The Effectiveness of Self-Reported Grading in Secondary Food and Nutritional Sciences

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Abstract

The purpose of this study is to evaluate the effectiveness of self-reported grading in a Food and Nutritional Sciences course in terms of student motivation, comprehension of learned knowledge, and the application of learned knowledge. During a six-week intervention, six participants took part in the study aimed to evaluate the effectiveness of self-reported grading. Participants reflected on their in-class experiences using the Weekly Reflection, used to reflect on self-reported grading experiences, and the Weekly Lab Evaluation, used to reflect on the comprehension and application of content and self-reported grading applied to the foods lab setting. Research question one asks does self-reported grading have a significant impact on student motivation in their studies? Participant motivation was increased in an effort to improve their skills in Food and Nutritional Sciences. Research question two asks how does self-reported grading help students to better comprehend the learning material? Participant comprehension was not well reflected in responses; however, participants obtained immediate feedback and gained confidence in their knowledge and skills in regard to the content. The final research question asks what influence does accountability have with self-reported grading in terms of the application of learned knowledge for lab experiences? Participants were held accountable for their learning, comprehension, and application which proved that self-reported grading had a positive impact on the application of learned knowledge. Overall, self-reported grading has a positive impact on student motivation, comprehension, and the application of learned knowledge.

Keywords: self-reported grading, motivation, comprehension, application of learning

The Effectiveness of Self-Reported Grading in Secondary Food and Nutritional Sciences

Grading is a constant practice in education as is the process of learning. However, in very few instances do students take on a larger role in the grading practice, or take control of their learning. In today's society, self-regulated learning is increasing involvement where "students regulate their own learning by requiring them to exercise metacognitive monitoring of their work and process those against standards, expectations, targets, or goals" (Panadero et al., 2016, p. 804). These practices help students to recognize the importance of learning and being in control of their learning. If students take control of their learning, they gain more from their experiences while comprehending more of the content.

With the new gained knowledge and control, students become more motivated to become better students and do more for themselves. These ideas have been studied in the past where teachers research the effects of self-grading in a section of their class while the other served as a sample. Using Glazer's Instructional model, the teacher engaged students in the learning process through active involvement in their learning, grading, and reporting processes (Davis & Rand, 1980). It was important to the teacher that students were involved in their learning, and it meant more to the students to do better when actively involved. Through self-reported grading there are specific standards that students must meet and excel to. In the Glazer's Instructional model, student letter grades were "determined by students considering the following factors: the amount of work put into a course and what is normally learned, the time devoted to the course, and how they normally perform in evaluation procedures" (Davis & Rand, 1980, p. 208). After posing the first the idea that students learn more with active involvement in their learning, more teachers began to researcher this idea with more strategies being implemented and experimented with in the classrooms. This has created a ripple effect among various other schools and learning areas to

increase student control in the classroom.

Participants were asked weekly to reflect on their learning processes and how they are applying the content to real-life experiences. If participants are not utilizing their new knowledge, then why? This self-reflection helps them analyze the "why" for recognizing their common motivators, comprehension, and accountability. In a Food and Nutritional Sciences course, participants learn how to prepare food through instructional pedagogy with the opportunity to also apply their knowledge in a foods lab experience. Participants reflected on their control of their learning experiences in the study while also grading their performance in application of the content.

The purpose of this study was to evaluate the effectiveness of self-reported grading in regard to student motivation, comprehension, and application of Family and Consumer Sciences content in a Food and Nutritional Sciences course. With the increase in research of self-reported grading strategies, there are more factors to be explored in how it directly affects students in learning settings. Educators have several roles, and student self-reported grading can help to create less of a burden on the teacher and more control for the students. By carrying out this study, teachers can recognize the value of self-reported grading practices within their own environments.

The research questions that have guided this study are the following:

1. Does self-reported grading have a significant impact on student motivation in their studies?
2. How does self-reported grading help students to better comprehend the learning material?
3. What influence does accountability have with self-reported grading in terms of the application of learned knowledge for lab experiences?

Through the conducted research, the teacher researcher hypothesized that the implementation of self-reported grading practices served as an intrinsic motivator for participants to improve in Food & Nutritional Sciences concepts. It was also hypothesized that the practice would allow for the participant to see their own mistakes first hand and improve the application of content in laboratory experiences as participants are holding themselves accountable. Through these guidelines, the teacher researcher collected data through narrative design.

In the following literature review, the teacher researcher addressed the effectiveness of self-reported grading through various methods and practices. Peer-review grading and self-reported grading were analyzed to evaluate the effectiveness of both practices. In addition, the teacher researcher stressed the benefits of self-reported grading for participants and teachers who implement the practice. The research also included examples of how self-reported grading may be implemented in various classrooms.

An assessment is one of the many ways that a teacher can evaluate a student's understanding of key concepts in their content area. Self-reported grading is a practice that refers to students grading their work based on instructor-created rubrics and criteria. As one of the most researched ideas, assessment scores are a strong indicator in student achievement (Sticca et al., 2017). With grades being greatly influential in student learning and reflection, they can be used as a tool to evaluate student satisfaction. Student satisfaction best relates to an "attitude based on the student's evaluation of his or her educational experiences" (Johnson et al., 2016, p. 318). Self- reported grading assists student' in evaluating their educational experiences in terms of their motivations and academic success. The literature included evaluates self-reported grading practices and their benefits for the students and the instructor through various motivations and flaws.

Self and Peer-Reported Grades

Self-reported grading and peer grading are strategies used for providing quick feedback with self-evaluation as the most integral part of the process. Generally, self-reported grades are more accessible to the student due to the immediate feedback they provide (Sticca et al., 2017). The reliability of self-reported grades is based on how assessment is worded and carried out. "Thus, the 'assessment *of* learning' paradigm expanded to include 'assessment *for* learning'" (Sanchez et al., 2017, p. 1049). Assessments for learning are more inclusive of the students and their academic performances; therefore, providing much more student satisfaction and the accomplishments of assigned learning goals.

In terms of academic performance, students are tasked with achieving specific goals. "A learning goal refers to what knowledge, behavior, skill, or strategy students are to acquire, and a performance goal refers to what task is to be completed" (Schunk & Mullen, 2012, p. 224). Once students have begun to understand the goals required of them, instructors who use self-reported grading see further progress in learning goals due to the diligent process of the mind. According to Sanchez et al. (2017):

> In terms of metacognitive benefits, self and peer grading (SPG) processes require students to make judgements about their own work and others' work, and, as a result, can lead to increased awareness, insight, and reasoning. In particular, self-grading encourages a growth mindset through an emphasis on revision and progress toward a higher standard of achievement. (p. 1050)

Both practices encourage growth in the individual student, but self-reported grading requires personal reflection, personal revision, and a personal understanding of the objectives for a peer review.

Self and peer-reported grading are practices that obtain high rates of success due to the direct impact that they have on the student. Students can practice "deliberate practice" which "is designed specifically to improve a targeted performance, provides continuous feedback, has a high mental demand, and can be repeated" (Jackson et al., 2018, p. 1). Self and peer-reported grades use a deliberate practice that allows them to address specific learning goals and improve observation and reflection skills. One study found that self-reported grading practices not only assessed academic knowledge, but also social interactions between students and teachers (Wagner et al., 2011). This technique becomes more well-rounded as it incorporates more reflective practices for targeted goals.

Student Motivation

Students with good grades and a common understanding are often more motivated to do well in school. "Student engagement in learning reflects cognitive, behavioral, and affective variables that encompass aspects of motivation and self-regulation" (Schunk & Mullen, 2012, p. 225). One study explored how satisfied students are more marketable for jobs due to their needs being fulfilled (Johnson et al., 2016). When students are satisfied with their status, they are more motivated to follow through with their original intentions. "Motivation refers to any force that energizes and directs behavior" (Reeve, 2012, p. 150). The energy and excitement from obtaining a good grade or good feedback can be a direct motivator for striving to do well in school.

Academic motivation helps our students to feel comfortable, strive for success, and accomplish their goals. "Students have needs, goals, interests, and values of their own, and these motivations sometimes manifest themselves in a context-free way, as when a student adopts a mastery goal orientation across all achievement contexts" (Reeve, 2012, p. 152). When students

see that school can include their values and motivations, they become a lot more intrigued by the activities and assessments they participate in. Students are even more engaged when they recognize their part in their education; for example, processes like grading can become more inclusive of the student taking a part in their education. When students feel confident in their abilities, they are more willing to take on new challenges in academic settings (Zheng et al., 2020). With the right resources for our students, we can all do hard things. Student given choices can "increase students' intrinsic desire to learn material" (Edwards, 2007, p. 72). We put the ball in their court and see what they want to do with it. Some students will become motivated and try hard while a few may not be affected.

