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Student Self-Assessment: Teachers' Definitions, Reasons, and Beliefs

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ABSTRACT

Student Self-Assessment: Teachers' Definitions, Reasons, and Beliefs

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The purpose of this study was to understand how teachers define student self-assessment (SSA), why teachers use or do not use SSA, and to explore how beliefs might influence teachers' reasons for using SSA or not. This study used Ajzen's theory of planned behavior to explore the relationships between teachers' stated beliefs about SSA and reasons for using or not using SSA. I interviewed seven teachers from one high school in the Intermountain West and found that five of the seven teachers in this study used SSA. I found that these teachers' definitions of SSA varied between formative and summative approaches. The way teachers defined SSA appeared to influence their implementation of SSA, as well as their reasons for using or not using SSA. I also found that beliefs associated with student outcomes (e.g., student cognitive and skill growth, student motivation) were usually indicators for using SSA. However, beliefs about resources (e.g., time to implement, good models) and concerns about students' ability to self-assess were typically associated with not using SSA. For those studying this issue, or schools or districts intending to implement forms of SSA, a "one-size-fit-all" approach is not recommended. A more effective approach for moving research to practice would be to start with how teachers are defining SSA, and then individually address their reasons and beliefs surrounding SSA.

Keywords: self evaluation (individuals), teacher attitudes, definitions, secondary education

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Chapter 1

Introduction

Student self-assessment (SSA) is a form of educational assessment that has direct benefits to students and their learning. Student self-assessment is an assessment process, "during which students reflect on the quality of their work, judge the degree to which it reflects explicitly stated goals or criteria, and revise accordingly" (Andrade & Valtcheva, 2009, p. 13). In other words, SSA allows and encourages students to participate in the process of judging, evaluating, and reflecting on their own work or abilities (Andrade & Valtcheva, 2009; Brown & Harris, 2013; Kasanen & Räty, 2002). Methods of SSA might include students' self-rating using rubrics, prompts intended to initiate and deepen student reflection on a learning task or process, and self-feedback for improving skills or understanding (Brown & Harris, 2013). Students can improve their learning when they are given the opportunity to reflect on and analyze their progress during a task or instructional activity (Zimmerman, 1990).

Brown and Harris (2013) conducted a meta-analysis of SSA studies in grades K-12, and found that several studies indicate that students who engaged in self-assessment improved academically by at least a moderate amount. Student self-assessment has been linked to benefits for students, such as greater critical thinking ability (Elder & Paul, 2008), self-regulation and self-regulated learning (Panadero, Tapia, & Huertas, 2012; Zimmerman, 1990), improved test scores (McDonald & Boud, 2003), and improved grades (White & Frederiksen, 1998). Other studies show that SSA can be helpful across subject areas including: improvement in students' music performances (Hewitt, 2001), higher quality science project reports (Olina & Sullivan, 2002), mathematics achievement (Ross, Hogaboam-Gray, & Rolheiser, 2002; Stallings &

Tascione, 1996), and improved writing ability (Andrade, Du, & Wang, 2008). Giving the students an opportunity to assess themselves allows students to develop cognitive abilities.

Although the previously mentioned studies generally report a positive impact on students, some studies of SSA show little to no student academic improvement (Brown & Harris, 2013). Andrade and Boulay (2003) conducted a rubric-guided SSA study with seventh- and eighth-grade students' written essays that resulted in some students in the control group scoring higher than those participating in SSA. The effect size was too small to be considered significant, but is an indication that SSA may not always yield large positive results. In their meta-analysis, Brown and Harris (2013) found that 11 of the 24 studies with data sufficient to compute effect sizes, reported effect sizes below 0.40, which may be insufficient to claim a large positive effect (Hattie, 2009). While the impact of SSA appears to be generally positive, Brown and Harris (2013) suggested that "it is the implementation and complexity of the self-assessment, more so than the type, which generates positive effects" (p. 383). In other words, SSA has been shown to be more beneficial for students when it requires a higher level of cognitive engagement.

Fewer studies have been conducted on benefits of SSA for teachers. Some research suggests that teachers who use SSA in the classroom may reduce their workload as they shift responsibilities of the learning to the student (Sadler, 1989; Sadler & Good, 2006). When teachers decrease some of their responsibilities for assessment, it allows them to spend more time helping students learn in other ways (e.g., helping students to think critically about their self-assessments). However, it could also be argued that using SSA actually increases a teacher's workload. Teachers need to spend classroom time instructing and training students in proper self-assessment, in addition to teaching their course content. Teachers might also need additional, time-consuming training in using SSA. While the potential teacher benefits of SSA

warrant additional research, the majority of studies on SSA indicated positive effects for students.

Despite data demonstrating the benefits of SSA in the classroom, the literature also suggests that the majority of teachers are not using SSA. For example, Hunter, Mayenga, and Gambell (2006) found that more than 80% of secondary Canadian English teachers used little or no SSA in the classroom. In another study, Noonan and Duncan (2005) found that more than 70% of high school teachers in Western Canada used little or no self-assessment with their students. One notable exception is a study examining elementary and secondary teachers in Spain in which 90% reported using SSA in their courses and more than 80% believed SSA was a necessary element for students (Panadero, Brown, & Courtney, 2014). A possible explanation for the discrepancies between study results could be that none of these studies addressed how the teachers or researchers are defining SSA. With the Panadero et al. (2014) study as the only exception, the available research points to an overwhelming lack of SSA in classrooms. However, as only Canada and Spain are represented in the literature, it is difficult to say what is known regarding the percentage of SSA use among teachers globally. This scarcity of research signifies a considerable lack of understanding how much or little SSA is being used by teachers in the classroom.

Hesitation on the part of teachers to include SSA in their teaching practice could be for a variety of reasons. Some studies suggest that teachers are concerned about students' lack of evaluative knowledge, as well as the accuracy of SSA compared to teacher-driven assessment (Brown & Harris, 2013; Panadero et al., 2014). Yet, evaluative knowledge and expertise is what students need to learn and use to improve their learning (Boud & Falchikov, 1989; Sadler, 1989). Panadero et al. (2014) reported that some reasons teachers gave for using or not using

SSA included previous training in implementing SSA (or similar assessment strategies), previous experiences with SSA, the policies of the institution (e.g., school, district, state), as well as teachers' values and attitudes about SSA. These reasons, or explanations, provide some insight into why teachers are or are not using SSA, but may also indicate deeper beliefs teachers have that might inform these reasons.

Teacher belief systems are an important area of study (Bullock, 2011; Fives & Buehl, 2012) and appear to have a direct impact on teachers' practices within the classroom (Combs, Blume, Newman, & Wass, 1974; Kagan, 1992; Pajares, 1992), including practices related to assessment strategies in the classroom (Black, Harrison, Lee, Marshall, & Wiliam, 2003; Cizek, Fitzgerald, & Rachor, 1996; Dixon, Hawe, & Parr, 2011; Fives & Buehl, 2012; Kahn, 2000). Yet, Marshall and Wiliam (2005) said that "teachers' beliefs have received too little attention" (p. 166). Attending to teachers' beliefs about the role of the student, the role of the teacher, how students learn, the subject matter, and the school system (Kagan, 1992; Nespor, 1987), may give insights into the reasons teachers are or are not using SSA.

One way to view and understand the relationship between teacher beliefs and teacher practices is by looking at the work of Ajzen (Bullock, 2011; Kennedy & Kennedy, 1996). Ajzen's (1991) theory of planned behavior states that a person's intention to perform some behavior "can be predicted with high accuracy" by attending to that person's behavioral beliefs, normative beliefs, and control beliefs (p. 179). Ajzen (2005) defined behavioral beliefs as "beliefs about the consequences of [a] behavior" (p. 123), normative beliefs as "beliefs that specific individuals or groups approve or disapprove of performing [a] behavior" (p. 124), and control beliefs as "beliefs about the presence or absence of factors that facilitate or impede performance of [a] behavior" (p. 125). Bullock (2011) used Ajzen's theory to help explain

possible reasons and beliefs that affect teacher's intentions to use SSA or not. For example, a teacher who has a school system (e.g., administration, parents) that supports the use of SSA, will be more likely to use it. Ajzen (1991) would call this a normative belief, which he described as the perceived behavioral expectations of important people (e.g., administration, parents) within the context of the intended behavior (e.g., SSA). Ajzen's theory provides a framework for researchers to study and analyze teachers' stated beliefs in regards to reported practice.

Statement of the Problem

Of the scant research on teacher reasons for implementing SSA, most is quantitative in nature (Brown & Harris, 2013; Panadero et al., 2014) and takes place, primarily, outside of the United States. Qualitative studies are needed to facilitate understanding beyond that provided by quantitative studies, accessing teachers' self-generated reasons for using or not using SSA. In addition, as teacher beliefs can influence the types of assessment strategies in the classroom (Black et al., 2003; Bullock, 2011; Cizek et al., 1996; Dixon et al., 2011; Fives & Buehl, 2012; Kahn, 2000), teachers' reasons for using or not using SSA are likely influenced by the beliefs teachers have about teaching and learning. Panadero et al. (2014) used a self-report survey to study teacher beliefs and SSA. While this study was helpful in beginning to understand the connection between the two, the researchers suggested that the use of qualitative methods would be helpful in furthering the understanding of SSA and teacher beliefs. An interview approach to this problem allowed for open-ended responses from the teachers.

Statement of the Purpose

Although the existing research on SSA and teacher beliefs provide a foundation for understanding what teachers think about SSA, there is not a clear picture of the relationship between teachers' reasons for using or not using SSA and their beliefs. Since teachers may be

more likely aware of their reasons than their beliefs (Kagan, 1992), asking teachers for reasons first, and then looking for the beliefs embedded in their reasons may be preferable to the reverse. The purpose of this study was to understand how teachers define SSA, why teachers use or do not use SSA, and to explore how beliefs might influence teachers' reasons for using SSA or not. Such research provides a framework for future studies also aimed at understanding or impacting local practices, and eventually leads to models that can be tested quantitatively in larger samples.

Research Questions

This research was designed to explore three questions:

1. How do teachers in this study define student self-assessment?
2. What are these teachers' stated reasons for using or not using student self-assessment in their classroom?
3. What teacher beliefs appear to be informing the reasons that teachers give for using or not using student self-assessment (i.e., beliefs about the expected outcomes of SSA, the normative expectations of others, and the affordances and constraints that support or inhibit SSA)?

Limitations

I interviewed seven teachers at a local high school, and findings are not intended for wide generalization. However, the research framework I used might be applied elsewhere in similar studies. In the present study, I interviewed teachers I already interact with as a colleague; although I felt confident my relationships with my colleagues helped them to share openly and honestly, it is possible that their responses were influenced in unexpected ways by their perception of our relationship as colleagues. Another limitation was the difficulty in collecting data on teacher beliefs as "teachers are often unaware of their own beliefs, [and] they do not

always possess language with which to describe and label their beliefs, and may be reluctant to espouse them publicly" (Kagan, 1992, p. 66). I attempted to mitigate this limitation by having multiple interviews with the participants, as well as a member check on the data, in order to give them an opportunity to correct or clarify their previous responses.

Despite these limitations, there is a need for qualitative research examining SSA and teacher beliefs in more depth, in context, and in open-ended ways (Panadero et al., 2014). My hope is that my relationship with the teachers I interviewed allowed for a more naturalistic, context-grounded conversation in which they could openly express their thoughts and ideas about SSA.

Chapter 2

Review of Literature

The Common Core State Standards, adopted by 43 of the 50 US states and implemented as part of their education policy, were created, in part, to increase student critical thinking, problem-solving, and analytical skills (National Governors Association Center for Best Practices & Council of Chief State School Officers, 2010). Although there has been some controversy regarding the implementation of the Common Core State Standards, few are debating these proposed goals, or outcomes.

Critical thinking and problem solving are generally accepted as desired skills for students of all ages (Bloom, 1956; Webb, 1997). According to Facione (2015), critical thinking and problem-solving skills help students develop a deeper understanding of the content they learn and improve their grades. Critical thinking and problem solving are valuable skills outside of the classroom environment as well. Additionally, critical thinking is an important piece of self-regulation theory, which encourages students to become "metacognitively, motivationally, and behaviorally active participants in their own learning" (Zimmerman, 1990, p. 4). Self-assessment is one way to help develop critical thinking (Elder & Paul, 2008) and self-regulation (Pintrich, 2000; Zimmerman, 1990). It is also tied to improved academic achievement (McDonald & Boud, 2003).

