end of September to mid November was a huge factor in setting his just-right reading level goal. He showed commitment to using the strategies that were part of his learning goals, accepted and asked for feedback, and showed a high level of self-efficacy. In November he was reading at a level 17 and "he set a goal of reading 27, 28 or 29 for his March goal. I told him that meant he had to improve 10 levels; in his mind he already improved 7 this year so what's 10 more?" (Lines 716-718). I reflected in January that setting and monitoring learning goals "provided students with tangible evidence that they are getting better at reading" which then provides a powerful mastery experience. The interaction I had with Student 21 in November and my reflection in January, provide evidence how mastery experiences could influence goal setting.

Seeing how influential these mastery experiences were to students developing their self-efficacy, there were a number of journal entries that highlighted how responsible I felt for setting students up for success with new reading levels and new learning goals. For example, in February I met with two students to have them read a book I had saved since the fall.   In the Fall I had accidentally grabbed a book at level 9, when I should have grabbed a book at level 6. I had already showed the students the book before I realized my error, and unfortunately they were really excited about the book, which was about a cat. I promised to tuck it away and save it for when they were ready. As a result, the level 9 book became a larger than life goal that these students had built up in their mind as a really big deal to be able to read. Both students were at risk readers and building their self-efficacy had taken intense support and thoughtful choices, so I had to save it until I fully believed that they would both be successful with it, otherwise risk a

negative mastery experience. A lot of thinking went in to how I could use this book to help influence their self-efficacy.

In February I decided they were both ready to read it and suspected it would be a powerful mastery experience when they did read it. Their initial reaction was what I had expected:

> Student 11 dove into the book – she was smiling and was showing a lot of excited characteristics (tapping the book, wiggling in her seat) when I gave it to her. Student 17 was smiling but calmer than Student 11. Both started reading quite quickly (Lines 1601-1604).

There was little to no hesitation to begin reading and their reading was spectacular, with both students demonstrating their independence in using strategies to decode difficult words. When Student 11 "…finished the book she was beaming. I asked her why and she explained that only did they FINALLY get to read the cat book, but that she read Level 9 and she thought she had done well" (Lines 1606 – 1608). This mastery experience was powerful for both students who proved to themselves that the Level 9 they could not have mastered in the Fall was now fully within their capabilities.

There were some journal entries reflecting on students who struggled to recognize mastery experiences. When conducting a reading assessment, a student made minimal errors and when she did she used strategies to decode efficiently and she adequately showed comprehension of the text. She demonstrated she was ready to be assessed at a higher level. When I told her I needed her to read another book because what she had read was too easy, I asked if she thought she would be successful. She responded:

> That this book would most likely be a "problem" for her because there may be
> words she doesn't know. I reminded her of the strategies she had used for success
> in the previous book and that these strategies would be helpful at this more
> difficult level as well. She looked as though the light had just gone on and said
> "Oh! Okay!" and proceeded to read (Lines 1143-1149).

She had not used the mastery experience from the first book as evidence that she would likely be successful with the next book, even though I had articulated that what she had read was too easy. This reminded me that not all students recognized or trusted in their mastery experiences. The student was successful in reading the higher level book and I was keen to point out her success with the hopes it would be a memorable mastery experience to rely on in the future.

A powerful journal entry in May demonstrated how the time and effort put into building a strong foundation to help mastery experiences occur is worth it. I invited Student 11 to read with me, knowing she was having a bit of a rough few days emotionally. It was important for me to gauge her emotional situation before deciding what I was going to ask her to try to accomplish so we engaged in a little bit of small talk before she began:

> I asked her "How are you feeling today?" She smiled and looked up at me and
> said, "I feel confident." This was not what I was expecting her to say! I asked
> her why she was feeling confident and she said cause she likes to read and knows
> what she is doing cause she is solving so many tricky words (Lines 1979-1983).

This was a student who earlier in the year was reluctant to read, resisted using strategies, and struggled in her self-efficacy to believe she could be a successful reader. I decided to seize this burst of confidence and ask her to read a book just above her just-right reading level. The reading that occurred was incredible:

> She was able to accurately assess that this new level is now more appropriate for
> her based on the amount of words she had to solve and her ability to retell what
> she read. She can talk herself through how she is going to be successful prior to
> starting a new book, and then rely on the strategies she has been taught explicitly.
> I hear the coaching I have given her, in the self-talk she uses when she is
> decoding a word (Lines 1986-1992).