Process of Self-Reported Grading

Assigning grades for assessments completed by students is a traditional task in education. Generally, students learn the content through teacher-led instruction and complete formative assessments to demonstrate their knowledge throughout the unit. When turned in, these assessments are graded by the teacher based on effort and the correct answer and then assigned a letter grade in the gradebook. Students are then handed back their graded assessments within a certain time frame prior to the summative assessment. This process can span over an extended period of time depending on the availability and workload of the teacher. Though this is a traditional process, there is nothing that says we cannot switch up our pedagogical practices to incorporate new ideas. Assigning grades reveals a sense of power to the one who assigns them (Olsen & Buchanan, 2019). Why not transfer that power to the student to engage them in their own learning process?

When using a self-reported grading practice, the power in grading is transferred to the student. In a similar idea, students actively participate in teacher-led instruction as well as

student-led learning. Following these learning experiences, students will complete an assessment covering the learned material. The difference lies in the grading portion where students will grade their own papers during class while the teacher goes over all of the answers. Grades will be reported into the gradebook within the same class period where students bring their papers to the teacher to review and enter. Students receive feedback instantly using this process and receive their graded papers within the same day that they turn it in.

Family and Consumer Sciences courses take self-reported grading one step further. "There are multiple purposes for why grades exist and no consensus on which grading purposes are most important" (Olsen & Buchanan, 2019, p. 2013). It is important that students answer questions correctly and reflect on how their learned material led them to their answer. Not only do students participate in self-reported grading from in-class instruction, but there is another component to their grades: foods lab experiences. Though in-class assessments and lab assessments both contribute to the overall grade, the complexity in grading differs with each assessment. In a Food and Nutritional Sciences course, students will complete a foods lab, for example a pancake lab. Following this lab, students complete a lab evaluation assessment which evaluates their performance in the lab, and how their procedures during the lab related to what was learned in class. Students self-report their performance in the lab to assign themselves a grade based on performance. This grading practice allows for immediate evaluation and reflection in performance and in course standards.

Student Benefits of Self-Reported Grading

Self-reported grading has increasing benefits for the students as they engage in the content and assessments provided for them. One instructor said, "I explain to students that they will grade their own work because I believe that they will learn statistics more easily if they can

identify when and where they make mistakes" (Edwards, 2007, p. 73). The engagement increases focus and attentiveness to their mistakes as they then turn around and correct them. For one college program, self-reflection helped prove student self-image and explain how they act around peers versus superiors (Wagner et al., 2011). The reflection part of this practice is one of the most beneficial aspects where students can learn so much.

There are more benefits to self-reported grading than just the reflection-based aspect. One study states the following:

> There are two potential benefits of students grading practice exams using the instructor's rubric. 1) With a decreased feedback workload, instructors can assign more practice exam questions, thus providing students with more deliberate opportunities. 2) Student grading has the potential to make students active evaluators rather than passive receivers of grades. (Jackson et al., 2018, p. 2)

The process creates a more well-rounded student that makes key observations and understands how to correct missed items. "Students also reported greater understanding of the material, more willing to try different ways of learning, enhanced enjoyment in the class itself, better effort put into assignments and readings, increased openness in class, and more thoughtfulness put into assignments" (Edwards, 2007, p. 72). All around, self-reported grading curates a meaningful environment for the students to learn and thrive through reflection, observation, and revision.

Instructor Benefits of Self-Reported Grading

Instructors have many benefits that they gain from self-reported grading—similar to the students. Instructors wear many hats—one of which includes providing feedback promptly. With self-reported grading, "students themselves can serve as useful sources of feedback" to assist

them on their academic journey (Sanchez et al., 2017, p. 1049). The process behind self and peer-reported grading allows the teacher to provide feedback to multiple students all at the same time. Students receive feedback and answers through class grading and revisions allowing them to see first-hand the mistakes and good progress that they and their peers have made with the content. One downside to this method is when the educator "is perceived as poor, students' academic cheating is more likely, and grades may be self-reported less accurately" (Escribano & Diaz-Morales, 2014, p. 174). Self-reported grading works successfully when the instructor provides meaningful feedback. Students must be learning content and understand the teachings to feel confident enough to participate in such a practice.

Flaws in Student Grading

Although self-reported and peer-reported grading produces many benefits for students and instructors, all procedures come with flaws. Within self-reported grading, there is a possibility for students to overrate scores due to "overconfidence in newly learned skills and a students' poor assessment of their own comprehensive skills" (Sanchez et al., 2017, p. 1050). Students may believe that they have a clear understanding of the content when they need a little more digging to get the big picture. "The percentage of student's over-reporting is often over twice as large as the percentage of under-reporting--sometimes reaching ratios as large as 12 to 1 or even 48 to 1" (Kuncel et al., 2005, p. 67). A lack of confidence and knowledge can lead a student to report grades inaccurately.

Reporting inaccurate grades is just one flaw of self-reported grades that could lead to others. Research finds that students tend to over report grades (Sticca et al., 2017). Every student wants to have good grades, but whether the grades are reported honestly or not is the key. Students participating in peer-grading were often generous with peer grades and consistently

accurate with their own (Wagner et al., 2011). Often, students want to be kind to others and fit in with the crowd which sometimes leads to leniency. “A student who is generally dishonest and unethical may be more inclined to be academically dishonest and take part in unethical behavior at school” (Zheng et al., 2020, p. 1060). Lying to get a good grade is just part of the problem where more issues are likely to arise.

One idea with self-reported grades is the accuracy between individuals. These pedagogical practices “seem to be less reliable among students with poor academic performance and, to a lesser extent, among students with lower cognitive abilities” (Escribano & Diaz-Morales, 2014, p. 169). As mentioned above, the temptation to lie about a grade can catch up with students—especially when self-reported grading. One study found that “the majority of males seemed to estimate their IQ accurately, and only a few females severely underestimated their intelligence” (Escribano & Diaz-Morales, 2014, p. 169). In addition to the factors listed above, one study dives deeper into the reasons why students may participate in inaccurate reporting. It is suggested that students with “lower levels of self-monitoring are also more likely to provide inaccurate grade information” (Schwartz & Beaver, 2014, p. 1127). There are trends in self-reported grading among demographics like gender, socioeconomic status, academic abilities, and more. These trends affect the accuracy of our grading practices, but what stands out is that self-monitoring is a factor in most if not all of them. If we teach kids to properly self-monitor themselves, we fix the majority of inaccurate reporting issues.

Self-reported grading is a useful tool used in many classrooms and content areas. When students participate in self-reported grading and/or peer-grading, they are more inclined to learn the content and reflect on their understanding. Both peer and self-reported grading practices help students to understand the content through various perspectives of their own and others. This

process helps the students, but it also helps the instructor with quick feedback and assessment of student understanding in real-time. Although this practice serves multiple purposes, there is a risk of students grading too leniently resulting in students overestimating their understanding of concepts. The ability of the student to be able to monitor their understanding of the content refers to self-monitoring which is a large factor in self and peer-reported grading. With positive self-monitoring lessons and accurate self and peer-reported grading modeling, students and teachers can find a lot of success in self-reported grading practices.

Methods

The study evaluated student learning experiences and the effectiveness of self-reported grading practices using a qualitative approach and narrative design from student experiences. Through written student responses, the teacher researcher analyzed data using coding from the responses. Each response was analyzed for key words and phrases that may have similarity in other responses. Over the six-week period, students engaged in Food and Nutritional Sciences content regarding recipe skills and dairy while self-assessing their assignments through guided grading practices.

Participants and Setting

Participants in this study consisted of six students within section 2 of the Food & Nutritional Sciences 1 course taught by the teacher researcher in Chrisman, Illinois. Participants consisted of female and non-binary individuals ranging from grades 11 through 12 and ages 16 to 18. Of the participants, two required accommodations through a 504 Plan. Accommodations included excused spelling errors, reduced choices, word banks, a quiet test location as needed, extended time, and reminders on deadlines. Participants either chose to take the class or had been placed in the class to fill an elective. Participants were Caucasian and had a wide range of

abilities, socioeconomic status, and resources available to complete tasks at home.