Defining SSA

In the research, SSA tends to be broadly defined and carries many synonyms. Brown and Harris (2013) found the words *self-evaluation*, *self-reflection*, *self-monitoring*, *reflection*, *self-grading*, *self-testing*, *self-rating*, and *self-appraisal* to all describe similar constructs in their meta-analysis of SSA. These authors defined SSA as "a descriptive and evaluative act carried

out by the student concerning his or her own work and academic abilities" (p. 368). This definition is broad in scope and encompasses many forms of SSA, both formative and summative. Some methods of SSA require less cognitive engagement, such as "self-rating satisfaction with a happy or smiley face scale, awarding oneself a grade for a test based on a desire to avoid failure" (p. 386). These authors acknowledged their use of a less-restrictive definition of SSA as purposeful, in part to see the distinct effects on the different interpretations and implementation of SSA in the classroom. However, teachers adopting a broad definition and simple approach to SSA may reduce the quality and benefits of SSA (Brown & Harris, 2014). Brown and Harris (2013) also concluded that the benefits of SSA are greater when the level of mental engagement and involvement from the students is higher.

Andrade and Valtcheva (2009) provided a more focused definition: "Self-assessment is a process of formative assessment during which students reflect on the quality of their work, judge the degree to which it reflects explicitly stated goals or criteria, and revise accordingly" (p. 13). These authors emphasized that the purpose of SSA is "to inform revision and improvement" (p. 13) and cannot be reduced to self-evaluation, which may include students grading their own work. Boud and Falchikov (1989) also used a more focused definition of SSA that emphasized a student's judgment about their own learning, a definition that is primarily formative in nature. Boud and Falchikov emphasized that students should be involved in selecting the criteria used in the assessment rather than using pre-selected criteria, so that students are more cognitively challenged. Kasanen and Räty (2002) also stressed the importance of using explicit criteria in self-assessment. The purpose of self-assessment is for students to compare against standards or goals, not other students, with an intent to avoid competition between students and foster a more collaborative environment.

Benefits of SSA

Student self-assessment is often studied with a focus on the positive effects it has on students in the classroom, including academic performance (grades or scores within a classroom), self-regulation (actively participating in one's own learning), and motivation. In Brown and Harris' (2013) meta-analysis of SSA literature in K-12, they found that SSA had a median positive effect on academic achievement and performance between 0.40 and 0.45, using Cohen's (1992) *d* effect sizes. Hattie's (2009) recent work in investigating effect sizes within educational research found that effect sizes of 0.40 and larger are more likely to indicate a significant positive effect. Brown and Harris' (2013) findings make sense; students who learn to self-assess for learning tend to think more deeply about their learning. In other words, students who engage in the evaluative process are participating in some form of critical thinking. Bloom's (1956) *Taxonomy of Educational Objectives* certainly supports this idea. Bloom placed evaluation at the top of the cognitive hierarchy of educational goals for learning. Sadler (1989) also recommended that teachers help students participate in the evaluative process, arguing that it is "part of the teacher's responsibility...so that students eventually become independent of the teacher and intelligently engage in and monitor their own development" (p. 141). Sadler continued:

> For an important class of learning outcomes, the instructional system must make explicit provision for students themselves to acquire evaluative expertise. It is argued that providing direct and authentic evaluative experience is a necessary (instrumental) condition for the development of evaluative expertise and therefore for intelligent self-monitoring. It is insufficient for students to rely upon evaluative judgments made by the teacher. (p. 143)

Boud and Falchikov (1989), in their meta-analysis of SSA in higher education, also encouraged the explicit teaching of self-assessment to students and that students be given more opportunities to practice self-assessment in order to become more effective learners.

In a study with mathematics students in high school and college, Stallings and Tascione (1996) used self-assessment—primarily on tests—where students submitted a written assessment of their own test performance that included corrections of problems they missed and an analysis of their test performance. They found that the self-assessment process helped the students to be more engaged in their individual progress of learning and understanding mathematics. The students struggled with the process of self-assessment at first, but as the students became more familiar and had more practice, they reported that they felt more comfortable with the process. One student who participated commented that, "Self-assessment is an assurance that even if I didn't know the material well enough when taking the exam, that I am sure to learn it through self-assessment and corrections" (p. 554). Key parts of self-regulation include a student monitoring his or her understanding and learning, participating in self-evaluation, and self-assessing (Zimmerman, 1990).

In order to see the effect of SSA on self-regulation, Panadero et al. (2012) studied self-assessment tools used by secondary students in Spain studying Geography. The students were asked to analyze a landscape and then self-assess using either a rubric or a script (a series of questions organized in steps) depending on the group they were in. The authors found that both SSA tools improved the students' self-regulation and increased learning.

McDonald and Boud (2003) conducted a study with secondary students in the West Indies in which they compared a group of 500 students, about half having received training in SSA, while the other half received no training. They found that students trained in SSA

techniques outperformed their peers on the Caribbean Examinations Council exam, an exam similar to the SAT or ACT in the United States. Previous studies suggested that using SSA improved learning, this study added another clear benefit of SSA, especially in a time of increased emphasis on test scores.

White and Frederiksen (1998) examined SSA when studying middle-school science curriculum that included a reflective self-assessment at the end of each module, or unit, based on specific criteria. The experiment included 12 classes of middle school students in grades 7-9. They found that students participating in a reflective assessment had improved grades and increased quality of student's project work. They also found that low-achieving students, as defined by scores on a basic skills test before the study began, had the largest gains on project scores and tests after participating in the reflective self-assessment. Students participating in the reflective self-assessment had increased motivation and confidence, as measured by assignment turn-in rate and difficulty of research topics selected.

Olina and Sullivan (2002) investigated the effects of SSA and teacher evaluation on the quality of student research reports. Latvian high school students (n=189) were trained on how to conduct experiments and produce research reports, and then were assigned to three treatment groups: no evaluation (n=62), teacher evaluation (n=69), and self-evaluation plus teacher evaluation (n=58). The students in the self-evaluation plus teacher evaluation group scored higher on their project reports than the other two groups and were "significantly more confident of their ability to independently conduct future research experiments" (p. 2).

Ross et al. (2002) looked at the effects of self-assessment training on mathematics achievement, specifically word problems, with Grade 5-6 students in Canada. The treatment group (n=259) received training in creating assessment criteria and rubrics, how to use the

criteria to assess their own work, and how to use their assessment to develop an action plan, while the control group (n=257) received no training. Students in both groups took a test that involved answering a complex word problem at the beginning of the study and a similar complex word problem at the end of the study. At the conclusion of the experiment, the treatment group scored significantly higher than the control group, suggesting that SSA helped the students develop and execute action plans that increased their learning.

Lasonen (1995) asked upper-secondary Finnish students (n=346) their opinions on the advantages of SSA using open-ended questions on a survey. The student's top responses referred to continuous learning skills such as, "Learning to learn and to analyze oneself as a learner" and "Learning how to study further" (p. 208). When students engage in SSA it likely promotes metacognitive growth because students are pushed to become conscious of their own thinking and learning.

Most of the studies in SSA have dealt with core subjects such as mathematics, language arts, social studies, and science, but benefits have been found among elective subjects as well. Hewitt (2001) assigned junior high instrumental music students (n=82) from the United States into groups, in which some students listened to a model performance and then compared and evaluated their own performance while other students did not participate in that process. To evaluate their performance, the students were trained on and used a rubric that included criteria such as: musical tone, technique, and melodic and rhythmic accuracy. Students who listened to the model performance and participated in self-assessment improved their performance, and the other students saw little to no change in their performance. Although the combination of SSA and listening to a model performance improved a student's musical performance, SSA alone did not significantly improve student performance.

Researchers have found additional benefits of SSA in studies conducted at the elementary school level. Schunk (1996) found that fourth grade students who participated in self-assessment showed improvement in their self-efficacy, motivation, and engagement. Andrade et al. (2008) studied third and fourth graders to see if self-assessment using a rubric could improve student writing. Although the students weren't involved in creating the criteria for the rubric, the students were trained in how to use a rubric for self-assessment. These authors found that SSA with rubrics did improve students' scores. It is important to note, however, that simply implementing a rubric with SSA is not always effective. Brown and Harris (2013) mentioned that implementing SSA rubrics without training students on their effective use may not yield a noticeable positive impact.

Limitations of SSA

While the majority of studies have indicated positive effects of SSA for students, and even some positive effects for teachers, not all studies found the use of SSA to be effective (Brown & Harris, 2013). Andrade and Boulay (2003) studied the effects of SSA on students' written essays among 13 seventh- and eighth grade classes (n=397). Students wrote two essays: one an historical fiction, and the other a literature essay. All of the students received a rubric detailing the criteria for each essay but only the students in the treatment group received two lessons on SSA using the rubric. The study concluded there was no significant relationship between SSA and students' improved writing with one exception: girls who participated in SSA scored higher on the historical fiction essay than girls who did not participate in SSA. The authors suggested that the results may be due to the insufficiency of the intervention (SSA training).

Another study by Ross, Rolheiser, and Hogaboam-Gray (1998) examined the effects of SSA on student performance in mathematics with fifth- and sixth-grade students (n=300). All students participated in a cooperative learning unit about probability, while students in the treatment group received six weeks of training on self-evaluation prior to the unit. The study found that students who received self-evaluation training improved their accuracy of assessments compared to the teacher evaluation. However, the training and implementation of SSA had no impact on student achievement as identified by test scores. Again, the authors gave possible reasons for the lack of improvement by the treatment group, such as: inequality between treatment and control groups; insufficient SSA training for the students; and split attention of treatment group teachers between the unit content and self-evaluation, whereas the control group teachers could focus solely on content. The results of the previous studies reveal possible weaknesses of SSA (e.g., may require significant training) and endorse the notion that "the implementation and complexity of the self-assessment…[is what] generate[s] positive effects" (Brown & Harris, 2013, p. 383).

Teacher Use of SSA

There is limited attention in the research to SSA benefits for teachers. Sadler (1989) suggested that SSA places the responsibility for learning on the learner, reducing student dependence on the teacher. Boud and Falchikov (1989) advocated the practical need for teachers to promote and use SSA to "[redirect] teacher effort from marking to planning and moderating assessment activities" (p. 530). Similarly, Sadler and Good (2006) suggested that SSA may save the teacher time because of the increase in assessment duties shifting to the learner. An opposing argument might also be made that the teacher would need to spend more time planning and moderating student assessment in order to monitor the effectiveness of the change. The teacher

might also feel the need to train students extensively on SSA, taking away instructional time normally dedicated to content. Although arguments can be made for both perspectives, the teacher benefits of using SSA has potential to be quite favorable.

Despite research showing the many possible benefits of SSA for students, and some benefits for teachers, the prevalence of SSA in the secondary classroom is remarkably disappointing. Lasonen (1995) asked Finnish upper-secondary students (n=346) how many had participated in SSA in the classroom and only half of the students reported participating in some form of SSA in their classes. Hunter et al. (2006), using a self-report survey instrument, studied classroom assessment of a group of secondary Canadian English teachers and found that less than 20% of teachers sampled (n=4148) frequently used SSA. About 85% of the teachers sampled used little or no SSA in their classroom.

Only one study reported a large number of teachers using SSA (Panadero et al., 2014). This self-report survey study included primary (n=366), secondary (n=510), and university (n=68) teachers throughout Spain. Of primary and secondary teachers, more than 90% reported currently using SSA in their courses, with the university teachers reporting just under 90%. In this study, more than 80% of the teachers in the study believed that SSA was beneficial for students. However, the study did not include data on how the teachers defined SSA or what it looked like in their classroom. These authors also concluded that when teachers have positive experiences with SSA, are trained in how to implement SSA, and believe that SSA has benefits (e.g., detection and correction of problems, saves time for teachers, and students learn using SSA), they are more likely to use SSA in the classroom.

Harris and Brown (2013) studied implementation of peer- and self-assessment (PASA), a similar construct to SSA, in a study that included three New Zealand teachers in grades 6, 7, and

10. The study used interviews with the teachers and their students to understand their perspectives on PASA. All three teachers saw PASA as a way to increase student self-regulation, and two teachers expressed that it helped them, as teachers, to improve instruction. The teachers also acknowledged that the school grading policies and practices limited the role of PASA in the classroom, mainly because teachers were expected to control assessment.

Similarly, Noonan and Duncan (2005) used an open-ended survey to understand Western Canada high school teachers' (n=118) use of peer- and self-assessment (PASA). Of those surveyed, 73% reported little to no use of PASA, while 27% reported using PASA "somewhat" (p. 5). Although the survey did not separate self-assessment from peer-assessment, twenty-two of the thirty teachers that responded as using PASA "somewhat" indicated a preference to self-assessment in their comments, "because it benefited students by helping them to reflect on their performance" (p. 5). Teachers who did not use PASA also voiced reasons such as student's lack of maturity, inability to be objective in their assessment, and lack of evaluative knowledge.