This interaction provided me with the proof that everything that had been poured into building trust, creating meaningful student-teacher relationships, setting goals, providing descriptive feedback, and opportunities for mastery experiences all resulted in positively influencing self-efficacy.

Impact of prove-it notes on self-efficacy.

In the fall all students received a bookmark that had space to record their current learning goal and just-right reading levels. As well, tiny sticky notes that we refer to as prove-it notes are also on the bookmark. Students are invited to use the prove-it notes to flag words or pages where they have tried to use a strategy that is part of their learning goal when reading independently. I originally introduced them for accountability purposes so I could see if students were using the strategy. However, through analyzing my journals, it became clear that these prove-it notes turned into powerful mastery experience reminders for many students who were eager to share what they had done with me during our meetings.

For example, in February Student 26 came to read with me, and she had numerous words flagged on each page of her book that she had practiced on her own. When I asked her to read aloud I observed her "…stop, take a moment and almost collect her thoughts as to how she is going to solve it again" (Lines 1635 – 1636) and then I'd watch her "smile and choose a strategy

within about 10 seconds. If it is not correct, she self-talks as to why it is not right and then

chooses another strategy" (1637 – 1639). Knowing she has solved it once on her own, taking as

much time as she needed, reminds her she can solve it again.

Student 27 had a similar connection to the prove-it notes in his book. When I asked him

to tell me about the large collection of prove-it notes he had in his book "he said there were

many words that were very difficult and he had worked hard to solve them all. I asked him to

show me a couple, but he proceeded to explain each and every one" (Lines 1748 – 1752). When

I asked how it felt to solve tricky words he replied "he felt good and was ready for another new

book, asking if I had any harder books" (Lines 1758 – 1759). His self-efficacy for reading was

positively impacted by the prove-it notes that proved to him the strategies he was using as part of

his learning goal were going to allow him to read more difficult text. When students came to

prove-it notes their perseverance for solving a word they knew they had already solved once also

improved.

Improved perseverance.

Analyzing my journals revealed that as students became more committed to meeting their

learning goals and received descriptive feedback, perseverance was observed more regularly.

For example, when Student 13 struggled to read the word "ladder" I asked what she had done to

solve it so far:

> She was able to articulate exactly what she had done to solve the word and how
>
> she knew it wasn't right because it didn't match the picture. And then she said, "I
>
> will not give up. I can't give up on this." And my heart soared. This is what I
>
> needed her to have – perseverance, grit and the belief she could keep trying and
>
> keep trying.   She tried to read the word ladder over and over, saying "Nope that

doesn't make sense" or "Nope that word doesn't have the right ending sound to

what I see" (Lines 537 – 545).

Her self-talk that kept her motivated and clarified her thinking through the whole process was

encouraging to watch as it provided a window into her metacognition and showed perseverance.

Self-talk in connection to perseverance was also observed in December when I read with

a student who had many prove-it notes in the book she was reading aloud. When she was stuck

on a word "She took a deep breath – this happened frequently when she came across tricky

words – and said, "I can do this!" (Lines 835-836). The word the student was struggling with

appeared on another page and rather than be frustrated by having to struggle with it again "…

she stated "This word is my enemy!" and I had to laugh and ask who was going to win the war?

She smiled and triumphantly said that she would. Again it took deep breathing and slowly

sounding out the word to solve it" (Lines 841-844). Students' ability to recognize mastery

experiences, including using prove-it notes and seeing the benefits of perseverance when things

are difficult all contributed to changing many students' self-efficacy about their reading abilities.

Summary

The purpose of the study was to observe the changes in the self-efficacy of students when

using formative assessment techniques and reflect on how my involvement in implementing and

providing feedback affected student self-efficacy. Tracking the actions and decisions I made

regarding students' progress in learning to read, and recording observations of students reading

and reactions, resulted in a collection of reflective journal entries over the course of school year.

Analyzing and coding my journals revealed four key themes: using formative assessment to set

learning goals, developing trust, the effect of feedback on self-efficacy, and the effect of master

experiences on self-efficacy. Each theme had various subthemes that further explored the results.