The location of this study took place in a small, rural school located in the south-eastern part of Illinois near the Indiana state border. The school is located in the rural town of Chrisman, Illinois with a population of 1,204 residents. The study took place at the high school in this town and data was collected within the Family and Consumer Sciences classroom managed by the teacher researcher. According to the Illinois State Report Card, the Edgar County District student population is made up of 92.7% white individuals with 41.5% qualifying for free or reduced-price lunches (Illinois State Board of Education, 2023). This small-town school is exposed to limited ethnic diversity; however, have experienced socioeconomic struggles, nonetheless.

Data Source and Research Materials

The researcher implemented two instruments to facilitate the study of the effectiveness of self-reported grading. The tool, Google Form, was used to document data from the instruments. Lab evaluations and in-class self-grading practices took place to help participants reflect on their personal learning experiences and processes. The following instruments served as the primary data sources: weekly reflection and weekly lab evaluation.

Weekly Reflection

a. A weekly reflection (Appendix A) was completed to reflect on self-reported grading practices at the end of each week. Participants answered questions on the Google Form tool to review their self-reported grading practices and how their involvement motivated them, allowed comprehension, and further allowed application of the content. Themes in participant responses were collected as data and analyzed by the teacher researcher.

b. Formative assessments assigned to assess student learning were graded individually

during class time by the participant. The teacher researcher revealed the answers for all those who completed the assessments. The participants graded themselves accordingly. During this process, participants had the opportunity to verbally ask quality questions to address misconceptions in the content.

Weekly Lab Evaluation

a. A weekly lab evaluation (Appendix B) was completed following a foods lab to reflect on the product prepared and student performance in the lab. Participants answered the reflection questions using written response via a Google Form tool. Data collected was in narrative form and analyzed to find common themes.
b. Following a foods lab experience, participants reflected on their performance in the kitchen and the application of Family and Consumer Sciences knowledge. The participant was asked to evaluate the product prepared, the kitchen procedures, and their personal performance in the lab experience in addition to the application of knowledge. This data was collected to evaluate student accountability, motivation, and comprehension.

Procedures of Data Collection

Within the six-week intervention, participants engaged in weekly reflections based on self-reported grading practices and lab experiences. During the intervention, formative assessments were graded in class by the participant to encourage the comprehension of learned concepts and misconceptions. After classroom instruction and learning, students were assigned a take-home or in-class assessment which would be graded in class. Once per week, the participant would reflect on their self-reported grading and what they received out of practicing this method. Following the weekly in-class foods lab experience, participants completed a lab evaluation that

evaluates the food as well as their performance in the lab experience.

The study's intervention for each week followed a distinct routine. The routine consisted of the following: 1) classroom instruction, 2) a formative assessment, 3) self-grading of the formative assessment, 4) weekly reflection, 5) in-class lab experience, and 6) weekly lab evaluation. Classroom instruction would take place on Monday and Tuesdays with an assessment due on Wednesday that was graded in class. Students completed the weekly self-reported grading reflection after the grading process. A lab experience took place at the end of each week. The weekly lab evaluation was due the following school day. Data was collected once a week from classroom instruction and once a week from the foods lab experience to provide a total of 12 data collections. The instruments helped to collect data to be analyzed through common themes in written responses to evaluate student performance while participating in self-reported grading versus when they did not use this method. In addition, participants were asked to reflect on how self-reported grading helped or did not help them as a student.

Data Analysis and Results

During the six-week intervention, participants in the second section of Food and Nutritional Sciences participated in self-reported grading and weekly foods lab experiences. A total of 12 data sets were collected throughout the intervention. The "Weekly Reflection" was administered one time each week to obtain data sets regarding participants' reflections in their self-reported grading practices. Participants filled out the weekly reflection after completing and grading a formative assessment that aligned with the lesson for that week. In addition, participants completed a foods lab relating to the content learned in class. Following the foods lab experience, participants were asked to complete the "Weekly Lab Evaluation" to obtain data from their application of learned knowledge. Weekly reflections about self-reported grading

practices and lab evaluations from two instruments over a six-week period equate to the 12 data sets that were obtained through this study.

Data Analysis

Weekly Reflection

The data from this instrument were used to examine themes in participant responses within the categories of comprehension, motivation, and the application of learned knowledge. Within this instrument, participants were asked how they plan to work on their learning progress for the following week in order to answer research question one: Does self-reported grading have a significant impact on participant motivation in their studies? Participants were asked to describe a concept that they better understood after grading their work for the week in order to answer research question two: How does self-reported grading help participants to better comprehend the learning material? Finally, participants were how they planned to apply their learned knowledge to their lab that week in order to answer research question three: What influence does accountability have with self-reported grading in terms of the application of learned knowledge for lab experiences? This instrument provided data for all research questions while primarily focusing on the comprehension and motivation factors of classroom content.

Weekly Lab Evaluation

The data from this instrument were used to examine themes in how participants applied classroom content to their hands-on lab experiences as well as how those influenced their motivation, comprehension, and application. With this instrument, they were asked how they improved their skills from the previous lab in comparison to how they performed in the current lab in order to answer research question one: Does self-reported grading have a significant impact on participant motivation in their studies? Participants were asked to evaluate how well

they followed lab procedures in order to answer research question two: How does self-reported grading help participants to better comprehend the learning material? In order to reference their application to the content, participants were asked to reflect on how they incorporated classroom material they learned and applied it to their lab in order to answer research question three: What influence does accountability have with self-reported grading in terms of the application of learned knowledge for lab experiences? This instrument provided data for all research questions while primarily focusing on the application of content in foods lab experiences.

Results

The study results collected from the following data instruments: Weekly Reflection and Weekly Lab Evaluation have shown that self-reported grading in a Food and Nutritional Science class has a positive effect on participant motivation. The overall results revealed that self-reported grading mostly helped participants to better comprehend the learning material; however, many participants just maintained skills while the practice allowed for immediate feedback. In regard to the purpose, the results showed that participants were positively influenced by self-reporting their grades which led to an increase in finding ways to apply content knowledge to hands-on foods lab experiences.

Research Question One: Does Self-Reported Grading Have A Significant Impact On Student Motivation In Their Studies?

Weekly Reflection

The data collected from this instrument were examined and categorized into themes. The overall results show that participants had increased motivation in their studies while practicing self-reported grading. Participants completed this form once per week following their practice of self-reported grading in order to reflect their motivation toward the following week. Multiple

participants planned to improve or maintain their skills while following through with proper actions to improve in their studies. For example, participant 623 stated "I want to better evaluate what I struggle with and learn how to teach myself to remember the things I struggle with" which reveals a positive indicator of motivation with self-reported grading. See Table 1.

Table 1

Weekly Reflection on Motivation: How do you plan to work on your learning progress next week based on this week's results?

Theme	Sample Participant Quote
Practice/Maintain Current Skills	"I want to better evaluate what I struggle with and learn. How to teach myself to remember the things I struggle with" "I will use the information that we learned with the self-grading."
Follow through with proper action	"I will try not to tap the cup when measuring soft powdery ingredients!" **"**I want to be more thorough and check my answers more carefully."
Improve/maintain positive attitude	"It's okay to get questioned off a assignments and not overdo myself" "I plan to try to keep my attitude at bay in the kitchen. I will try to do this by reminding myself that I can step back and breathe and regain politeness before jumping back into cooking."
Remain focused	"Even though I focus pretty good in class, I could maybe be a little better." "I will focus on the assignment in greater detail."

Weekly Lab Evaluation

The Weekly Lab Evaluation instrument was completed once per week following the foods lab experience—whether it was a cooking or tasting experience. Participants reflected on their improved skills from one lab to the next to determine if working on weaker skills related to content was a motivator. Many participants shared that working with others is difficult for them

to do, but they have slowly been working toward fixing this with their in-class practices. For example, participant 624 shared that **"**I've been doing pretty good with working with other people, especially considering how I am in social scenarios." This shows a strong motivation to improve this skill in their class experience. See Table 2 below.

Table 2

Weekly Lab Evaluation on Motivation: How have you improved your skills for working in the lab based on how you preformed in the last lab?

Theme	Sample Participant Quote
Timing and skills	"I think we used our time very efficiently, and cleaned well." "My skills are pretty similar, but there was a difference because I baked last time."
Working with others	"working with my partner was a little tricky." **"**I've been doing pretty good with working with other people, especially considering how I am in social scenarios."
Improve/maintain positive attitude	"I finally am getting some control on my attitude in labs and can easily get myself to focus back on the lab. In turn, a good attitude brings me the ability to work well within the time restraints for once."
Having confidence	"feeling confident about reading the instruction and not second guessing myself!" "I think my skills have improved a bit, well, my school skills because I am completely different at home."