Throughout each of these studies, research has shown benefits of SSA that increased student learning in a variety of ways, including grades and test scores (Andrade et al., 2008; McDonald & Boud, 2003; Ross et al., 2002; White & Frederiksen, 1998), metacognitive thinking (Lasonen, 1995), and self-regulation skills (Harris & Brown, 2013; Panadero et al., 2012; Schunk, 1996; Zimmerman, 1990). However, additional research needs to be done to further explore and understand the reasons why teachers use or do not use SSA in the classroom (Brown & Harris, 2013; Panadero et al., 2014). Additionally, further research needs to be conducted in other countries besides Canada, Finland, and Spain regarding how little or how much SSA is

being used among teachers. The present study helps fill those needs and adds to the research available in exploring reasons why teachers are or are not using SSA within the United States.

Teacher Reasons for Using SSA

Throughout the available research, several reasons have been offered as explanations for the lack of SSA in classrooms. Brown and Harris (2013) suggested that teachers are concerned about students' lack of evaluative knowledge, and therefore the accuracy of SSA. Panadero et al. (2014) indicated that some teachers may choose not to use SSA because of school, district, or state institution policies. Additionally, they cited teachers' unfavorable attitudes (e.g., unreliability of SSA) towards SSA as another possible reason for the lack of its use. Understanding the reasons teachers give for their assessment decisions will shed some light on the lack of SSA implementation; however, a reason may only be a surface-level explanation of a teacher's choices. In contrast, a belief may have a greater impact on assessment decisions. Although reasons often develop from beliefs (Ginsborg, 2006), beliefs differ from reasons in that they are assumptions about the truth of something, while reasons seek to explain why something is believed. For example, Brown and Harris (2013) indicated that some teachers are concerned about the accuracy of a student's assessment compared to a teacher's assessment. This reason (i.e., accuracy), although legitimate as a reason, might suggest a belief that assessment is part of the role of the teacher and not the student. It might also stem from a belief that students are not capable of participating in the assessment process. In the present study, I will differentiate between teacher beliefs and reasons, in order to explore whether and how certain beliefs might inform teachers' reasons for using or not using SSA.

Teacher Beliefs

The values, conceptions, and beliefs of teachers affect their classroom decisions and assessment techniques (Black et al., 2003; Cizek et al., 1996; Dixon et al., 2011; Fives & Buehl, 2012; Kahn, 2000; Pajares, 1992). Combs et al. (1974) stated, "Whether an individual will be an effective teacher depends fundamentally on the nature of his private world of perceptions" (p. 21). By paying more attention to teacher beliefs, teachers and researchers can gain a greater understanding of educational practice (Pajares, 1992). Kagan (1992) came to a similar conclusion in her summary of research on teacher beliefs:

> The more one reads studies of teacher belief, the more strongly one suspects that this piebald form of personal knowledge lies at the very heart of teaching. Teacher belief appears to arise out of the exigencies inherent in classroom teaching, it may be the clearest measure of a teacher's professional growth … As we learn more about the forms and functions of teacher belief, we are likely to come a great deal closer to understanding how good teachers are made. (p. 85)

These statements argue that examining teachers' beliefs is an important part of understanding teacher practices, including assessment.

Teacher beliefs are broadly defined as teachers' "assumptions about students, learning, classrooms, and the subject matter to be taught" (Kagan, 1992, p. 66). Nespor (1987) added the role of the teacher and perceptions about the school where they work as additional beliefs to be considered. While there appear to be some inconsistencies in how researchers define teacher beliefs (Fives & Buehl, 2012), researchers agree that beliefs impact teacher practices (Combs et al., 1974; Pajares, 1992).

Dixon et al. (2011) studied teacher beliefs in relation to assessment practices, which included SSA. They interviewed teachers about their beliefs and then observed their classroom and looked for evidence of their stated beliefs, focusing on two teachers in particular. The study highlights the complex nature of beliefs as they found that two teachers who had similar stated beliefs behaved very differently in the classroom. Ultimately, these authors stated that, "teachers' beliefs, both those espoused and those held tacitly, [are] influential in respect to practice" (p. 376).

Bullock (2011) also conducted a similar study exploring teacher beliefs and behavior in relation to SSA. The study involved ten secondary teachers in Ukraine who were asked to complete a questionnaire about learner autonomy and SSA and then were asked follow-up questions that differed for each teacher based on their responses from the questionnaire. The study found teachers' responses were generally positive toward SSA, but these favorable views of SSA did not necessarily lead to implementation of SSA. The author suggested teachers' beliefs about the outcomes of SSA (behavioral beliefs), were strong indicators of intention, but beliefs about what others thought (normative beliefs) and the availability of resources and support (control beliefs) hindered implementation of SSA for the teachers in the study. These three sets of beliefs, (i.e., behavioral beliefs, normative beliefs, and control beliefs) were borrowed from Ajzen's (1991) theory of planned behavior and used as a framework for the study. Bullock (2011) further explained how Ajzen's theory applies to SSA:

> According to Ajzen, …a person's evaluative response to something [is] determined by behavioral beliefs. For example, if a teacher believes that getting students to self-assess will involve more work but strongly believes it will benefit the student, that teacher's attitudes will probably be favourable. Subjective norms, [or normative beliefs] are

> concerned with what a person believes significant others will think. For example, if a teacher believes that his/her boss or the students' parents will approve of introducing self-assessment, then this will positively influence on that teacher's intentions. The third influential factor is perceived behavioural control [or control beliefs]: the degree of control the teacher believes he or she has in getting students to self-assess. Control factors may be internal, i.e. skills and abilities, or external, for example materials, equipment, time, or institutional support. (p. 116)

Ajzen's (1991) theory of planned behavior helped inform the present study and served as a theoretical lens to untangle the complexity of beliefs. This theory also helped to explore the differences between teachers' stated beliefs and their self-reported classroom practices. For example, teachers' concerns about accuracy of SSA compared to a teacher's assessment (Brown & Harris, 2013; Ross, 2006; Sadler & Good, 2006) may rest on a normative belief that teachers are expected to be the primary source of learning and a control belief that students are incapable of accurate self-assessment. In contrast, teachers that teach students how to self-assess (Harris, Brown, & Harnett, 2015; Kasanen & Räty, 2002; McDonald & Boud, 2003) may hold a normative belief that students are generally expected to think critically about their own work, and a control belief that students are capable of meaningfully assessing that work.

While both Bullock (2011) and Dixon et al. (2011) provided some groundwork for the present study, there are key differences. Bullock's (2011) study was conducted to understand teachers' beliefs after an intervention was implemented where teachers were asked to start using forms of SSA in their classrooms. Also, Bullock did not look at reasons why teachers use or do not use SSA. Dixon et al. (2011) examined teachers' espoused beliefs along with their practices. The present study examined how teachers' definitions of SSA might influence reasons and

beliefs surrounding SSA, as well as examining how teachers' reasons and beliefs interact. Neither Bullock (2011) nor Dixon et al. (2011) explored these aspects of SSA. There is clearly a need for more qualitative research that seeks to understand why teachers are choosing to implement or not implement SSA in their pedagogical practices and the effect teacher beliefs might play in those reasons (Black et al., 2003; Brown & Harris, 2013; Harris & Brown, 2013; Noonan & Duncan, 2005; Panadero et al., 2014). How do teachers define SSA? What are teachers' reasons for using or not using SSA in their classroom? What teacher beliefs inform the reasons teachers give for using or not using SSA (e.g., beliefs about the expected outcomes of SSA, the normative expectations of others, and the affordances and constraints that support or inhibit SSA)? These are questions I explored during this study.

Chapter 3

Methods

In this chapter, I first describe the study context, the participants, and the data sources I used. Next, I detail the design of the study and the procedures. Finally, I explain my data analysis. This research was designed to address three questions: How do teachers in this study define SSA? What are these teachers' stated reasons for using or not using SSA in their classroom? What teacher beliefs appear to be informing the reasons teachers give for using or not using SSA?

Research Setting

This research study was conducted at one high school, located in a suburban area of the Intermountain West in the United States. This high school has a student population of 1,337 enrolled students in grades 10-12 and employs 57 full- and part-time teachers. The ethnicity of the student body is 92% white, 5% Hispanic, and all other groups were 1% or lower. The gender split for the student body is 52% male and 48% female. The number of students receiving free or reduced lunch was 55%. The data for this study were collected from November 2015 to February 2016. This high school was selected for the study because I was employed there as a teacher during the time of this study, which provided me access to the participants. For this study, I applied for and received approval from the university institutional review board, the school district, and the school principal.

As part of understanding the context of SSA at the school, I sent an email (Appendix A) to each teacher at the school, which also included a request for interviews. The email included a link to an online survey (Appendix B) that asked two questions: "Do you use student self-assessment in your classroom?" and, "What types or forms of student self-assessment do you

use?" Of the 48 teachers who responded to the survey, 33 of them (68%) reported using SSA. While the survey did not ask whether teachers had a positive or negative attitude towards SSA, the survey results indicated that the majority of teachers reported using SSA, suggesting that a majority of teachers at this school find some value in using SSA in their classroom.

Teachers using SSA in their classroom submitted various examples of self-assessments on the survey. The responses ranged from asking the students for a thumbs-up if they understand the concepts taught in class, to correcting their own homework or in-class work, to grading their own work using a rubric, to reflecting on their learning and goals over the course of a term or semester. These survey data suggest there are diverse implementations of SSA at this school.

Researcher Positionality

I have taught at the high school in this study for the past seven years. I have worked with many of the participants in this study in some capacity and have interacted with them multiple times over the course of the last seven years. Although I was not in any explicit position of power over any of the teachers in this study, I did serve on the leadership team for the school. As a member of the leadership team, I worked with the administration and 11 other teachers to discuss school improvement initiatives. At the beginning of the 2015-2016 school year, I became a mentor teacher in addition to my other responsibilities. Mentor teachers observe, support, and help train teachers who are in their first three years of teaching. This is important, as one of the participants is also a mentor teacher, and we worked closely together during the time of the study. I believe that the relationships I have built with the teachers allowed the interview to feel like a natural collaboration between colleagues, allowing the teachers to express their thoughts openly and honestly.

Participants

The seven participants chosen for this study were recruited through email and face-to-face interactions. Demographic information about these participants is summarized in Table 1. Details of how the participants were recruited and chosen, as well as the reasons for removing one of the participants, are included in the procedures section of this chapter.

Table 1

Participant Demographic Information

Participant	Gender	Age	Yrs Teaching	Education	Subject Area
Alan	M	32	10	Bachelor's	Mathematics
Amy	F	27	4	Bachelor's	Fine Arts
Greg	M	54	29	Master's	Social Science
Jason	M	29	3	Bachelor's	Special Education and Physical Education
Kathy	F	55	28	Bachelor's	Elective (CTE)
Ryan	M	50+	30	Master's	English
Sean	M	39	15	Master's	Science

I have a personal relationship with most of the participants in this study and I have worked with many for the past seven years. I feel this has allowed open and honest conversations to take place during the course of the interviews. I also feel strongly—and I believe it was evident in each of the interviews I conducted—that each participant in this study cares deeply about students and their best interests.

Alan (all names are pseudonyms) teaches Secondary Math 2 and Secondary Math 3. This is Alan's tenth year teaching. He started at the junior high level and took a job at the high school level two years ago. Alan and I have had many conversations because we both eat lunch in the faculty lounge together and he is a mentor teacher with me. We often plan meetings together and are constantly interacting in helping each other in the mentoring process. Alan reported that he does use SSA.

Amy teaches in the Fine Arts department teaching the Drama and Tech Theater classes. She is in her 4th year teaching. She started at the junior high level and taught there for two years before taking a position at the high school, where she has been for the last two years. I have had many interactions with Amy and we have collaborated between our classes from time to time. Amy reported that she does use SSA.

Greg is a school counselor and also teaches a Sociology class at the school. Greg has been a teacher for the last 29 years. I have known Greg since I started at the school. I have frequently talked with Greg about the philosophy of education and we have often bounced ideas off of each other for our respective classes. Greg reported that he does use SSA.

Jason teaches some inclusion Special Education classes as well as some Sports Medicine classes that are part of Healthy Lifestyles and Career and Technical Education courses. Jason is in his third year teaching. Jason is in the mentoring program; however, I am not mentoring him. Jason reported that he does use SSA.

Kathy teaches elective courses in the Career and Technical Education: Family and Consumer Science areas, particularly Clothing 1 and 2, Fashion Design, Adult Roles, Early Childhood Education, and Child Development. She has been teaching for 28 years. I have known Kathy for the last seven years as she was my mentor teacher through my first three years

of teaching. I have often gone to her for advice on teaching matters and we often converse about non-work related topics. Kathy reported that she does not use SSA.