Developing trust was critical when working with students who were fearful of making mistakes and unsure of what my response would be. Building a trusting teacher-student relationship was foundational to being able to better understand students as readers. This provided me with authentic formative assessment to set appropriate learning goals for students to reach. Students had strong physiological reactions to learning goals and became involved in setting their own goals, which motivated students to keep trying when it was challenging. Descriptive feedback had a positive impact on self-efficacy for many students, during one-on-one meetings and when working with a small group of students. Students then began to observe their peers and offer feedback. When a peer was illustrating a learning target the observing student was trying to achieve, it also served as vicarious experiences. The feedback that students received became internalized and useful for them to recognize their successes independently resulting in a mastery experience that further influenced their self-efficacy and began to build their perseverance for future challenges.

The next chapter sets out to relate the above themes to the cited literature and to propose recommendations for future implementation as well as limitations of the study.

Chapter 5

Discussion, Summary, Limitations, Conclusion and Implications

Discussion and Summary

The goal of the study was to conduct an auto-ethnography by reflecting how my involvement in implementing formative assessment affects student self-efficacy in reading. Through analyzing and coding my journals that included observations of student behavior, conversations with students that included feedback, and reflections of my actions and decisions using formative assessment, four major themes were revealed with supporting subthemes. The four main themes include: using formative assessment to set learning goals, developing trust, the effect of feedback on self-efficacy, and the effect of master experiences on self-efficacy. Each theme included subthemes that provided supporting results. The themes and subthemes that were exposed correlate with much of the literature and many of the studies that have explored the development of self-efficacy and the impact of formative assessment.

Evaluating the effect of feedback as part of verbal persuasion on student self-efficacy has been a difficult source of self-efficacy to measure (Usher & Pajares, 2008) because of the close connection it has to providing a student with a mastery experience. Schunk (1991) recommended a long-term study to see the effect of teacher-student interactions on developing a student's self-efficacy. Through this auto-ethnography both issues were explored. Over the ten months of the study, the descriptive feedback that was given to students did appear to positively influence student self-efficacy. Journals that provided in the moment observations showed how a student's belief in meeting their learning goal was affected by descriptive feedback. The journals exposed that a strong student-teacher relationship would foster trust in the learning goal that the teacher had set for the student. This trust would also be necessary for the student to

believe in the feedback they were receiving, supporting the literature that claimed trust would be necessary for verbal persuasion to be effective (Bandura, 1997; Margolis & McCabe, 2006). A draw back of the study's results is that it is not possible to evaluate the degree to which verbal persuasion influenced student self-efficacy. This supports Bandura's (1997) argument that to evaluate the influence of each source is too difficult because they often converge.

The connection between formative assessment and a motivation to learn was consistent with the literature. Students were provided with personalized learning goals, based on observations made when students were reading, that focused on strategies to improve his or her reading ability. Students were then included in setting just-right reading level goals. Students in the study were motivated to use the strategies included in their learning goals, as they recognized it created a path towards being able to meet their just-right reading level goal. This supports arguments made by Stiggins and Chappuis (2005) as well as Hattie and Timperley (2007) that students should be involved in setting goals that are framed around three key questions: "Where am I going? Where am I now? And How can I close the gap?" (Chappuis, 2005, p. 40). There were numerous conversations had with students regarding these three questions, and students were provided with positive descriptive feedback about what they were doing to be successful as it pertained to these goals. This corresponds with the claim that feedback describing what was done to result in success will cause self-efficacy to be positively developed (Bandura, 1993, 1997; Black & Wiliam, 1998b; Hattie & Timperley, 2007; Margolis & McCabe, 2006). The extended length of the study meant students were provided with regular descriptive feedback for a variety of goals Nes Ferrara (2005) argued has an even greater effect on self-efficacy.

As a participant in the study, my reflections on my own self-efficacy to provide feedback were mostly positive. I believed the learning goals I was setting for students would improve

their reading ability. I also believed in my ability to provide students with the feedback necessary to help them see the validity in what they were and that this feedback would have a positive impact on their self-efficacy. This corresponds with the literature that teacher self-efficacy to provide necessary instruction for students to succeed in the skill they are teaching can impact student self-efficacy (Bandura, 1993). My background in teaching students to read is well developed after twelve years of teaching. However there were moments in my journal when I struggled with what feedback to provide to a student, and this often corresponded with students who showed low levels of self-efficacy for meeting their learning goals and who were making slower progress than others.