In addition to working with others, participants associate their motivation with their timing and skills in their lab experiences. As you can see in Table 2 above, participants relate their motivations to do better in the following lab to the timing of their performance in relation to the bell schedule. For example, participant 624 states that "My skills are pretty similar, but there was a difference because I baked last time." Participant motivation increased as a result of self-

reported grading and their desire to improve their skills over time after taking control of their learning.

Research Question Two: How Does Self-Reported Grading Help Students To Better Comprehend The Learning Material?

Weekly Reflection

The Weekly Reflection collected data to analyze if self-reported grading helped participants to better comprehend the learning material. Most participants reported a better understand of the material learned throughout the week each week. For example, participant 626 reported that "I better understand how cows are milked it's so cute I love cows. I also feel good about SRG and knowing that checking over my work is really important." See Table 3 for more participant responses regarding learned skills and knowledge.

Table 3

Weekly Reflection on Comprehension: Describe at least one concept that you better understand after grading this week.

Theme	Sample Participant Quote
Recipe Math	"I better understand where my error in the math was." "When it comes to fraction and it like 3/1 it's going to come out to just 3."
Recipe Skills	**"**Knife cutting skills, particularly measuring with my eyes when cutting." **"**I better understand why I shouldn't tap flour when measuring it."
Learned Knowledge	"The purpose of the vitamins and minerals." "I better understand how cows are milked it's so cute I love cows. I also feel good about SRG and knowing that checking over my work is really important."
Confident in Material	"After self-grading it made me feel more confident on the entire thing."

	"I feel like there was nothing to better understand! I feel reassured."

For some participants, self-reported grading served as more of an immediate feedback practice rather than an opportunity to better comprehend the material. For example, participant 623 reported having more confidence after practicing self-reported grading. This does not describe a concept that they better understand; however, the participant reported a positive increase in their confidence about the content after self-reported grading.

Weekly Lab Evaluation

Following the weekly foods lab experience, participants reflected on how well they followed directions and understood the concepts from the lessons within the week. A strong majority of participants reported confidence in their comprehension within the lab for each week. Participants 622 and 623 reported a lack of confidence more often within the six-week intervention. For example, participant 623 reported "I think I could always find something improve on, but feel like I was precise and on time during the whole thing." This lack of confidence could also be seen in various other responses where participants reflected on fixing skills rather than downgrading their confidence in the lab. These responses can be seen below in Table 4.

Table 4

Weekly Lab Evaluation on Comprehension: How did you perform in this lab in regard to lab procedures?

Theme	Sample Participant Quote
Fixing Skills	"Not really, but I did learn that some of the stuff I was told was incorrect and fixed it."

	"I think I did very well, but left my bread in the mixture a bit too long."
Confidence	"Mrs. Brown told our group (Yellow) that we followed all of the directions and also we went step by step and did not rush." **"**I held the knife properly without putting my finger on the spine part, and I didn't cut myself. I think I cut the potatoes pretty well, maybe not 100%, but I still think I did okay."
Lack of Confidence	"I think I could always find something improve on, but feel like I was precise and on time during the whole thing."

Research Question Three: What Influence Does Accountability Have With Self-Reported Grading In Terms Of The Application Of Learned Knowledge For Lab Experiences?

Weekly Reflection

The final use of the instrument collected data regarding participant application of content learned in class in reference to their personal and lab experiences. A strong majority of participants reflected on their abilities to apply and utilize skills and knowledge learned in class. See examples of utilizing skill set reflections in Table 5 below. It is evident in the data that few data sets were categorized within different themes. Other participants reported their intention to maintain skills learned or reflected on their confidence to perform such skills. For example, participant 626 reported that "I can do recipe math without having to double check with/ask Ms. Brown before I do something." Their confidence in the application of content knowledge indicate success in the application of content knowledge when participants are held accountable in self-reported grading.

Table 5

Weekly Reflection on Application: How have you applied what you have learned to your lab this week?

Theme	Sample Participant Quote
Using Skills	"I learned what measuring devices to use for what ingredients and I used that for the cinnamon and the sugar." "I have during measurements and buying things at the store."
Maintaining Skills	"I used my knowledge of dairy when putting the milk in the French toast." "I will know how to adjust recipes."
Help Partners	"I will know how to effectively help a partner on procedures in the kitchen if necessary and I can cut back on asking so many questions in the kitchen." "I will apply my "delegating" skill in future labs. I sharpened my skill of teamwork this week and found how much delegating tasks evenly helps me to not take over control, especially when control is not needed."
Confidence	"I can do recipe math without having to double check with/ask Ms. Brown before I do something." "do not stress out before a lab."

Weekly Lab Evaluation

The final purpose of this instrument was used to analyze how participants incorporate learned material into the lab experience where participants can be held accountable for their learning and application to real-world scenarios. Most participants reflected on their strong ability to utilize the specific techniques like participant 625 who states, "I cut potatoes as best I could to the way we were shown." See Table 6 below for more responses on how participants were accountable in application.

Table 6

Weekly Lab Evaluation on Application: How did you incorporate the material you learned this past week into today's lab?

Theme	Sample Participant Quote

Using Techniques	"I held the knife properly without putting my finger on the spine part, and I didn't cut myself." "I am lactose, but we have been talking about dairy and milk was in our lab."
Confidence	"I know I didn't remember and incorporate everything we learned, but I did do the leveling off method that Ms. brown taught." **"**I did use them, I just had to re-read quite a few times."
Attitude	"I think learning the measurements and how to use them is really beneficial both in and out of class."
Improve Learning	"This was pretty fun and nice; however, I wish that the students could have been able to do the work to figure out how much of their ingredient equated the egg amount. Maybe even learn why?"

To summarize these results, the data reported for research question 1: Does self-reported grading have a significant impact on participant motivation in their studies? The data shows that self-reported grading does have a significant impact on participant motivation in their studies. Participants in the study reported an increase in motivation of their studies and a desire to do well in the course. In regard to research question 2: How does self-reported grading help students to better comprehend the learning material?, it provides participants with immediate feedback to evaluate their comprehension while allowing them the space to fix their mistakes and skills. In reference to research question 3: What influence does accountability have with self-reported grading in terms of the application of learned knowledge for lab experiences?, there is a strong influence. Participants were more apt to apply content when participating in self-reported grading practices.

Findings, Implications, and Limitations

Findings

The purpose of the study was to evaluate the effectiveness of self-reported grading in a Food and Nutritional Sciences course in terms of participant motivation, their comprehension of learned knowledge, and their application of learned knowledge. These indicators were guided by three research questions and evaluated through two instruments. It was hypothesized that the implementation of self-reported grading practices would serve as an intrinsic motivator for participants to improve in Food & Nutritional Sciences concepts. Through self-reported grading participants would be able to see their own mistakes first hand and allow them to better comprehend the content. Their motivation and comprehension of classroom content would allow the participant to apply knowledge and skills to lab experiences while holding themselves accountable for their learning.

Findings for Motivation

Research question one focused on participant motivation where participants positively reflected on their experience providing evidence that self-reported grading practices greatly influence participant motivation in their studies. The Weekly Reflection asked participants to reflect on how they planned to work on their learning progress for the following week based on that current week's results in order to evaluate their motivation in their studies. Participants were successful in addressing their weaknesses and remaining motivated to do well in the following week. In addition, participants completed their Weekly Lab Evaluation in which they were asked to rate their performance and justify their rating for how they have improved their skills from one lab to the next. The results from this provided evidence of confidence in their abilities and their ability to continue working on skills based on prior results.

Findings for Comprehension

Research question two focused on how self-reported grading helped participants to better

comprehend the content in Food and Nutritional Sciences. The Weekly Reflection asked participants to share at least one concept that they better understood after self-grading. Participants shared their confidence in the learning material from each week. The feedback from these results were positive, but participants were mostly satisfied with the immediate feedback provided when self-reported grading. The Weekly Lab Evaluation asked participants to rate their performance and justify their response considering how well they performed in the lab in regard to general lab procedures. Participants gained confidence in their comprehension and abilities as the study continued and their comfortability in self-reported grading increased.