Ryan teaches the Sophomore and Junior English classes. He has been teaching for 30 years. I have known Ryan since I started at the school, but we have not interacted very often. Ryan serves with me on the leadership team for the school, so, I have had opportunities to speak briefly with him in those meetings. However, we have rarely had any conversations together. Ryan reported that he does use SSA.

Sean is in the Science department, teaching Chemistry. He has been teaching for 15 years. I have known Sean ever since I came to the high school. He also serves on the leadership team for the school. Despite the number of times we have had opportunities to interact, we have not interacted very often. Sean reported that he does not use SSA.

In order to understand both perspectives, I intentionally constructed a purposive sample of teachers for the study by including teachers who were using SSA as well as those who were not. Of the seven participants in this study, five indicated using SSA in their practice, while two indicated not using SSA. I also solicited teachers from different content areas, as teachers' reasons and beliefs about SSA might be influenced by the content they teach.

Data Source

Semi-structured interviews with seven teachers at the school served as data for this study. After obtaining signed consent forms (Appendix C), I conducted two separate interviews, lasting fewer than 30 minutes each, with each of the seven participating teachers. The first two sections of questions used in the interviews (Appendix D), on definitions and reasons, are qualitative adaptations of the different survey instruments used in past research (Bullock, 2011; Panadero et al., 2014). The questions about teacher beliefs were created based on the ideas of Kagan (1992)

and Nespor (1987). In this way, I build on existing research and what has already been examined quantitatively by adding additional insights, through an examination of qualitative, open-ended responses.

The first interview with each participant contained open-ended questions asking how the teacher would define SSA and reasons why they use or do not use SSA (Appendix D). The open-ended questions allowed participants to respond in depth and link their own teaching contexts to their responses.

In the second interview, I asked each participant open-ended questions about their beliefs regarding behaviors required for SSA and its likely outcomes, perceived norms, and perceived control over the assessment process. Following the second interview and data analysis, I scheduled a brief follow-up conversation. This short meeting was an opportunity to clarify responses, resolve misconceptions, or add new insights.

Design

This is a qualitative study exploring the relationships between teacher definitions of SSA in the classroom, stated reasons for using or not using SSA, and teacher beliefs in qualitative ways. I interviewed teachers about their understanding of and experiences with SSA, their reasons for using or not using SSA, as well as the beliefs that might inform their reasons. I examined the responses to provide insight into possible reasons teachers are or are not using SSA, and the beliefs that underlie those reasons. Although SSA has been studied using quantitative and qualitative methods, there is little research linking teacher beliefs to SSA.

While the relationship between beliefs and reasons has been debated philosophically (e.g., Ginsborg, 2006; Turri, 2011; Wedgwood, 2006), for the purposes of this study I defined reasons as a statement or fact given as an explanation for *why* something is practiced ("Reason,"

2015). In contrast, I defined beliefs as "assumptions about students, learning, classrooms, and the subject matter to be taught" (Kagan, 1992, p. 66).

Procedures

In this section I detail the procedures I implemented to recruit participants for the study, and in conducting the interviews. First, I explain the process for the survey instrument, and then describe the process for the interviews. Table 2 includes a timeline of the data collection process.

Table 2

Timeline of Participant Interviews and Member Checks

Participant	1st Interview	2nd Interview	Member Check
Alan	1/15/2016	1/19/2016	5/10/2016
Amy	12/11/2015	12/18/2015	5/12/2016
Greg	12/8/2015	12/14/2015	5/10/2016
Jason	2/8/2016	2/16/2016	5/10/2016
Kathy	12/10/2015	12/16/2015	5/11/2016
Ryan	1/7/2016	1/15/2016	5/10/2016
Sean	12/10/2015	12/16/2015	5/12/2016

Survey. Near the beginning of November 2015, I sent an email (Appendix A) to all the teachers at the high school in the study, which invited them to answer a short, two-question survey (Appendix B). Two days later, I sent another email reminder about the survey. Within four days of the initial email, I had received 34 responses for a 60% response rate. I sent a third email at the end of November, which provided another nine responses. I sent one final email in

early January, which added another five responses. By the end of the study, 48 teachers had responded for an 84% response rate.

Interviews. The initial email (Appendix A) that was sent to all the teachers at the high school also included a request for teachers to volunteer to be interviewed as part of the study. After the first two emails, I had six teachers respond who were willing to be interviewed. It was my original intent to interview participants from each of the core areas (i.e., Math, Science, Social Science, English, Fine Arts, and Healthy Lifestyles); however, I realized that having the perspectives of teachers in an elective area (e.g. Career and Technical Education) as well as Special Education would improve this study. At this point I did not have any participating teachers in Math, Healthy Lifestyles, or Special Education, so I sent separate emails to the teachers in each of those departments requesting an interview for this study. Those emails garnered two more responses from a Math teacher and a Special Education teacher who also teaches Healthy Lifestyles classes. This brought the total interview participants to eight.

I contacted each participating teacher individually to provide them with a consent form (Appendix C) and to schedule the first interview. During each interview, I wrote field notes to help identify areas in the interview that had particular relevance to my research questions. Each interview lasted about 30 minutes and was audio-recorded and transcribed for data analysis. This first interview with each participant included a series of questions and prompts related specifically to SSA and associated with my first two research questions (Appendix D).

I waited at least three days between the first and second interviews, in order to give the participants time to reflect on the questions and responses from the first interview. Each of the second interviews also lasted about 30 minutes and were audio-recorded for transcription and data analysis purposes. These interviews included questions about SSA and questions related to

teacher beliefs (Appendix D), different than the questions in the first interview, in order to explore whether and how certain beliefs might inform teachers' reasons for using or not using SSA.

Although I initially interviewed eight participants (see Table 2 for a timeline of interviews and member checks), I removed one participant from the final study. This participant was removed because the subject area he taught, science, was already represented, with greater clarity in responses. The other teacher of his subject area used SSA in his classroom, so the inclusion of Sean, the science teacher who did not use SSA, added unique information to the study that was not already present.

After the data were analyzed, I scheduled a short member check meeting with each of the participants to share with them my interpretations of their responses and direct quotes I planned to include in the study. This allowed each teacher participating in the study an additional opportunity to clarify their responses, and ensured that I represented their views accurately, thus increasing this study's trustworthiness.

Data Analysis

The first part of data analysis examined the results of the two-question survey (Appendix B). These data were used to give context to the school culture and climate for SSA and helped inform the data analysis of the interviews. The results from question 1 on the survey provided information about the number of teachers who were and were not using SSA at the school. These data helped frame the data from the interviews and place the individual teachers involved in the interviews within the SSA culture of the school. The results from question 2 on the survey helped identify what types of SSA were being used at the school.

Following the analysis of survey responses, I began the interview analysis. To begin the analysis of interviews, I imported all of the transcripts into the NVivo qualitative data analysis software program. I used selective coding (Miles & Huberman, 1994) informed by Ajzen's (1991) theory of planned behavior as the initial codes (i.e., behavioral, normative, and control beliefs) for analyzing and exploring the responses of each teacher individually. I also looked for statements from the participants that related to each of my research questions. When statements that matched one of the previously mentioned categories were identified, they were assigned a code (Miles & Huberman, 1994) within the NVivo software.

After analysis of each individual participant, I analyzed the codes across the participants looking for patterns that emerged, including similar and contrasting themes. Then I created a modified list of cross-participant themes from all sets of data. Using the NVivo software, I identified direct quotations from each of the interviews that illustrated each of the cross-participant themes (Marshall & Rossman, 2011; Miles & Huberman, 1994). In order to avoid confirmation bias, I looked for data from the interviews that showed both common and contrasting ideas. I also wrote analytic memos detailing my interpretation of the data that I shared with the participants for review (Miles & Huberman, 1994).

My work was peer reviewed by my thesis chair to ensure that my analysis and interpretations were sound. The triangulation of data with multiple interviews, member checks, and peer review strengthened the trustworthiness of my analysis (Marshall & Rossman, 2011).

Chapter 4

Findings

In this study of high school teachers, I examined responses to interview questions about SSA in order to understand the reasons why some teachers use SSA while other teachers do not. I also explored teacher beliefs associated with these stated reasons using Ajzen's (1991) theory of planned behavior as a theoretical lens.

In this chapter, I first explore how the selected teachers defined SSA. Second, I detail the reasons teachers in this study gave for using or not using SSA. Third, I describe and frame the participants' stated beliefs about SSA using Ajzen's (1991) theory of planned behavior. Finally, I illustrate how reasons and beliefs in this study overlapped.

Teachers' Definitions of SSA

Most of the teacher participants (four out of seven) gave definitions of SSA that referred to students reflecting on their own work, behavior, and learning. For example, Amy said, "I think student self-assessment is any time that the students are being pointed at their own work…Anytime the students have time to contemplate, write down, and answer questions about the things they have done." Jason described SSA this way: "It's the individual student looking at their own work, their own product, and assessing its quality based on standards that are given to them." Even Sean, who was hesitant about his understanding of SSA, said this: "My guess is…[the students are] going to perform an assignment and then they're going to go back and check and look over it to see how they performed at it." Each of the teachers in this study referred to students reflecting on their own work as part of their definition of SSA. These broad definitions could be categorized as types of formative assessment—a type of assessment that might not show up on a student's grade.

However, five of the seven teachers in this study also described students as evaluating themselves or their work using a rubric or other scoring mechanism that would ultimately influence a student's grade—a type of summative assessment. Ryan defined SSA this way: "[Students] assessing themselves for the grade." Kathy's definition was similar, she expressed that SSA was where "[students] actually take the rubric and grade themselves against that." While Ryan and Kathy were the only teachers to actually use the word "grade" when defining SSA, other teachers described examples of SSA involving students evaluating themselves using rubrics and combining or comparing the student evaluation with a teacher evaluation for a grade.

For one teacher, there seemed to be tension between his definition and his described implementation. Ryan, an English teacher, reported using SSA, and he defined SSA as "assessing themselves for a grade." However, he undermined that statement by expressing that most of his students are not "mature enough and trustworthy enough" to assess themselves, and that "the burden of assessment has to fall squarely on my shoulders as a teacher." Ryan described his use of SSA as students correcting their own daily oral language and sentence completion assignments. He also suggested that students participate in self-assessment, although not formally, in the writing process as students "[look] at their paper and then [are] their own critic on it." Ryan clearly saw a benefit to students "correcting" their own work, but possible concerns about accuracy prevented students from participating in summative assessments in his classroom. Ryan's tension between his definition and implementation seems to stem from the idea that SSA as a formative assessment can benefit the student, without the concern for accuracy in grades that is presented in SSA for summative assessments.

Kathy also addressed the relationship between SSA and summative grades when she defined SSA as a means by which the student affects their actual grade. A disconnect appeared

between Kathy's definition of SSA and what she articulated about what she actually does in the classroom. She stated:

> Whenever I assign a major project, I give them the grading rubric and I tell them, "This is what's expected here and this is how many points this is worth." So on a large assignment…as they do the assignment they can almost self-assess to know, "Did I include that part, did I include this part?"

While Kathy expected the students to do some form of self-assessment, she did not consider this practice SSA because, according to her definition, the student was not affecting the grade. Kathy's definition of SSA appears to be largely affecting why she reported not using SSA in the classroom.

All teachers in this study gave a definition of SSA; however, four of the seven teachers expressed a lack of confidence in their stated definition of SSA. Ryan described a particular assessment he used and said, "I don't know if that counts for self-assessment." Jason, when he described his experience working with Special Education students, also said, "I don't know if it's fully true self-assessment." Likewise, Kathy shared an example of a type of assessment she sometimes used in her class, then said, "I don't know if that's a self-assessment." Finally, Sean admitted that he was "not sure what [student self-assessment] is." While each teacher supplied a definition for SSA in their interview, some teachers demonstrated a lack of confidence in their definition.

Teachers' Reasons

In this section, I will describe the reasons teachers gave for using or not using SSA, as well as examples for each of those reasons. As stated in Chapter 2, the difference between reasons and beliefs can be muddy. For the purpose of this study, reasons were coded as

statements made that were directly responding with something similar to, "I use SSA because…" or "I do not use SSA because…" Most reasons included one or more underlying beliefs, which will be discussed later in this chapter.