Exploring the influence feedback provided by peers had on self-efficacy and the organic vicarious experiences that arose because of the feedback provided, was not explored in-depth in the literature. Bandura (1997) does theorize that the more alike the individual modeling the skill is to the observer, the more likely they will believe they are capable of the skill. Pajares, Johnson and Usher (2007) suggested a peer could be an appropriate model for a vicarious experience to make an impact. However the literature explored in this study provided no evidence regarding the impact of peers providing verbal persuasion to one another in the form of feedback.

As a by-product of descriptive feedback, when the researcher pointed out what students had done to be successful it provided tangible evidence of a mastery experience. As Bandura (1997) theorized, young students often have minimal prior experience to rely on. Usher and Pajares (2008) argued that having someone speak to the metacognitive steps that were taken to be successful would influence a student's self-efficacy. In the current study, by providing students with evidence of their abilities that led to success, it clearly illustrated an experience

they could rely on when making predictions for how capable they would be with future tasks of a similar nature. This domino effect was observed in the self-efficacy development for a number of students, such as when students would describe strategies that they believed would make them successful with a new book; often they were parroting positive descriptive feedback that I had provided to them after reading previous books. In light of Schunk's (1991) argument that feedback based on ability rather than on effort, has a higher impact on self-efficacy because the feedback can then be used for future tasks, the current study shows how ability based feedback is useful for providing a foundation for a mastery experience.

The literature describes that student's with high levels of self-efficacy are more likely to accept challenging tasks, show greater persistence, put more effort into problem solving, and ask for help to better understand the concept being explore (Linnenbrink & Pintrich, 2003; Usher & Pajares, 2008; Zimmerman, 2000). It was theorized by Määttä and Järvelä (2013) that young students will often exhibit higher self-efficacy because they do not have the prior experiences to draw on to indicate that they would be anything but success. Observations of students in the current study, showed behavior consistent with moderate to higher self-efficacy as the year progressed. These are characteristics that Dweck (1986) refers to as adaptive behaviours that demonstrate a student is highly motivated. There were students in the study such as Student 11 who consistently displayed high self-efficacy with adaptive characteristics. Students' requests for more challenging just-right reading levels and an openness to new learning goals, corresponds with the literature outlining adaptive behaviours and a high motivation for learning.

At times though, a student who one day would display adaptive characteristics could the next day display completely maladaptive behaviours, described by Dweck (1986) as showing helplessness, avoiding challenges and having a low level of persistence. Student 17 often

displayed both adaptive and maladaptive behaviours for the same learning goals depending on the day. This variance in behaviours and rapid changes in self-efficacy levels in such a short amount of time was not evident in the literature presented and would be worth further exploration.

When the four major themes of the study were analyzed it became clear that they were building blocks for creating a foundation to influence self-efficacy. Trust and a strong relationship had to be established. These were necessary for two reasons: students had to trust in the goals that were set and the feedback that was provided; and two, in order to accurately determine learning goals, students had to feel comfortable making mistakes and showing what they were truly capable of in reading. This corresponds to the literature that explains when highly trusted individuals provide support and encouragement for a specific goal it can strengthen the student's self-efficacy belief (Bandura, 1997; Margolis & McCabe, 2006).

Once these two essential elements were established, then learning goals based on formative data of student reading could be set. The learning goals provided a topic for feedback. By including students in setting a just-right reading level goal, it gave something to aim for and provided purpose for the feedback about the learning goal.   When students have a strong connection to setting and monitoring a personalized learning goal it allows for meaningful feedback (Chappuis, 2005).

The positive descriptive feedback encouraged students to keep trying, providing a positive physiological response as well as a mastery experience. When highly trusted individuals provide support and encouragement for a specific goal it can strengthen the student's self-efficacy belief (Bandura, 1997; Margolis & McCabe, 2006). Usher and Pajares (2008) state that young people often need someone to point out their success because they do not have the

metacognition to be aware of it, and descriptive feedback provides this evidence for them. This was necessary for many students in the current study. By pointing out the mastery experience within the feedback, it made metacognition visible for students to better understand how they were being successful.