Findings for Application

Research question three focused on improving the application of classroom content to hands-on lab experiences in order to hold participants accountable in their learning. Participants often learn more from hands-on experiences and the results were clear that participants better understood content once applied to the lab. Participants were encouraged to critically think about how they would apply what they learned in class to their weekly lab when responding to their Weekly Reflection. Participant feedback confirmed that the content learned in class would be applied using skills fit for the lab and relating to the weekly lesson. On the Weekly Lab Evaluation, participants were asked to rate their performance and justify their rating in regard to applying classroom content to lab procedures. The feedback from participants evidenced that classroom content learned was better understood when applied to the lab setting, and participants were confident in their ability to apply content to real life skills and examples. Participants even provided suggestions for improvement to their learning through application of classroom content.

Conclusion and Discussion

The overall results from this study find that self-reported grading can influence student

motivation, comprehension, and application for high school students in Food and Nutritional Sciences. Based on the reflective responses from participants, a majority either found success in self-reported grading or found that they learned just the same. When breaking it down week by week, participants reflected on individual lessons implemented each week. All participants found content from class to apply to the lab experience. All participants were confident in their ability to comprehend the content or recognize misconceptions through self-reported grading. However, students were more satisfied with the immediate feedback on assignments rather than how it impacted their comprehension overall.

One idea recognized with motivation was the date and time that participants completed the reflection and evaluation. Participants completing their reflection and evaluation during class time and within the classroom were more motivated with the content and their learning progress. There were a few participants who were absent during reflection and self-reported grading days in which their reflection and evaluation were made up later or not at all. Instances were an 'x' is placed where data is absent is an indicator of the latter idea.

The feedback received from participants regarding motivation, comprehension, and application were mostly positive. There were few instances where students could not apply content knowledge from the classroom to the lab due to falling behind in lessons or having a tasting lab in place of a cooking lab. These factors were out of the participants' control, but may have played a role in the influences for their motivation, comprehension, and application during that given week. The teacher researcher is confident that the data collected reflected the experiences of the participants to the best of their abilities in that given week.

Implications

High schools is a time when students begin to develop career pathways and life skills that

will lead to through their adult life. Food and Nutritional Sciences is just one career pathway of many that students can indulge in. When it comes to the workforce, employers want individuals who are competent in their specialty, who take initiative, and who are motivation to do the work needing to be done. Though when it comes to high school, teachers are trying to transform students into competent employees and college students. One of the ways to prepare students for college and the workforce is help them to take control of their learning. Self-reported grading helps students to remain motivated in their studies, comprehend classroom content, and apply that classroom content to lab and real-life experiences. While the study only addressed the positive effects in a Food and Nutritional Sciences course, it can be implied that self-reported grading in any high school course could prove successful with student motivation, comprehension, and application.

Limitations

Though student comprehension and application are easier to monitor with student reflection and hard evidence, motivation in a high school classroom can be proven as just as important. It was more difficult to gauge the motivation and attitude of the participants since a teenager's attitude can change based on their overall day, their current environment, what they endured prior to class, when they are filling out their reflection, etc. The study's instruments were primarily completed during class time to ensure participants had the time and space allowed to collect the most truthful and raw data. However, there was no definite way to identify when and where participants completed the reflection if their class time did not allow, or they were absent.

Reflection and Action Plan

Reflection

While the study was necessary and a unique learning experience, it often made adhering to accommodations more difficult. Each week participants were required to learn the content of the lesson, complete an assessment, self-grade that assessment during class, and then complete the weekly reflection form. This all occurred in the first three to four days of the week. In the last one to two days of the week, participants would complete a foods lab experience and reflect on their experience within the weekly lab evaluation form. Obtaining quality reflection for qualitative data twice a week while also completing regular course work created extra effort and stress on the participants.

In addition to the extra work added onto students, many students felt the pressure of this work week within shortened school day and weeks within the month of October. Some students require extended time on assignments due to their 504 plan accommodations. However, the time constraints for self-grading and reflection made participants feel rushed in their work resulting in work that was not their best. These ideas were evident in some reflection data not directly relating to research indicators. Though the study presented these challenges, the research and data are clear that self-reported grading in instrumental in student success in accountability in their learning regarding motivation, comprehension, and application.

Action Plan

The results from this study can be used to defend the importance of self-reported grading in Career and Technical Education courses as well as general education courses. The teacher researcher plans to share these results with other teachers in the district in order to incorporate self-reported grading into other content areas. The results will be shared with the principal of the junior high and high school in an effort to inform them of the success of the study and decide on a plan for implementation moving forward. Participants in the study reaped success in their

academic efforts and understanding of content while using self-reported grading. One participant even stated wanting to learn how to do more self-reported grading in other classes to obtain success across all courses. Evidence of this desire encourages the teacher-researcher to assist in creating an implementation plan to make this possible.

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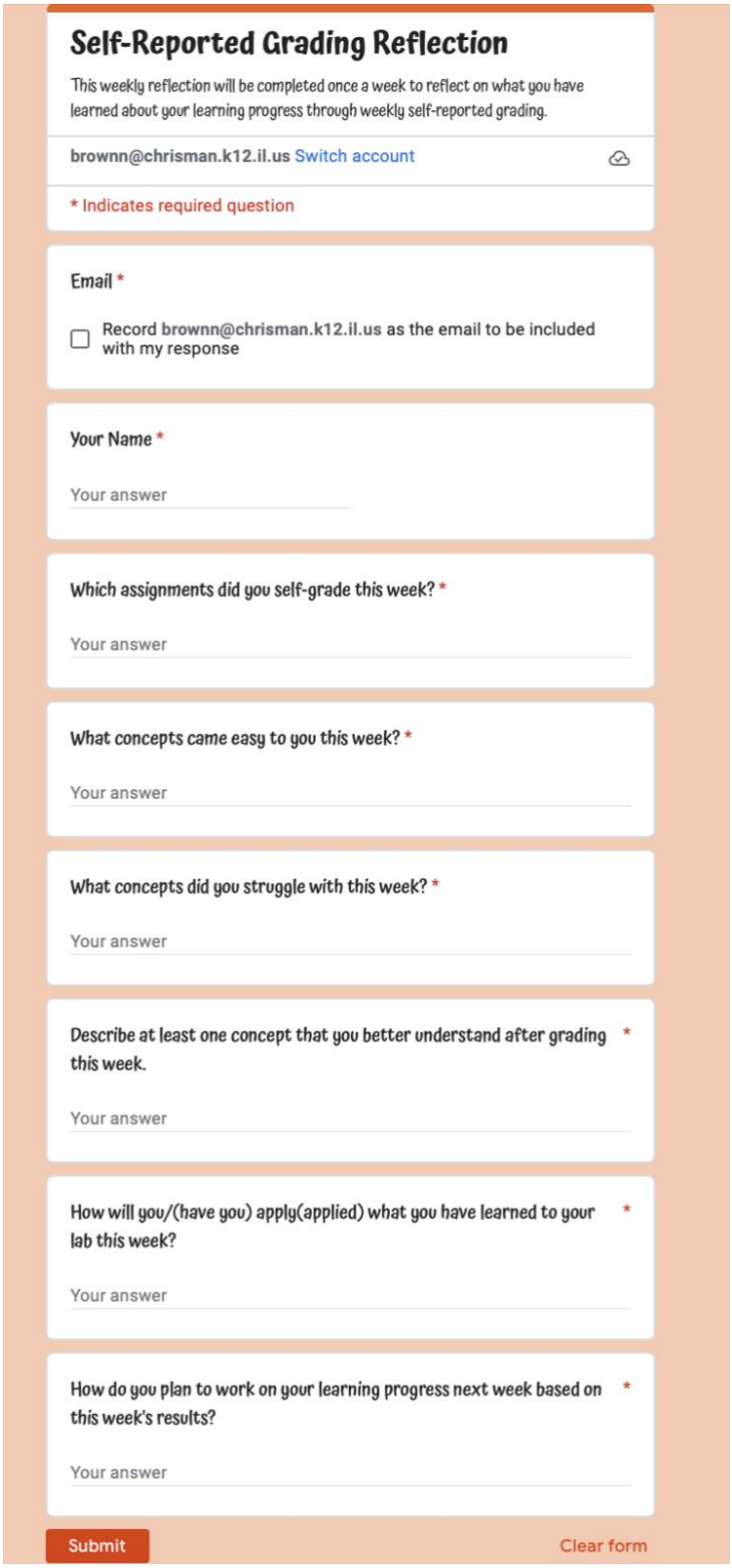
Appendix: Table of Contents