Table 3

Reported Reasons for Using and Not Using SSA

Reasons for using SSA (16 different reasons)
Student Benefits (62% of reasons for using SSA)
SSA helps students learn how to think and problem-solve (Alan, Amy)
SSA helps students see the connection between work, practice, and performance (Alan)
SSA helps to see students' understanding (Alan, Amy)
SSA helps students to grow as learners (Jason, Ryan)
SSA is an important life-skill (Amy, Jason)
SSA helps students monitor and adjust their behavior (Alan, Greg)
SSA gives students more ownership over their learning (Amy, Greg, Jason, Ryan)
SSA helps provide a safe environment for students to express their thoughts (Greg)
SSA builds resiliency in students (Greg)
SSA motivates students (Amy, Greg)
Teacher Benefits (19% of reasons for using SSA)
SSA helps the teacher give more specific feedback (Alan, Amy)
SSA helps the teacher get a better picture of student learning (Amy)
SSA saves a teacher time in assessment (Amy)
External Influences (19% of reasons for using SSA)
SSA is part of the state core drama standards (Amy)
Teacher was trained with SSA (Amy)
SSA aligns with principal's expectations (Amy)
Reasons for not using SSA (8 different reasons)
Time (50% of reasons for not using SSA)
SSA might take too much class time (Alan, Kathy, Sean)
SSA might take too much time to learn how to implement (Alan, Sean)
Not having a complete understanding of SSA (Alan, Sean)
Lacking good models of SSA (Sean, Greg)
Student Capability (37.5% of reasons for not using SSA)
Students do not know how to assess themselves accurately (Kathy, Sean)
Students sometimes grade themselves too harshly (Kathy)
Some students have lower expectations (Kathy)
Teachers' Responsibilities (12.5% of reasons for not using SSA)
The teacher is responsible for assessment in the classroom, not the students (Kathy)

The seven teachers in this study provided 24 different reasons for using or not using SSA (See Table 3). Overall, teachers provided more reasons for using SSA than not using SSA. Stated reasons were consolidated into overarching categories which are discussed below within reasons for using SSA and reasons for not using SSA.

Reasons for using SSA. Five of the seven teachers in this study said they used SSA and each of them provided several reasons why they used SSA. Within reasons for using SSA, teachers' responses were organized into three categories: (a) student benefits, (b) teacher benefits, and (c) external influences.

Student benefits. The most common reasons that teachers expressed for using SSA related to student benefits (62% of stated reasons for using SSA). For example, Amy said, "Students are important, and because of that, I think reflection is important to help them really start becoming lifelong learners." This sentiment was expressed by other teachers as well, emphasizing that self-assessment is an important life skill. Jason said, "[Students] being able to assess their own work and their own product, I think, is an important skill." Ryan also expressed a similar sentiment that students "benefit more" from correcting their own work: "In order for them to truly grow…they have to be scoring their own [assignment]." All of the participating teachers who reported using SSA expressed a desire to help students grow and develop as learners and human beings.

Other examples of reasons related to student growth included helping students develop problem-solving skills, helping students develop self-control, and helping students develop resiliency. Alan expressed that SSA "helps [students] monitor and adjust their own behavior" which, he believed, was tied to "how [the student] is doing academically." Alan stated that the

students started to see the "connection between how they work, and then how they practice, and then how they perform" at a given academic task in his classroom. Greg described a similar idea that he called resiliency: "[R]esiliency comes through self-assessment…where students can see that [their] future is mostly based on [their] efforts and [their] initiative."

Teachers also expressed that SSA increased student motivation and students took more responsibility and ownership in their learning process. Greg was particularly passionate about this aspect:

> I felt like the kids could evaluate themselves. I thought that, in and of itself, is going to be a big motivator. If they know that, "You grade yourself, you tell me how you think you're doing." That really empowered students; it puts us more on an even keel.

Greg's comment indicated his recognition of an underlying power dynamic between teachers and students, and that students and teachers can share that power.

Teacher benefits. Reasons relating to teacher benefits also emerged in the interviews (19% of stated reasons for using SSA). In particular, SSA helped teachers get a better understanding of the students' learning. Amy said, "I can see better with a lot of our subject areas whether or not students have actually learned things from the project and whether or not they're understanding the material." Whether or not a teacher can better understand a student's learning is likely connected to the type of SSA used in the classroom. Amy elaborated on this point:

> I can have them just do the project and look at it and say, "Oh, I don't know that they necessarily understand this," but from the self-reflection I was better able to tell whether or not they understood how they had done.

Similarly, Alan said that using SSA "gives me, as a teacher, a lot more power to point [the students] in the right direction." He also said that SSA has helped him "with behavioral issues" and being able to "identify what the students need to do better." According to Amy, using SSA can also save a teacher some time:

> Sometimes it's really nice to just put the grading on them, …allow[ing] them to self-reflect and not have to be the person who is always telling them what they can improve. There's not always time for that, so [it's a] big time saver.

Both Alan and Amy expressed that using SSA benefited them as teachers.

External influences. Only one of the teachers interviewed mentioned external influences as a reason for using SSA (19% of stated reasons for using SSA). Amy mentioned that having students self-assess is part of her core standards in the drama area. None of the other teachers mentioned self-assessment as part of their core standards.

Amy was also the only teacher to mention that she was exposed to a good model of SSA. Amy stated that both her student teaching supervising teacher and the teachers in the district mentoring program were good role models of using SSA in the classroom. Speaking about the district mentoring program for induction teachers, Amy said:

> Having just come out of the mentor program as a fairly new teacher, the requirements that the state and the district required as far as the student work analysis…have definitely led me in the direction of finding more ways to have students self-reflect and really start to get more information and feedback from my students in that way.

Amy also indicated that the local administration's emphasis on student learning reminded her "how useful…student self-reflection can be…for the students." Each of these models and resources influenced Amy in her decision to use SSA in her own classroom.

Reasons for not using SSA. Only two of the teachers interviewed for this study said they did not use SSA in their classroom. However, some of the teachers who reported using SSA currently, expressed that have not always used SSA. Within reasons for not using SSA, teachers' responses were organized into three categories: (a) time, (b) student capability, and (c) teachers' responsibilities.

Time. The most cited reason that influenced teachers to not use SSA was time (50% of the stated reasons for not using SSA). Of the seven teachers interviewed, four said that time influenced them to not use SSA. Kathy, one of the two teachers who reported not using SSA, said that time was one of the reasons she reported not using SSA. It appears that she was worried about the time SSA would take out of class time needed for instruction and work. She said that one issue is "time, as far as taking time…out of class, when we could move on to other things." Sean was also concerned about this aspect: "For me, probably the biggest thing is the time."

Another aspect of time that influenced teachers to not use SSA was the time it might take to learn how to implement SSA effectively. Sean was concerned about how much time it would take him to understand and implement SSA because he did not have a fully formed concept of SSA:

> I'm not exactly sure what the self-assessment is for chemistry and…because I don't know what it is…I think I'd hold myself back from…entering in the extra time to go there and say, "Well, do I want to go into this and try this? What would that require of me to get that out? Can I do that? Could I pull it off with what I have available to me, resource-wise, time-wise?"

Later, Sean also expressed concern about his "ability to do [SSA]," posing the question, "How many times will it take me to get it?" Sean recognized and was concerned about the time it might take him to implement SSA effectively. Alan, who has not always used SSA over the course of his teaching career, also talked about how the time it might take to effectively use SSA could interfere with "better" uses of time:

> I've seen in my own teaching…where I spent 20 minutes, I gave [the students] a piece of paper, and we set some goals, and we evaluated where we're at, and what we've done, and where we want to go….We spent ten to twenty minutes on this, and I never went back to it, I never re-addressed those goals that they made, I never tried to build off of this, and so that was a waste of students' time. They could have used that time a lot better doing something else.

Even three of the five teachers who reported using SSA mentioned the time commitment that learning and implementing SSA had or might have.

Student capability. Both Kathy and Sean, the two teachers who reported not using SSA in their classroom, expressed concern about the students' capability to assess themselves (37.5% of stated reasons for not using SSA). Kathy said, "[The students] are still learning…so how do they know what mastery looks like for sure, unless I have taught them perfect[ly] and said, 'This is exactly what this needs to look like.'" Sean said that one of the reasons he reported not using SSA was because he did not "think the students can assess themselves well enough in this subject." Sean further explained that:

> For 90% [of my students] this is the first time they've come across Chemistry, and it's not like Math or English where they've had it their whole growing up education career and have a little basis to assess themselves on; it's all brand new.

For Sean's particular subject, he expressed that the ability to self-assess was a deterrent to his implementation of SSA in the class.

Teachers' responsibilities. This category emerged from one teacher who expressed that it was her role or responsibility to control assessment in her classroom (12.5% of stated reasons for not using SSA). Kathy expressed this reason when she said: "I guess…I like to be able to say, 'This is my class, this is what I want you to do, and this is the grade I'm going to give you for it.'" This comment represents a previously mentioned underlying power dynamic between teachers and students. Unlike Greg's comment about empowering students, Kathy appeared to feel that the classroom and assessment actions are primarily the responsibility of the teacher. Although only represented by one comment, this reason provides unique insight into why this teacher might not use SSA, even if her other reasons were absent.

Teachers' Beliefs

Reporting on teachers' beliefs is a difficult task because beliefs are often not readily apparent. In this case, I used Ajzen's (1991) theory of planned behavior to operationalize belief statements. According to Ajzen's theory of planned behavior, there are three categories of beliefs: behavioral, normative, and control. Behavioral beliefs are a person's perceptions of the probability that a specific behavior or action will result in a given outcome. For example, a teacher might express a behavioral belief that implementing SSA in their classroom will achieve an outcome of deeper thinking from the students. Normative beliefs are a person's perceived expectation from others to perform a specific behavior or action. For example, a teacher may express a normative belief and perception that students do not take SSA seriously—suggesting that students' expectations are that assessment is a teacher, rather than a student, responsibility. Finally, control beliefs are a person's perception about factors that facilitate or impede their

ability to perform a specific action. For example, a teacher might express a control belief that they do not believe they have enough time to understand and implement SSA effectively. Table 4 includes examples of teacher beliefs that emerged in this study, organized using Ajzen's (1991) framework.

Table 4

Teacher Beliefs about SSA

Behavioral Beliefs (96 coded statements, 47% of all coded belief statements)
SSA helps students learn how to think and problem-solve
SSA helps students see the connection between work, practice, and performance
Students do better work when they self-assess
SSA is an important life-skill
SSA helps students monitor and adjust their behavior
SSA gives students more ownership over their learning
SSA helps teachers see students' learning more clearly
SSA motivates students
Students might not participate as much as teacher-driven assessment
Normative Beliefs (67 coded statements, 33% of all coded belief statements)
Students do not value SSA
Students have varying expectations when they use SSA
Teachers are expected to assess students as part of their professional responsibilities
School principal expectations
Control Beliefs (42 coded statements, 20% of all coded belief statements)
Sometimes SSA saves time in assessment
SSA requires time to learn and implement
Students are not capable of self-assessing
SSA requires a good model

Note. The total number of coded belief statements, N=205.

During analysis, I discovered that reasons were often composed of one or more belief statements. For example, in Amy's reason for using SSA as previously cited, she revealed multiple beliefs when she stated: "Students are important, and because of that, I think reflection is important to help them really start becoming lifelong learners." Within this reason, Amy appeared to reveal a normative belief that students were the driving force behind what she did, as

well as revealing a behavioral belief expressed in her desire to improve the future learning of those students. In contrast, Kathy's reason about time, "Time, as far as taking time…out of class when we could move on to other things," might have expressed a control belief that the amount of class time limited the possibilities of SSA and a behavioral belief that mastering specific content in class was more important than SSA.

Behavioral beliefs. The teachers in this study revealed more behavioral beliefs (47% of all coded beliefs) than any other type of belief according to Ajzen's (1991) theory of planned behavior. The teachers interviewed for this study often referred to various aspects of student improvement or student growth when talking about student self-assessment. For example, Ryan expressed how important he felt student growth was for his students:

> In order for them to truly grow, to learn what they did right or wrong on the daily oral language, or on the editing, like subject/verb, or changing the fragments, or the run-on sentences; they have to be scoring their own.

Alan indicated that he believed using SSA helped his students "think," "problem solve," and "strengthen understanding." Both Alan and Ryan expressed behavioral beliefs that SSA would probably result in positive outcomes for the students. Even Kathy, who did not use SSA, mentioned that she believed that students who self-assess on their own—informally evaluating themselves, probably through a rubric for a particular assignment—"do better work." Each of these outcomes, indicated by the teachers in this study, represent behavioral beliefs.