Eventually students had received enough feedback to recognize mastery experiences independently and they began to cite these experiences as evidence for why they thought they would be successful with specific tasks. Students need to see this success based against assessments that they deem reliable to "spark confidence, which, in turn, encourages more effort" (Stiggins & Chappuis, 2005, p. 12). This did occur for many students, and led to some requesting more challenging just-right reading levels. When this success is repeated and students finally reach their desired level of achievement, it demonstrates true ability and builds their self-efficacy (McMillan & Hearn, 2008). Being aware of improved self-efficacy in the current study, led to the teacher presenting new challenges that most students were eager to try to meet. This illustrates a deepening level of trust between the teacher and the student, which brings the whole cycle back to where it began.

Limitations

By its nature an autoethnography, written as a first person narrative exploration, has a strong author bias since it is drawing from experiences and conclusions made solely by the researcher. An autoethnography relies on the honesty of the researcher in her reflections, which can at times be challenging given the vulnerability and weaknesses it can expose (Ellis & Bochner, 2000). The depth of the researcher's ability to reflect and be vulnerable, can affect the validity of the journal and the final conclusions of the study. As well, the observations and reflections are based on the memory of the researcher. Observations not recorded in a timely

manner may lack details and be less thorough than those recorded within a few hours of the

experience. The observations are completely from the singular perspective of the researcher, and

often two people present for the same experience can view and remember it differently. How the

researcher views the reading experience or self-efficacy of a student may be different than how

the student may observe the interaction.

Implications

The study has deeply personal implications for the researcher's future practice. The

personal relationship that were developed with student's regarding reading helped move

student's forward in their reading by being overtly sensitive to their current levels of self-

efficacy. Seeing how it impacted their perceived capabilities for achieving learning goals was a

powerful experience. Applying what was learned to other key subject areas such as writing and

math is highly likely. Discerning student self-efficacy levels for specific writing and math

outcomes would be beneficial when setting personalized learning goals and how to provide

positive descriptive feedback. Building and maintaining trust with students regarding choices

that are made for them is critical to be aware of, as the smallest breach of trust can have a lasting

impact on being able to help students achieve their learning goals and influence student self-

efficacy.

The study provided the researcher with an opportunity to reflect on her levels of self-

efficacy for teaching student's specific reading strategies and influencing student self-efficacy.

Being aware that my own self-efficacy for being able to teach specific outcomes and strategies

can affect student self-efficacy is important to be aware of. If I don't believe myself to be

capable of teaching something, I'll have even less belief that students will be able to master the

skill or strategy. This could easily become a self-fulfilling prophecy of lack of ability and

subsequently negatively affect achievement in other areas of instruction I am responsible for.

Given the unstructured nature of an autoethnography and the personal bias of the study,

replicating the results of this study would be highly unlikely, even for the researcher. However,

this study could provide other educators with a window into a vulnerable and real life situation of

a teacher that they may be able to find similarities with. Teaching can be a very isolating

experience, yet we can learn so much from one another when we are open to revealing both our

achievements and our struggles. It is hoped that educators who read about my experience could

reflect on their own practice using formative assessment, their personal self-efficacy levels, and

the self-efficacy of their students. They may attempt to draw parallels or consider learning more

about how to influence student self-efficacy within their classrooms. Sometimes by telling your

own story, you inspire others to reflect on a similar journey and deepen their own story.

Final Conclusion

The findings of the study demonstrate that formative assessment practices that fall under

verbal persuasion can influence student self-efficacy in reading. The long-term duration of the

study provides narrative and very personal insight into establishing trust, building relationships,

using formative data to set learning goals, and the experience and reactions of providing

descriptive feedback to young students learning to read. Based on the findings, the process of

influencing student self-efficacy is cyclical in nature and a strong connection between the teacher

and student is beneficial when implementing feedback as a source of verbal persuasion.

The results of the study correspond with much of the literature that describes how to

influence self-efficacy, and how formative assessment as a source of verbal persuasion can affect

student self-efficacy. The effect students could have on their peers' self-efficacy, by mimicking

feedback that they themselves had received from the teacher, was an important observation made during the study. Student's ability to provide feedback demonstrated they could identify a peer's mastery experience, which led to students being able to recognize mastery experiences of their own that they had difficulty identifying at the beginning of the study. This provided students with multiple sources to influence their self-efficacy, stemming initially from positive, descriptive feedback. It is worth exploring the fluctuation in self-efficacy levels observed in some students when trying to achieve a specific goal, which was not cited in the literature included in the study.

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