Appendix A



Self-Reported Grading Reflection

This weekly reflection will be completed once a week to reflect on what you have learned about your learning progress through weekly self-reported grading.

brownn@chrisman.k12.il.us Switch account

* Indicates required question

Email *

Record brownn@chrisman.k12.il.us as the email to be included with my response

Your Name *

Your answer

Which assignments did you self-grade this week? *

Your answer

What concepts came easy to you this week? *

Your answer

What concepts did you struggle with this week? *

Your answer

Describe at least one concept that you better understand after grading this week. *

Your answer

How will you/(have you) apply(applied) what you have learned to your lab this week? *

Your answer

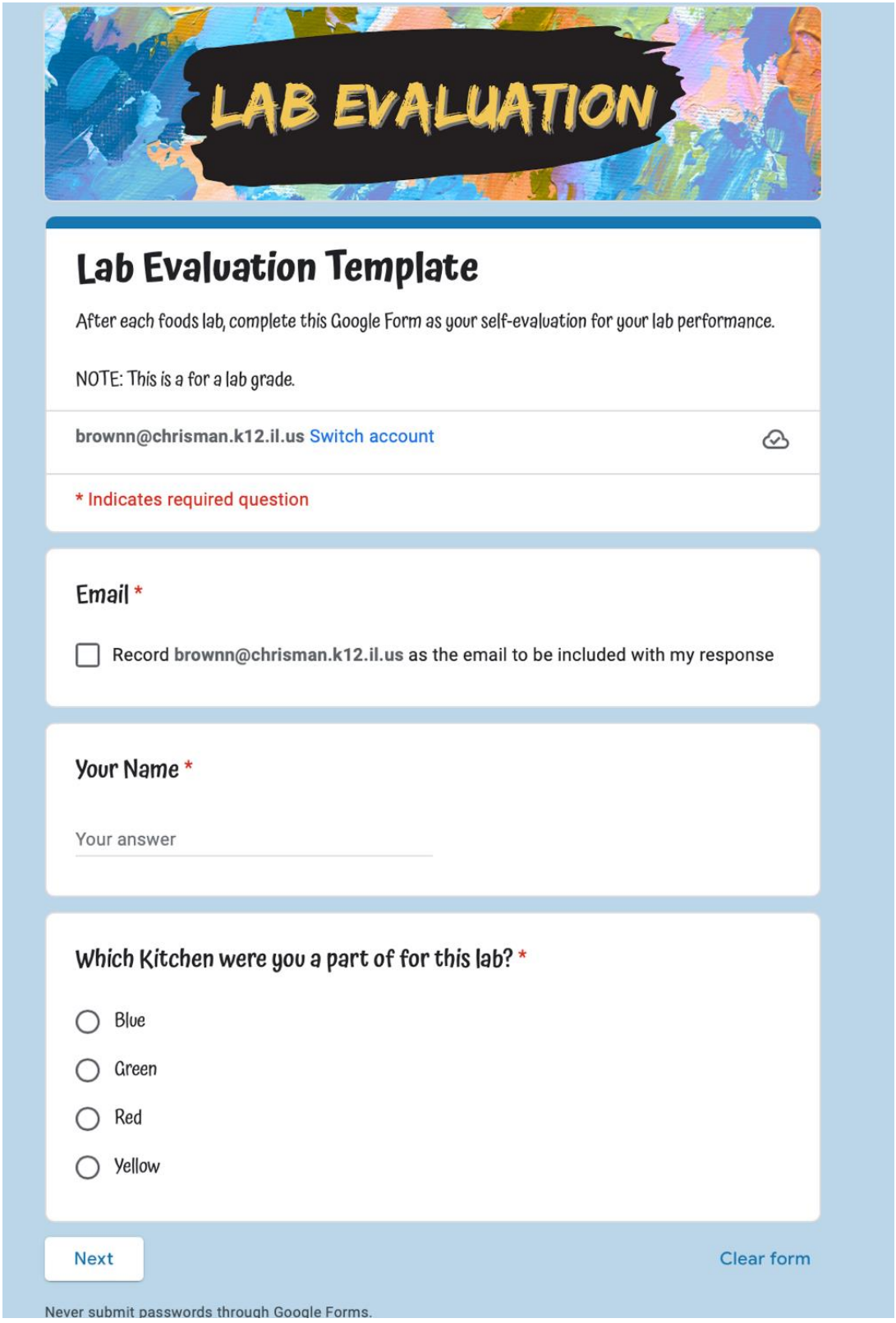
How do you plan to work on your learning progress next week based on this week's results? *

Your answer

Submit

Clear form

Appendix B


LAB EVALUATION
Lab Evaluation Template
After each foods lab, complete this Google Form as your self-evaluation for your lab performance.
NOTE: This is a for a lab grade.
brownn@chrisman.k12.il.us Switch account
* Indicates required question
Email *
Record brownn@chrisman.k12.il.us as the email to be included with my response
Your Name *
Your answer
Which Kitchen were you a part of for this lab? *
Blue
Green
Red
Yellow
Next
Clear form
Never submit passwords through Google Forms.

Lab Evaluation Template

brownn@chrisman.k12.il.us Switch account

Your email will be recorded when you submit this form

* Indicates required question

Prepared Food Reflection

Use the following questions to reflect on the food that was prepared for today's lab.

What food was prepared? *

Your answer

How did your product turn out? Be descriptive (Consider the following: Appearance, Taste, Texture, Temperature) *

Your answer

Overall Rating of this lab. *

	1	2	3	4	5	
Hated It!	○	○	○	○	○	Loved It!

Why did you give the lab the rating that you did? *

Your answer

What could have been improved on during your lab? *

Your answer

What do you think went well during your lab? *

Your answer

Back Next Clear form

Personal Performance Reflection

Use the following questions to reflect on how you performed in today's lab.

Rate your performance in this lab in regard to lab procedures. (i.e. How well did you follow directions and the rules of the lab?) *

	1	2	3	4	5	6	7	8	9	10	
Poor	○	○	○	○	○	○	○	○	○	○	Excellent

Why did you give yourself the rating that you did? *

Your answer

Rate your performance in this lab in regard to applying classroom content to procedures. (i.e. How did you incorporate the material you learned this past week into today's lab?) *

	1	2	3	4	5	6	7	8	9	10	
Poor	○	○	○	○	○	○	○	○	○	○	Excellent

Why did you give yourself the rating that you did? *

Your answer

Rate your performance in this lab in regard to how you performed in the last lab? (i.e. How have you improved your skills for working in the lab?) *

	1	2	3	4	5	6	7	8	9	10	
Poor	○	○	○	○	○	○	○	○	○	○	Excellent

Why did you give yourself the rating that you did? *

Your answer

Any final comments about the lab?

Your answer

Send me a copy of my responses.

Appendix C

Dear Parents/Guardians,

As part of my graduate work in Curriculum and Instruction at Eastern Illinois University I am conducting an Action Research project in my classroom this semester. This project is a requirement to fulfill my master's degree course work.

I will be conducting a study that will assess the effectiveness of self-reported grading in the classroom. I will be using weekly classroom and lab experience reflections as a means to recognize student motivation, comprehension, and application in Family and Consumer Sciences content. Students will be continuing in our curriculum as planned and receive the same instruction as a regular Food and Nutritional Sciences class.

The time allotted for this research project is 6 weeks.

The results gathered from this study will be used for the purpose of this project. All data collected will be confidential and the outcomes that will be presented will not contain any specific identifying information. As parents or guardians you have the option to exclude your child from the study. Please contact me if that is the case. In addition, you may withdraw your students, or they may choose to withdraw, from the student at any time during this process without consequences or a loss of benefits in the classroom.

I have been granted approval by the school to conduct this research project in my classroom.

If you have any questions or concerns about this project, please, feel free to contact:

- Nicole Brown (Principal Investigator)
  - FCS Teacher Researcher
  - brownn@chrisman.k12.il.us
- Sham'ah Md-Yunus (Faculty Sponsor)
  - Ms. Brown's Professor at EIU
  - smdyunus@eiu.edu
- Institutional Review Board (IRB)
  - "An independent committee composed of members of the University community, as well as lay members of the community not connected with EIU."
  - Institutional Review Board
    Eastern Illinois University
    Telephone: (217) 581-8576
    E-mail: eiuirb@eiu.edu

Thank you,
Ms. Nicole Brown

Chrisman-Scottland Junior and Senior High School
Family & Consumer Sciences Teacher
FCCLA Adviser

Appendix D

Student Assent Letter

September 8, 2023

Dear Students,

I am currently working on my master's degree at Eastern Illinois University. As a portion of one of my classes, I will need to complete a study to determine the effectiveness of self-reported grading in Food & Nutritional Sciences class and how it influences your understanding of knowledge, application of knowledge, and motivation to do well.