While talking about why they used SSA, a few of the participating teachers wanted to express an idea they felt was important to their role as the teacher. Although they were passionate about their subject area, several stated that a large part of their teaching was teaching life skills. Alan put it this way: "I'm trying to teach math, but…I'm also trying to teach the

students how to think, how to problem solve, and you can't do that unless you're constantly evaluating where you're at." Amy stated it even more strongly: "I don't really feel like I am teaching students theater. I feel like I am teaching students life skills through theater, and I feel like self-reflection is a very important life skill that students need to develop." Even Sean, who did not use SSA, suggested that students participating in SSA might be able to get to a deeper level of learning and "[gain] a life skill." Both Alan and Amy expressed that the process of self-assessment was important, and all three teachers indicated that they perceive SSA has long-term benefits for students.

The teachers in this study also expressed some beliefs that SSA might not benefit all students. Jason expressed a concern that some students, when engaging in SSA, might "not participate as fully as they might if it were something that were more teacher driven." Amy also expressed a concern that, for some students, SSA is "almost hurting them, instead of helping," possibly because "they don't understand it, or don't put stock in it's value, and so they don't make an effort, or they just quickly throw out something that's very vague and not really useful." These statements are also connected to normative beliefs about students, and will be discussed in the following section.

Normative beliefs. Normative beliefs about social influences that affected teachers (33% of all coded belief statements) included beliefs about student expectations, parent expectations, and administrator expectations, as well as including district policies and state standards for individual subjects.

Most of the normative beliefs expressed by teachers in this study were related to student expectations. For example, Alan indicated that students might not "take [SSA] seriously" unless "they can see the purpose of it." This statement might suggest that Alan believed students

expected assessments to have a purpose that students understood or that mattered to them. Jason also expressed that some students who engaged in SSA "won't take it as seriously," and might "not participate as fully." Amy expressed this concern as well, stating that some students "don't put stock in it's [SSA] value, and so they don't make an effort." These teachers recognized that students' expectations about the class and the assessment influenced the effectiveness of the assessment for each student. These teachers might believe that if students could see the "value" and "purpose" of the assessment for themselves, they might take it more seriously. It also could suggest that students expect teachers to do the assessing, in part because of how assessing is defined and valued in the school system. The teachers' perception of how the students reacted to using SSA was something that emerged with four of the five teachers who use SSA.

From a teacher's perspective, student expectations regarding SSA might also be tied to student's expectations of themselves. For example, Kathy expressed concern and sympathy for students who were "too hard on themselves" and might expect themselves to perform better on an activity than the teacher expected. She believed some students using SSA might say, "'No, my stuff is crap. I can't do it.' …[but] I would look at it and go, 'For my expectations for you, in this particular class, at your level, this is fine. This is good.'" In contrast, some students might have lower expectations for themselves in a particular content-area. Sean expressed that while SSA "may be great for a group of kids…there may be some kids that [SSA is] not going to work for," possibly because their expectations are lower; "Maybe the best thing for them is survival….They just want to see, 'Did I miss it [e.g., test question, assignment task] or not?' and not delve into it." Alan also suggested that student expectations influenced the effectiveness of SSA, "One of the biggest things that gives the best results of self-assessment is I have to be willing to be OK with their goals," because some students expressed, "I'm happy where I'm at

[with my understanding or learning]…I could do better here, and that would help me…, but I'm where I want to be." Perceptions of student expectations for themselves appear to have had some influence on teacher's beliefs about SSA.

Some normative beliefs might stem from perceived expectations of others, while others might represent self-imposed expectations. For example, Ryan expressed, "I have to be responsible for my experience in assessing them carefully, truthfully and fairly on their grades...I feel like that responsibility lies squarely on my shoulders." This belief is normative because there is an expectation, either self-imposed or perceived to come from others, that the teacher is responsible for a summative grade. Kathy seemed to share this expectation, "I like to be able to say, 'This is my class, this is what I want you to do, and this is the grade I'm going to give you for it.'" While she expressed that she liked to feel some control over the classroom, there appeared to be an associated belief that the teacher was responsible for the classroom in a way that encapsulates assessment.

Other normative beliefs about parent, administrator, and state expectations were also expressed. All seven teachers indicated that parents' expectations had little to no influence on assessment decisions. When asked if parents had any influence on his assessment strategies, Jason replied, "Not that I can think of," and Ryan said, "I'll be honest, not a whole lot." Amy expressed that parents do not affect her assessment strategies very much, but SSA "is useful" because "the students can actually show their parents, [and say] 'Look, this is how I felt about my performance,'" instead of the assessment coming solely from the teacher. This statement suggests that although it might be minimal, parents' opinions of Amy and her assessment decisions had some influence on her perception of SSA. Amy also indicated that SSA fit in well with administrator expectations, which had been focused on individual student learning. Amy

recently completed a new teacher induction program run by the district, but mandated by the state, which often asked teachers to assess themselves. Amy stated that the expectations from this program, "have definitely led me in the direction of finding more ways to have students self-reflect."

Control beliefs. Control beliefs were found the least among the teachers in this study (20% of all coded beliefs). The two teachers who did not use SSA were more likely to express control beliefs than the six teachers who did use SSA. Nearly all of the expressed control beliefs related to teachers' perceptions of the resources they had access to for implementing SSA.

In this study, time was considered a control belief because it was a resource that facilitated or impeded the action of SSA. Sean's earlier referenced quote fits into the category of control beliefs here. Sean indicated that he wasn't sure what self-assessment for chemistry would look like, and wondered whether he had the time and resources to make the attempt. Sean's statement consisted of two separate control beliefs: the first part suggested a belief of doubt regarding his current knowledge of SSA, which led into his second expressed belief, his concern about whether he had time to dedicate to learning SSA (or any other new learning or assessment strategy). Kathy also expressed that SSA might take up "extra time in class," which she felt was limited. Alan fluctuated in how he used SSA in his career and struggled with "[finding] that right balance" of how much time he could dedicate to SSA. He believed that SSA "is helpful, but I [didn't] want to take too much class time." Amy, who reported using SSA in her classroom, stated that sometimes using SSA takes her more time if the form of SSA is a written reflection that "takes a little bit more time to actually sit down and grade." However, she also expressed that allowing students to self-assess could save her time: "It's really nice to allow them to self-reflect and not have to be the person who is always telling them what they can

improve. There's not always time for that." These quotes suggest that beliefs about time may have influenced teachers' use of SSA.

Having easy access to other resources, such as good examples, also affected teachers' perceptions of SSA. Greg, who started using SSA after a few years of teaching, referred to the lack of good examples to learn from: "Plain and simple, there was not a good model [of SSA]. I don't think anything was out there that was very usable." This suggested a lack of resources Greg saw as being, at least initially, out of his control. In contrast, Amy indicated being exposed to examples of SSA as a student teacher and as a new teacher from her mentor teacher and the district mentoring program.

The other control belief that was found among the teachers in this study related to students' ability to self-assess. Both Sean and Kathy expressed concern about students' ability to self-assess. Sean stated, "I don't think students can assess themselves well enough in this subject," while Kathy, referring to students assessing themselves on a sewing project, stated, "I'm not really sure they understand what it [the finished product] should look like." Ryan, who reported using SSA, also expressed concern about students' ability to self-assess when a grade would be given, "Where the grade is involved, I feel like that responsibility [to assess] lies squarely on my shoulders. I say this because I don't feel like, in general, [students] are mature enough and trustworthy enough." These statements indicate that these teachers felt that a student's ability to accurately self-assess influenced their perception and implementation of SSA.

Other teachers in this study also referred to student ability to self-assess. Jason expressed that "there is a big difference in capability to self-assess" between his Special Education students and his regular education students. His Special Education students "need some bridges to get to the place where they can actually assess what they did." Alan expressed that some students

"don't even know how to assess what they don't understand," and Amy stated that some students "don't understand [SSA]." Both Alan and Amy also suggested that these students might need some training in order to be able to self-assess. In contrast, Greg expressed that self-assessment is part of who we are: "I think it's ingrained in all of us to assess where we're at." While not explicit, his statement seems to involve a belief that students are capable of self-assessing, but that teachers also need to "nurture this process of assessment." While these statements might also involve normative beliefs about teachers' and students' expectations, they also express control beliefs about whether or not students are capable of self-assessment.

Reasons Emerging from Beliefs

While the reasons and beliefs expressed by teachers in this study were discussed separately, there is clearly an overlap between the two. Every reason for using or not using SSA expressed by teachers in this study consisted of one or more beliefs, and many of the beliefs, although not always stated as a reason, could be used as a reason for using or not using SSA. For example, Ryan expressed a behavioral belief that using SSA in the classroom "[gets] the student more involved in his or her learning process." Ryan did not express this statement as an explicit reason, but during the conversation about SSA, this belief about a benefit of SSA emerged. However, this stated belief could be considered as a reason for using SSA because Ryan expressed a belief that using SSA resulted in a positive outcome for the student. Some of the stated beliefs appeared to lean more towards not using SSA. For example, Jason stated that while many students participated when using SSA, some students might "not participate as fully" when using SSA, as opposed to a more teacher-driven assessment. This belief indicates some possible drawbacks to using SSA and could be considered as a reason for not using SSA. More examples of reasons emerging from beliefs categorized according to Ajzen's (1991) theory of

planned are listed in Table 5. These examples suggest that the stated reasons and beliefs in this study were intertwined and that teachers' reasons for using or not using SSA were influenced by their beliefs about SSA.

Table 5

Categories of Reasons Emerging from Beliefs

	Reasons for using SSA	Reasons for not using SSA
Behavioral	SSA helps students learn SSA is an important life skill SSA motivates students	SSA might interfere with student learning
Normative	Students take more responsibility for their own learning when using SSA SSA fits well with administrator expectations	The teacher is responsible for assessment Students do not take SSA seriously
Control	SSA saves time when grading Students are able to self-assess in useful ways	SSA is too big of a time commitment Students are not capable of accurate self-assessment

Summary of Findings

Five of the seven teachers interviewed for this study reported using SSA in their practice. The teachers in this study had varying definitions of SSA and, based on their described implementations of SSA, those definitions influenced how they used SSA in their classroom and possibly influenced their reasons and beliefs surrounding SSA (e.g., Kathy). The reasons for using SSA expressed by the teachers in this study corresponded primarily with behavioral (e.g., student growth) and normative beliefs (e.g., SSA is part of core subject standards). In contrast, reasons for not using SSA corresponded primarily with control (e.g., time commitment) and

normative beliefs (e.g., assessment is the teacher's responsibility). The data also showed that two teachers, earlier in their careers, moved from not using SSA to using SSA, but no teachers in this study moved from using SSA to not using SSA. Finally, some teachers in this study who reported using SSA provided reasons for not using SSA, while the reverse was also true. Some teachers who reported not using SSA provided reasons for using SSA.

Chapter 5

Discussion

The purpose of this study was to understand how teachers define SSA, why teachers use or do not use SSA, and to explore how beliefs might influence teachers' reasons for using SSA or not. While much of the information in this study supports what was found in the literature, this qualitative study provides a deeper understanding of how teachers perceive SSA in their classroom, and raises new questions about SSA.

Previous research pointed out the range and variety of definitions used for SSA in the literature and acknowledged a need for more consistency (Brown & Harris, 2013, 2014; Bullock, 2011). The present study suggests that teachers' definitions of SSA appear to be inconsistent as well, which is likely affecting how SSA is implemented in the classroom. For example, if teachers' definitions of SSA require deeper cognitive engagement of students, teachers may not use less cognitively engaging strategies, such as thumbs up or thumbs down, or smiley-face rating scales. It appears that a clear definition of effective SSA should be established, probably with teachers' input, and explained in order for the practices of SSA to reap the benefits suggested in the research (Brown & Harris, 2013, 2014).

Individual variation in teachers' definitions of SSA should also be understood as this appears to be influencing why teachers choose to use or not use SSA. There is little data in the literature on how teachers' definitions of SSA are influencing their reasons for using or not using SSA. Would participants in this study or previous studies adjust their reported use of SSA if it was defined in a more summative way? Formative way? If SSA is defined in a more formative way, would teachers' concerns about student ability to self-assess be lessened? It appears that

some reasons and beliefs about SSA might dramatically change if a teacher's definition of SSA were changed.

Reasons for using SSA were dominated by behavioral beliefs, while reasons for not using SSA were dominated by control beliefs. This supports findings in the literature, in particular that the expectations of positive outcomes of SSA strongly predicted SSA use (Bullock, 2011; Panadero et al., 2014) while the time SSA takes negatively impacted SSA use (Bullock, 2011). This is important because the current study used a different methodological approach while still finding similar results, which validates the previous findings. This study also provides additional validation to Ajzen's (1991) theory of planned behavior as an effective lens to use when examining beliefs about teacher practices, as each of the beliefs (i.e., behavioral, normative, and control) emerged in the data.

Why were behavioral beliefs typically indicators of using SSA? This could be related to teachers' desire to validate the actions they are taking in the classroom. Most teachers probably would like to feel that there is a positive impact from what they are doing in the classroom, and so expressing the positive outcomes of SSA makes sense. It is also possible that, for teachers who use SSA, experiencing positive outcomes of SSA has a stronger impact than normative or control factors do. In contrast, why did teachers who reported not using SSA focus more on the control factors (e.g., time and student capability)? This could also be related to teachers' desire for validation, or rather, justification for not using SSA. It might also be that control factors have a stronger impact on these teachers than positive student outcomes, or that they do not believe that positive outcomes will outweigh these control limitations. Teacher change can be a difficult process and, if teachers are unfamiliar with a new assessment strategy, they might view the change as a threat to their current practices, without the right amount of motivation and support

(Gregoire, 2003; Guskey, 2002). It appears that professional development that focuses on the positive benefits of SSA, while providing solutions for overcoming perceived constraints, might help mitigate these control factors (Panadero et al., 2014).

The present research suggests that teachers' understanding of SSA is more nuanced and complex than what previous literature has provided. Teachers in this study, regardless of whether they used SSA or not, appeared to be aware of some of the arguments for the opposite position. Teachers who did not use SSA were able to give possible reasons for using SSA, and teachers who used SSA could articulate reasons for not using SSA. A teacher might hold multiple beliefs about SSA (e.g., SSA benefits students, and students are not capable of self-assessing) that interact in ways that might support or undermine SSA implementation. This study also shows that the same category of belief (e.g., normative) could be used either as a reason for or against using SSA. In this research, for example, both Sean and Kathy expressed beliefs about the benefits of using SSA, yet neither of them reported currently using SSA. Their control beliefs regarding SSA are apparently outweighing their beliefs about the potential for positive outcomes of SSA. While teachers may hold multiple beliefs about SSA that prevent them from implementing it in their practice (e.g., SSA takes too much time, and assessment is the teacher's responsibility), it is possible that addressing just one of those concerns will mitigate the other, allowing beliefs about positive outcomes of SSA to become more influential.

It is also important to note that the present study revealed some teachers shifting from not using SSA to using SSA (although it did not reveal the reverse). The possibility of teachers who might switch between using and not using SSA is not discussed in the previous literature on SSA. What conditions, definitions, reasons or beliefs might influence a teacher to change their practice regarding SSA? While both Greg and Sean expressed concerns about lacking models of

SSA, why did Greg find or create an SSA model, but not Sean? Further research is required in this area, as answers to such questions might help inform efforts to promote SSA with individual teachers.

The current study also extends the previous literature by allowing reasons and beliefs to emerge naturalistically, without requiring participants to choose from pre-selected responses on a quantitative survey (Panadero et al., 2014) or respond after an SSA intervention (Bullock, 2011). This allowed more nuanced findings to emerge in the present study, such as: teachers' awareness of beliefs and reasons that contradict their own practice, the shift of some participants towards using SSA, and the apparent influence of teachers' definitions of SSA on reasons and beliefs about SSA. In these ways, the present study prompts new questions and avenues of research that might not have emerged from previous research (e.g., Panadero et al., 2014; Bullock, 2011), and affords new insights into teacher reasons for not using SSA. Although these findings might not generalize, it is likely that in other studies regarding SSA, considering adding open-ended questions and qualitative analyses will also yield additional and important insights.

Other questions raised by the present study include how content area might influence definitions, reasons, and beliefs about SSA (e.g., Amy's view that SSA was an integral part of her discipline, while Sean questioned its usefulness for his), how existing power structures might influence teacher responses (e.g., Kathy's apparent assumption that assessment is an exclusive responsibility of the teacher), and how changes in belief might cause a teacher to shift from not using SSA in their classroom to using SSA.

Implications

This study adds to the body of research by supporting previous findings as well as adding new insights to how teachers are understanding and engaging with SSA. What might this mean

for implementation of SSA in schools? Schools or districts hoping to implement this type of assessment might benefit from bringing teachers to a basic understanding and definition of SSA. This definition should probably be more formative in nature, while also pushing for higher levels of cognitive engagement, in order to be most effective (Brown & Harris, 2013, 2014). For example, Kathy may only need a clarification of what SSA is to realize she is already implementing aspects of SSA. Once a consistent definition is established, professional development efforts should be tailored to individual teachers' reasons and beliefs, as individual teachers will likely have differing reasons and beliefs regarding the use of SSA. A "one-size-fit-all" intervention approach is not recommended. For example, Amy, who was comfortable using SSA, might prefer to develop her own SSA assessment tools, rather than being given some to use in the classroom. On the other hand, Sean, who expressed concern about not knowing what SSA might look like in his Chemistry classroom, may appreciate ready-made SSA tools which might increase his use of SSA. In an effort to improve SSA use among teachers, individualized interventions would be a much more effective action than focusing on only communicating the positive outcomes of SSA to teachers.

Additional professional development on effective use of SSA might be beneficial in professional learning communities, allowing teachers to share their experiences, successes, and struggles with SSA in order to improve its effectiveness (DuFour, DuFour, Eaker, & Many, 2013). Providing teachers more access to peer-reviewed literature on SSA would likely help teachers' understanding and implementation of SSA as well. Efforts should also be made to train students in SSA in order to help guide them in their own learning (Brown & Harris, 2014). The quality of SSA will likely improve by training both teachers and students in SSA.

Limitations and Future Research

While this study adds new insights to the primarily quantitative data already gathered on SSA, these data is self-reported through in-person interviews. Additional research would be beneficial in examining reported practices combined with SSA observation data of teachers. Further research regarding how teachers are defining SSA would also be beneficial. For example, would altering definitions result in different reports of using or not using SSA? Much of the teacher conversation in this study brought up power structures (between student and teacher); how might underlying power structures shape reasons and beliefs? How might interventions that impose a specific SSA structure affect SSA implementation (Brown & Harris, 2014; Bullock, 2011) versus interventions tailored to specific teacher definitions, reasons, and beliefs? Replications of this study are needed to examine whether patterns of interaction between Ajzen's (1991) different types of beliefs, as well as patterns of interaction between beliefs and reasons for using or not using SSA, emerge similarly in other settings.

Possibly due to the small number of participants, the data in this study did not reveal patterns in whether teaching experience, age, and gender were more or less likely to influence use SSA. Interviewing more teachers across varying demographic backgrounds would also add to the research in exploring possible trends between or among years teaching, age, and gender. This study did find that Fine Arts was the only reported department to include SSA as part of their core standards, in a particular course. Further research is required to examine how content areas might interact with reasons and beliefs, as well as SSA use.

Conclusion

This study indicates that SSA is being used at this high school to a large extent, and teachers appear to be aware of its benefits. However, there are clearly factors that inhibit the use

of SSA for some teachers. This study adds to our understanding of reasons why teachers report using or not using SSA by providing more depth and context than that provided by simple quantitative measures of use. How teachers define SSA, teachers' reasons for using or not using SSA, and teachers' beliefs regarding SSA may be influencing each other and influencing SSA implementation. This study suggests that efforts to implement SSA might work best by identifying and addressing individual teachers' affordances and constraints concerning SSA (i.e., definitions of SSA, reasons for using or not using SSA, and beliefs regarding SSA).

References

Ajzen, I. (1991). The theory of planned behavior. *Orgnizational Behavior and Human Decision Processes, 50*, 179–211. doi:10.1016/0749-5978(91)90020-T

Ajzen, I. (2005). *Attitudes, personality, and behavior* (2nd ed.). Maidenhead, England: McGraw-Hill Education.

Andrade, H. L., & Boulay, B. A. (2003). Role of rubric-referenced self-assessment in learning to write. *The Journal of Educational Research, 97*, 21–30. doi:10.1080/00220670309596625

Andrade, H. L., Du, Y., & Wang, X. (2008). Putting rubrics to the test: The effect of a model, criteria generation, and rubric- referenced self-assessment on elementary school students' writing. *Educational Measurement: Issues and Practice, 27*(2), 3–13. doi:http://dx.doi.org/10.1111/j.1745-3992.2008.00118.x

Andrade, H. L., & Valtcheva, A. (2009). Promoting learning and achievement through self-assessment. *Theory Into Practice*, *48*, 12–19. doi:10.1080/00405840802577544

Black, P., Harrison, C., Lee, C., Marshall, B., & Wiliam, D. (2003). *Assessment for learning: Putting it into practice*. Maidenhead, England: Open University Press.

Bloom, B. S. (1956). *Taxonomy of educational objectives: The classification of educational goals*. New York, NY: David McKay Company.

Boud, D., & Falchikov, N. (1989). Quantitative studies of student self-assessment in higher education: A critical analysis of findings. *Higher Education, 18*, 529–549.

Brown, G. T. L., & Harris, L. R. (2013). Student self-assessment. In J. H. Mcmillan (Ed.), *The SAGE handbook of research on classroom assessment* (pp. 367–393). Los Angeles, CA: SAGE. doi:10.1207/s15327752jpa8502

Brown, G. T. L., & Harris, L. R. (2014). The future of self-assessment in classroom practice: Reframing self-assessment as a core competency. *Frontline Learning Research, 2*(1), 22–30. doi:10.14786/flr.v2i1.24

Bullock, D. (2011). Learner self-assessment: An investigation into teachers' beliefs. *English Language Teaching Journal, 65*, 114–125. doi:10.1093/elt/ccq041

Cizek, G. J., Fitzgerald, S. M., & Rachor, R. E. (1996). Teachers' assessment practices: Preparation, isolation, and the kitchen sink. *Educational Assessment, 3*, 159–179.

Cohen, J. (1992). A power primer. *Psychological Bulletin, 112*, 155-159.

Combs, A. W., Blume, R. A., Newman, A. J., & Wass, H. L. (1974). *The professional education of teachers: A humanistic approach to teacher preparation* (2nd ed.). Boston, MA: Allyn and Bacon.

Dixon, H. R., Hawe, E., & Parr, J. (2011). Enacting assessment for learning: The beliefs practice nexus. *Assessment in Education: Principles, Policy & Practice, 18*, 365–379. doi:10.1080/0969594X.2010.526587

DuFour, R., DuFour, R., Eaker, R., & Many, T. (2013). *Learning by doing: A handbook for professional learning communities at work* (2nd ed.). Bloomington, IN: Solution Tree Press.

Elder, L., & Paul, R. W. (2008). Critical thinking: Strategies for improving student learning. *Journal of Developmental Education, 32*(1), 32–33.

Facione, P. A. (2015). Critical thinking: What it is and why it counts. *Insight Assessment*. Measured Reasons LLC. Retrieved from https://www.insightassessment.com/CT-Resources/Teaching-For-and-About-Critical-Thinking/Critical-Thinking-What-It-Is-and-Why-It-Counts/Critical-Thinking-What-It-Is-and-Why-It-Counts-PDF

Fives, H., & Buehl, M. M. (2012). Spring cleaning for the "messy" construct of teachers' beliefs: What are they? Which have been examined? What can they tell us? In K. R. Harris, S. Graham, & T. Urdan (Eds.), *APA educational psychology handbook, Vol. 2: Individual differences and cultural and contextual factors*, pp. 471–499. Washington, DC: American Psychological Association. doi:10.1037/13274-000

Ginsborg, H. (2006). Reasons for belief. *Philosophy and Phenomenological Society, 72*, 286–318. doi:10.1017/CBO9780511977206

Gregoire, M. (2003). Is it a challenge or a threat? A dual-process model of teachers' cognition and appraisal processes during conceptual change. *Educational Psychology Review, 15*, 147-179. doi: 10.1023/A:1023477131081

Guskey, T. R. (2002). Professional development and teacher change. *Teachers and Teaching: Theory and Practice, 8*, 381-391. doi: 10.1080/135406002100000512

Harris, L. R., & Brown, G. T. L. (2013). Opportunities and obstacles to consider when using peer- and self-assessment to improve student learning: Case studies into teachers' implementation. *Teaching and Teacher Education, 36*, 101–111. doi:10.1016/j.tate.2013.07.008

Harris, L. R., Brown, G. T. L., & Harnett, J. A. (2015). Analysis of New Zealand primary and secondary student peer- and self-assessment: Applying Hattie and Timperley's feedback model. *Assessment in Education: Principles, Policy & Practice, 22*, 265–281.

Hattie, J. (2009). *Visible learning: A synthesis of over 800 meta-analyses relating to achievement*. New York, NY: Routledge.

Hewitt, M. P. (2001). The effects of modeling, self-evaluation, and self-listening on junior high instrumentalists' music performance and practice attitude. *Journal of Research in Music Education, 49*, 307–322.