Beginning in the next week, we will begin grading assignments in-class and completing a highly reflective lab evaluation form. If you participate in my study, you will complete a weekly reflection form on your self-reported grading practices as well as the reflective lab evaluation form. My hope is that self-reported grading motivates you and allows you to grasp a better understand of the information while also being able to accurately apply that information in lab experiences.

Your responses will be kept secret, and your names will not be associated with the responses used on your form. The only people to see your responses are myself and my professor at EIU.

You do have the choice to choose not to participate in this study, and there will be no consequences if you choose not to participate. You may also choose to drop out of the study at any time with no consequences. Mrs. Cox has given me permission to do the study in this class. Please, be sure to inform me if you do not want to be in this study. You may always ask questions if you have them at any time during this research study.

Thank You,

Ms. Brown

Appendix E

Chrisman High School
Chrisman-Scottland Junior High
"To empower all students to succeed in a changing world!"
Mrs. Nicole Cox, Principal
Mr. Trevor Howald, Dean of Students
Mrs. Nancy Crawford, Secretary/Registrar
23231 IL Highway 1, Chrisman IL 61924 Phone 217-269-2823 Fax 217-269-2329

September 11, 2023

To Whom it Concerns:

Chrisman High School administration agrees to allow Nicole Brown to conduct her action research study at Chrisman High School during the fall semester of the 2023-2024 school year. Administration agrees to provide any information and support necessary to complete this study. These supports include, but are not limited to: facility personnel involved in the data collection, adequate capabilities to perform the research as approved by the IRB, and information on student demographics and the appropriateness for the school population.

Please reach out to Nicole Cox, principal, if you have any questions or need additional information. I look forward to assisting Ms. Brown in any way possible in this study.

Respectfully,

Nicole Cox

Nicole Cox
Principal Chrisman High School

Appendix F

IRB Protocol 23-099

EIU IRB <eiuirb@eiu.edu>
Mon 9/25/2023 9:21 AM
To:Nicole M Brown <nmbrown@eiu.edu>
Cc:Sham'ah Md-Yunus <smdyunus@eiu.edu>
September 25, 2023

Nicole Brown
Sham'ah Md-Yunus
Teaching, Learning, and Foundations

Dear Nicole,

Thank you for submitting the research protocol titled, "The Effectiveness of Self-Reported Grading in Secondary Food and Nutritional Sciences" for review by the Eastern Illinois University Institutional Review Board (IRB). The IRB has reviewed this research protocol and effective 9/25/2023, has certified this protocol meets the federal regulations exemption criteria for human subjects research. The protocol has been given the IRB number 23-099. You are approved to proceed with your study.

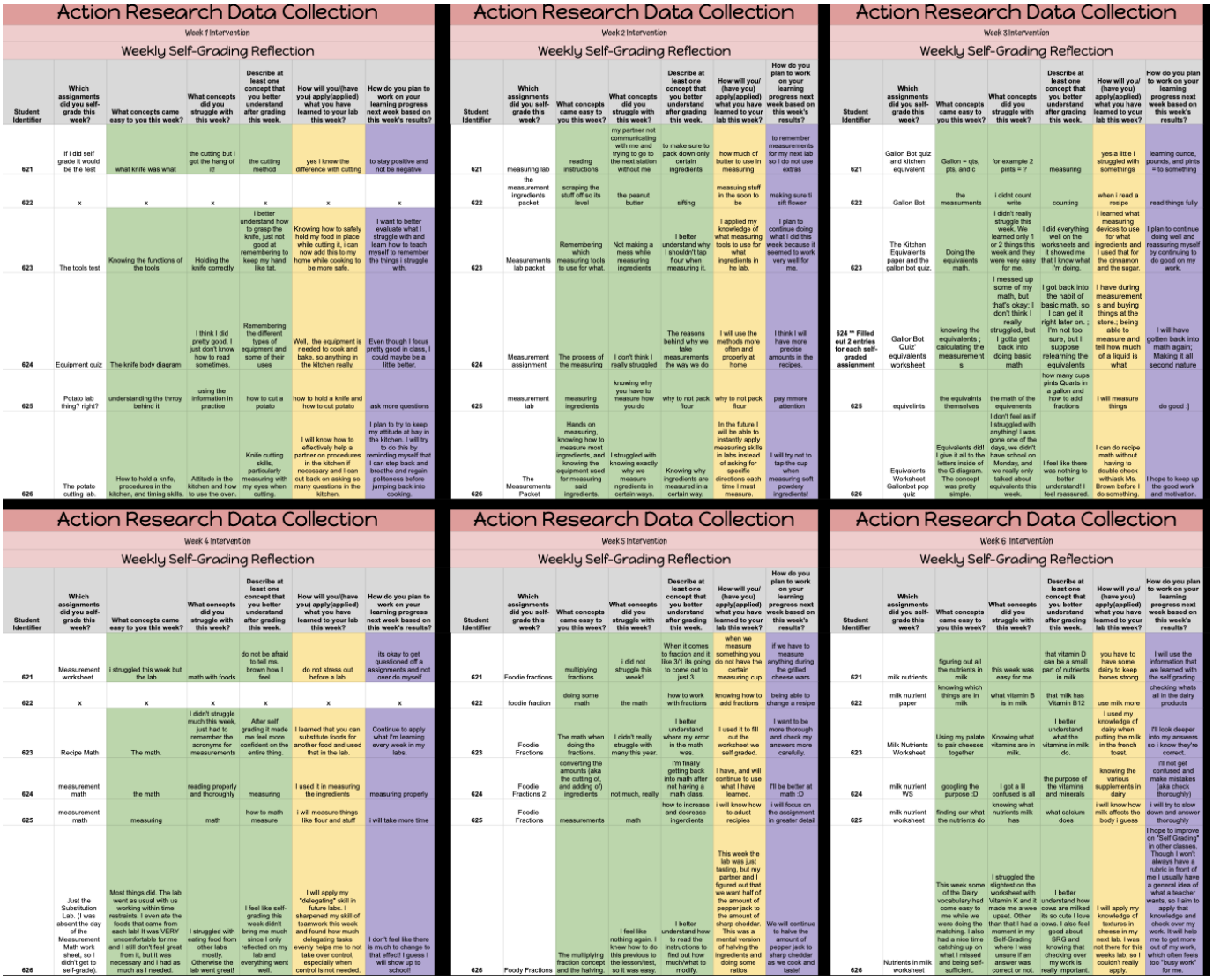
The classification of this protocol as exempt is valid only for the research activities and subjects described in the above named protocol. IRB policy requires that any proposed changes to this protocol must be reported to, and approved by, the IRB before being implemented. You are also required to inform the IRB immediately of any problems encountered that could adversely affect the health or welfare of the subjects in this study. Please contact the Compliance Coordinator at 581-8576, in the event of an emergency. All correspondence should be sent to the Institutional Research Board, care of the Office of Research and Sponsored Programs.

Thank you for your cooperation, and the best of success with your research.

Institutional Review Board
c/o Office of Research and Sponsored Programs
Telephone: 217-581-8576
Fax: 217-581-7181
Email: eiuirb@eiu.edu

Reviewer Comments: Self-reported grading will be used as an intervention strategy. No more than minimum risk to students.
Good luck with the research!