Hunter, D., Mayenga, C., & Gambell, T. (2006). Classroom assessment tools and uses: Canadian English teachers' practices for writing. *Assessing Writing, 11*, 42–65. doi:10.1016/j.asw.2005.12.002

Kagan, D. M. (1992). Implications of research on teacher belief. *Educational Psychologist, 27*, 65.

Kahn, E. A. (2000). A case study of assessment in a grade 10 English course. *The Journal of Educational Research, 93*, 276–286. doi:10.1080/00220670009598719

Kasanen, K., & Räty, H. (2002). "You be sure now to be honest in your assessment": Teaching and learning self-assessment. *Social Psychology of Education, 5*, 313–328. doi:http://dx.doi.org/10.1023/A:1020993427849

Kennedy, C., & Kennedy, J. (1996). Teacher attitudes and change implementation. *System, 24*, 351–360. doi:10.1016/0346-251X(96)00027-9

Lasonen, J. (1995). A case study of student self-assessment in upper secondary education. In J. Lasonen & M. Stenstrom (Eds.), *Contemporary Issues of Occupational Education in Finland* (pp. 199-215). Jyvaskyla, Finland: Institute. for Educational Research, Jyvaskyla University.

Marshall, B., & Wiliam, D. (2005). Editorial. *Teacher Development, 9*, 165–167. doi:10.1207/s15327752jpa8502

Marshall, C., & Rossman, G. B. (2011). *Designing qualitative research* (5th ed.). Thousand Oaks, CA: SAGE.

McDonald, B., & Boud, D. (2003). The impact of self-assessment on achievement: The effects of self-assessment training on performance in external examinations. *Assessment in Education, 10*, 209–220. doi:10.1207/s15327752jpa8502

Miles, M. B., & Huberman, A. M. (1994). *Qualitative data analysis: An expanded sourcebook* (2nd ed.). Thousand Oaks, CA: SAGE.

National Governors Association Center for Best Practices & Council of Chief State School Officers. (2010). Common Core State Standards. Washington, DC: Author.

Nespor, J. (1987). The role of beliefs in the practice of teaching. *Journal of Curriculum Studies, 19*, 317–328.

Noonan, B., & Duncan, C. R. (2005). Peer and self-assessment in high schools. *Practical Assessment, Research & Evaluation, 10*(17), 1–8.

Olina, Z., & Sullivan, H. J. (April, 2002). *Effects of teacher and self-assessment on student performance*. Paper presented at the meeting of the American Educational Research Association, New Orleans, LA.

Pajares, M. F. (1992). Teachers' beliefs and educational research: Cleaning up a messy construct. *Review of Educational Research, 62*, 307–332. doi:10.3102/00346543062003307

Panadero, E., Brown, G. T. L., & Courtney, M. (2014). Teachers' reasons for using self-assessment: A survey self-report of Spanish teachers. *Assessment in Education, 21*, 365–383. doi:10.1207/s15327752jpa8502

Panadero, E., Tapia, J. A., & Huertas, J. A. (2012). Rubrics and self-assessment scripts effects on self-regulation, learning and self-efficacy in secondary education. *Learning and Individual Differences, 22*, 806–813. doi:10.1016/j.lindif.2012.04.007

Pintrich, P. R. (2000). The role of goal orientation in self-regulated learning. In M. Boekaerts & P. Pintrich (Eds.), *Handbook of self-regulation* (pp. 451–502). San Diego, CA: Academic Press. doi:10.1016/B978-012109890-2/50043-3

Reason. (2015). Retrieved September 15, 2015, from http://www.merriam-webster.com/dictionary/reason

Ross, J. A. (2006). The reliability, validity, and utility of self-assessment. *Practical Assessment, Research & Evaluation, 11*(10), 1–13.

Ross, J. A., Hogaboam-Gray, A., & Rolheiser, C. (2002). Student self-evaluation in grade 5-6 mathematics effects on problem-solving achievement. *Educational Assessment, 8*, 43–58. doi:10.1207/S15326977EA0801_03

Ross, J. A., Rolheiser, C., & Hogaboam-Gray, A. (April, 1998). *Impact of self-evaluation training on mathematics achievement in a cooperative learning environment*. Paper presented at the meeting of the American Educational Research Association. San Diego, CA.

Sadler, D. R. (1989). Formative assessment and the design of instructional systems. *Instructional Science, 18*, 119–144. doi:10.1007/BF00117714

Sadler, P. M., & Good, E. (2006). The impact of self- and peer-grading on student learning. *Educational Assessment, 11*, 1–31. doi:10.1207/s15326977ea1101_1

Schunk, D. H. (1996). Goal and self-evaluative influences during children's cognitive skill learning. *American Educational Research Journal, 33*, 359–382. doi:10.3102/00028312033002359

Stallings, V., & Tascione, C. (1996). Student self-assessment and self-evaluation. *The Mathematics Teacher, 89*, 548–554.

Turri, J. (2011). Believing for a reason. *Erkenn*, *74*, 383–397. doi:10.1007/s10670-011-9271-5

Webb, N. L. (1997). *Criteria for alignment of expectations and assessments in mathematics and science education* (National Institute for Science Education and Council of Chief State School Officers Research Monograph No. 6). Washington, DC: Council of Chief State School Officers.

Wedgwood, R. (2006). The normative force of reasoning. *Noûs, 40*, 660–686. doi:10.1111/j.1468-0068.2006.00628.x

White, B. Y., & Frederiksen, J. R. (1998). Inquiry, modeling, and metacognition: Making science accessible to all students. *Cognition and Instruction, 16*, 3–118. doi:10.1207/s1532690xci1601_2

Zimmerman, B. J. (1990). Self-regulated learning and academic achievement: An overview. *Educational Psychologist, 25*, 3–17.

APPENDIX A: Initial Email to Possible Participants

Subject line: Please help me with my thesis research

Dear colleagues,

My name is Chris Andrews, and I am currently in a masters program at BYU and as part of my thesis research, I would like to ask you to participate in a short three-question survey on student self-assessment. It should take you no longer than three minutes and will help me in my research. The link at the bottom of this email will give you further information.

In addition, I am hoping to interview some of you from different subject areas about student self-assessment, **even if you do not use student self-assessment**. I am simply interested in your opinions about student self-assessment. There will be two audio-recorded interviews, each lasting about 30 minutes, and a follow-up conversation to make sure the notes I took accurately represent your responses to the questions. I can be flexible on when and where the interviews take place, as I want to be respectful of your time, knowing how valuable it is. If you would be willing to be interviewed, please respond to this email and let me know. If you respond, I will be contacting you shortly thereafter to coordinate with you on a time and place for the interview.

Thank you for helping me.

Link to survey: https://goo.gl/D8lWBv

APPENDIX B: Short Survey on SSA

My name is Chris Andrews, a current masters student in the Teacher Education Department at Brigham Young University. I am working with a faculty mentor, Michael Richardson, PhD, a faculty member in the Teacher Education Department. As part of my thesis research, I am inviting you to participate in this research study about student self-assessment. I am interested in finding out about why teachers are using or not using student self-assessment.

Your participation in this study will require the completion of the attached survey. This should take up to three minutes of your time. Your participation will be anonymous and you will not be contacted again in the future, unless you choose to be interviewed at a later date. You will not be paid for being in this study. This survey involves minimal risk to you, which may include a few minutes of your time. The benefits, however, may impact society by helping increase knowledge about student self-assessment.

You do not have to be in this study if you do not want to be. You do not have to answer any question that you do not want to answer for any reason. I will be happy to answer any questions you have about this study. If you have further questions about this project or if you have a research-related problem you may contact me, Chris Andrews at chris.andrews@nebo.edu or (801)896-7667, or my advisor, Michael Richardson, PhD, at michael_richardson@byu.edu or (801)422-7310.

If you have any questions about your rights as a research participant you may contact the IRB Administrator at A-285 ASB, Brigham Young University, Provo, UT 84602; irb@byu.edu; (801) 422-1461. The IRB is a group of people who review research studies to protect the rights and welfare of research participants.

The completion of this survey implies your consent to participate. If you choose to participate, please complete the survey. Thank you!

1. I agree to participate in this survey
    a. Yes
    b. No
2. Do you use student self-assessment in your classroom?

    This would include any type of assessment where the student is involved in the assessment process.
    a. Yes
    b. No
3. What types or forms of student self-assessment do you use?

    Give examples of any type of student self-assessment you use (e.g., students write a blog post reflecting on their learning as a formative assessment).

APPENDIX C: Interview Consent

Consent to be a Research Subject

Introduction

This research study is being conducted by Chris Andrews, a current masters student at Brigham Young University in the Teacher Education Department, and supervised by Michael Richardson, PhD, a faculty member in the Teacher Education Department. The purpose of the study is to determine the reasons why teachers are or are not using student self-assessment and how teacher beliefs might influence that decision. You were invited to participate you teach in a high school and were willing to participate in this study.

Procedures

If you agree to participate in this research study, the following will occur:

- you will be interviewed twice for approximately thirty (30) minutes each time about student self-assessment and other teacher related topics
- the interview will be audio recorded to ensure accuracy in reporting your statements
- the interview will take place in your own classroom or another location convenient for you at a time that is also convenient for you
- the researcher will contact you later to clarify your interview answers for approximately fifteen (15) minutes.
- total time commitment will be approximately seventy-five (75) minutes occurring on three different days

Risks/Discomforts

Possible risks include emotional discomfort associated with answering questions about your practice and loss of preparation time for teaching. Although your name will be changed, some

information (i.e., subject area, gender, years of teaching) will not be removed and an individual familiar with the school might be able to identify you.

The researcher will minimize these risks by holding the interview in a location that is convenient and comfortable for you and at a time that will be convenient for you. The researcher will also give you an opportunity to clarify or revise your interview responses. The name of the high school will not be identified in the study in order to make it more difficult for someone to identify you. You also have the right to withdraw from the study at any time without penalty.

Benefits

There will be no direct benefits to you. It is hoped, however, that through your participation the researchers may learn about why teachers are or are not using student self-assessment and how it might relate to teacher beliefs.

Confidentiality

The research data, including audio recordings, will be kept on a password-protected computer and only the researcher will have access to the data. At the conclusion of the study, all identifying information will be removed in order to keep confidentiality. Although your name will be changed, some information (i.e., subject area, gender, years of teaching) will not be removed and an individual familiar with the school might be able to identify you. Digital recordings will be deleted after being transcribed. Data may be used in the future only for research purposes consistent with the original purpose of the research stated in this document. In any reporting of this data, pseudonyms will be used to protect your anonymity.

Compensation

There will be no direct compensation, but it will give you the opportunity to reflect on your teaching practices and beliefs, which may benefit your teaching.

Participation

Participation in this research study is voluntary. You have the right to withdraw at any time or refuse to participate entirely without affecting your employment or standing at the school.

Questions about the Research

If you have questions regarding this study, you may contact Chris Andrews at chris.andrews@nebo.edu and (801)896-7667, or Michael Richardson, PhD, at michael_richardson@byu.edu and (801)422-7310 for further information.

Questions about Your Rights as Research Participants

If you have questions regarding your rights as a research participant contact IRB Administrator at (801) 422-1461; A-285 ASB, Brigham Young University, Provo, UT 84602; irb@byu.edu.

Statement of Consent

I have read, understood, and received a copy of the above consent and desire of my own free will to participate in this study.

Name (Printed): _____ Signature:_____ Date:_____

APPENDIX D: Interview Questions

Interview questions might include, but are not limited to the following:

First Interview (approximately 30 minutes)

- **SSA Definition (related to research question 1)**
    - How would you define student self-assessment?
    - Have you used student self-assessment in your classroom?
    - [If so] What kinds of student self-assessment have you used?
    - What does it look like in a classroom setting?
    - How might assessment of your content area differ from assessment in other content areas?
- **Teacher Reasons (related to research question 2)**
    - What reasons would you give for using (or not using) student self-assessment?
    - How does the content area you teach affect your assessment decisions?
    - How do the school administration, district administration, or state or federal requirements influence your assessment decisions?
    - How might the age of the students affect your assessment?
    - How do your students' parents or the community influence your assessment decisions?

Second Interview (approximately 30 minutes)

- **Teacher Beliefs (related to research question 3)**
    - If you have used self-assessment with your students, how would you describe your experience?

- What do you think might happen if you used student self-assessment in the classroom?
- What advantages do you feel self-assessment practices might have?
- What disadvantages do you feel self-assessment practices might have?
- Do you think that it is important or useful for students to participate in the assessment process? Why?
- What role do students play in the learning process?
- What role does the teacher play in the learning process?