Appendix G



Action Research Data Collection

Week 1 Intervention

Weekly Self-Grading Reflection

Student Identifier	Which assignments did you self-grade this week?	What concepts came easy to you this week?	What concepts did you struggle with this week?	Describe at least one concept that you better understand after grading this week.	How will you/(have you) apply(applied) what you have learned to your lab this week?	How do you plan to work on your learning progress next week based on this week's results?
621	if i did self grade it would be the test	what knife was what	the cutting but i got the hang of it!	the cutting method	yes i know the difference with cutting	to stay positive and not be negative
622	x	x	x	x	x	x
623	The tools test	Knowing the functions of the tools	Holding the knife correctly	I better understand how to grasp the knife, just not good at remembering to keep my hand like tat.	Knowing how to safely hold my food in place while cutting it, i can now add this to my home while cooking to be more safe.	I want to better evaluate what I struggle with and learn how to teach myself to remember the things i struggle with.
624	Equipment quiz	The knife body diagram	I think I did pretty good, I just don't know how to read sometimes.	Remembering the different types of equipment and some of their uses	Well,, the equipment is needed to cook and bake, so anything in the kitchen really.	Even though I focus pretty good in class, I could maybe be a little better.
625	Potato lab thing? right?	understanding the throy behind it	using the information in practice	how to cut a potato	how to hold a knife and how to cut potato	ask more questions
626	The potato cutting lab.	How to hold a knife, procedures in the kitchen, and timing skills.	Attitude in the kitchen and how to use the oven.	Knife cutting skills, particularly measuring with my eyes when cutting.	I will know how to effectively help a partner on procedures in the kitchen if necessary and I can cut back on asking so many questions in the kitchen.	I plan to try to keep my attitude at bay in the Kitchen. I will try to do this by reminding myself that I can step back and breathe and regain politeness before jumping back into cooking.

Action Research Data Collection

Week 2 Intervention

Weekly Self-Grading Reflection

Student Identifier	Which assignments did you self-grade this week?	What concepts came easy to you this week?	What concepts did you struggle with this week?	Describe at least one concept that you better understand after grading this week.	How will you/ (have you) apply(applied) what you have learned to your lab this week?	How do you plan to work on your learning progress next week based on this week's results?
621	measuring lab	reading instructions	my partner not communicating with me and trying to go to the next station without me	to make sure to pack down only certain ingredients	how much of butter to use in measuring	to remember measurements for my next lab so I do not use extras
622	the measurement ingredients packet	scraping the stuff off so its level	the peanut butter	sifting	measuing stuff in the soon to be	making sure ti sift flower
623	Measurements lab packet	Remembering which measuring tools to use for what.	Not making a mess while measuring ingredients	I better understand why I shouldn't tap flour when measuring it.	I applied my knowledge of what measuring tools to use for what ingredients in he lab.	I plan to continue doing what I did this week because it seemed to work very well for me.
624	Measurement assignment	The process of the measuring	I don't think I really struggled	The reasons behind why we take measurements the way we do	I will use the methods more often and properly at home	I think I will have more precise amounts in the recipes.
625	measurement lab	measuring ingredients	knowing why you have to measure how you do	why to not pack flour	why to not pack flour	pay mmore attention
626	The Measurements Packet	Hands on measuring, knowing how to measure most ingredients, and knowing the equipment used for measuring said ingredients.	I struggled with knowing exactly why we measure ingredients in certain ways.	Knowing why ingredients are measured in a certain way.	In the future I will be able to instantly apply measuring skills in labs instead of asking for specific directions each time I must measure.	I will try not to tap the cup when measuring soft powdery ingredients!

Action Research Data Collection

Week 3 Intervention

Weekly Self-Grading Reflection

Student Identifier	Which assignments did you self-grade this week?	What concepts came easy to you this week?	What concepts did you struggle with this week?	Describe at least one concept that you better understand after grading this week.	How will you/ (have you) apply(applied) what you have learned to your lab this week?	How do you plan to work on your learning progress next week based on this week's results?
621	Gallon Bot quiz and kitchen equivalent	Gallon = qts, pts, and c	for example 2 pints = ?	measuring	yes a little i struggled with somethings	learning ounce, pounds, and pints = to something
622	Gallon Bot	the measurments	i didnt count write	counting	when i read a resipe	read things fully
623	The Kitchen Equivalents paper and the gallon bot quiz.	Doing the equivalents math.	I didn't really struggle this week. We learned only 1 or 2 things this week and they were very easy for me.	I did everything well on the worksheets and it showed me that I know what I'm doing.	I learned what measuring devices to use for what ingredients and I used that for the cinnamon and the sugar.	I plan to continue doing well and reassuring myself by continuing to do good on my work.
624 ** Filled out 2 entries for each self-graded assignment	GallonBot Quiz' equivalents worksheet	knowing the equivalents ; calculating the measurements	I messed up some of my math, but that's okay; I don't think I really struggled, but I gotta get back into doing basic math	I got back into the habit of basic math, so I can get it right later on. ; I'm not too sure, but I suppose relearning the equivalents	I have during measurements and buying things at the store.; being able to measure and tell how much of a liquid is what	I will have gotten back into math again; Making it all second nature
625	equivelnts	the equivalnts themselves	the math of the equivements	how many cups pints Quarts in a gallon and how to add fractions	i will measure things	do good :)
626	Equivalents Worksheet Gallonbot pop quiz	Equivalents did! I give it all to the letters inside of the G diagram. The concept was pretty simple.	I don't feel as if I struggled with anything! i was gone one of the days, we didn't have school on Monday, and we really only talked about equivalents this week.	I feel like there was nothing to better understand! I feel reassured.	I can do recipe math without having to double check with/ask Ms. Brown before I do something.	I hope to keep up the good work and motivation.

Action Research Data Collection

Week 4 Intervention

Weekly Self-Grading Reflection

Student Identifier	Which assignments did you self-grade this week?	What concepts came easy to you this week?	What concepts did you struggle with this week?	Describe at least one concept that you better understand after grading this week.	How will you/(have you) apply(applied) what you have learned to your lab this week?	How do you plan to work on your learning progress next week based on this week's results?
621	Measurement worksheet	I struggled this week but the lab	math with foods	do not be afraid to tell ms. brown how I feel	do not stress out before a lab	its okay to get questioned off a assignments and not over do myself
622	x	x	x	x	x	x
623	Recipe Math	The math.	I didn't struggle much this week, just had to remember the acronyms for measurements	After self grading it made me feel more confident on the entire thing.	I learned that you can substitute foods for another food and used that in the lab.	Continue to apply what I'm learning every week in my labs.
624	measurement math	the math	reading properly and thoroughly	measuring	I used it in measuring the ingredients	measuring properly
625	measurement math	measuring	math	how to math measure	i will measure things like flour and stuff	i will take more time
626	Just the Substitution Lab. (I was absent the day of the Measurement Math work sheet, so I didn't get to self-grade).	Most things did. The lab went as usual with us working within time restraints. I even ate the foods that came from each lab! It was VERY uncomfortable for me and I still don't feel great from it, but it was necessary and I had as much as I needed.	I struggled with eating food from other labs mostly. Otherwise the lab went great!	I feel like self-grading this week didn't bring me much since I only reflected on my lab and everything went well.	I will apply my "delegating" skill in future labs. I sharpened my skill of teamwork this week and found how much delegating tasks evenly helps me to not take over control, especially when control is not needed.	I don't feel like there is much to change to that effect! I guess I will show up to school!

Action Research Data Collection

Week 5 Intervention

Weekly Self-Grading Reflection

Student Identifier	Which assignments did you self-grade this week?	What concepts came easy to you this week?	What concepts did you struggle with this week?	Describe at least one concept that you better understand after grading this week.	How will you/ (have you) apply(applied) what you have learned to your lab this week?	How do you plan to work on your learning progress next week based on this week's results?
621	Foodie fractions	multiplying fractions	i did not struggle this week!	When it comes to fraction and it like 3/1 its going to come out to just 3	when we measure something you do not have the certain measuring cup	If we have to measure anything during the grilled cheese wars
622	foodie fraction	doing some math	the math	how to work with fractions	knowing how to add fractions	being able to change a resipe
623	Foodie Fractions	The math when doing the fractions.	I didn't really struggle with many this year.	I better understand where my error in the math was.	I used it to fill out the worksheet we self graded.	I want to be more thorough and check my answers more carefully.
624	Foodie Fractions 2	converting the amounts (aka the cutting of, and adding of) ingredients	not much, really	I'm finally getting back into math after not having a math class.	I have, and will continue to use what I have learned.	I'll be better at math :D
625	Foodie Fractions	measurements	math	how to increase and decrease ingerdients	i will know how to adust recipies	i will focus on the assignment in greater detail
626	Foody Fractions	The multiplying fraction concept and the halving.	I feel like nothing again. I knew how to do this previous to the lesson/test, so it was easy.	I better understand how to read the instructions to find out how much/what to modify.	This week the lab was just tasting, but my partner and I figured out that we want half of the amount of pepper jack to the amount of sharp cheddar. This was a mental version of halving the ingredients and doing some ratios.	We will continue to halve the amount of pepper jack to sharp cheddar as we cook and taste!

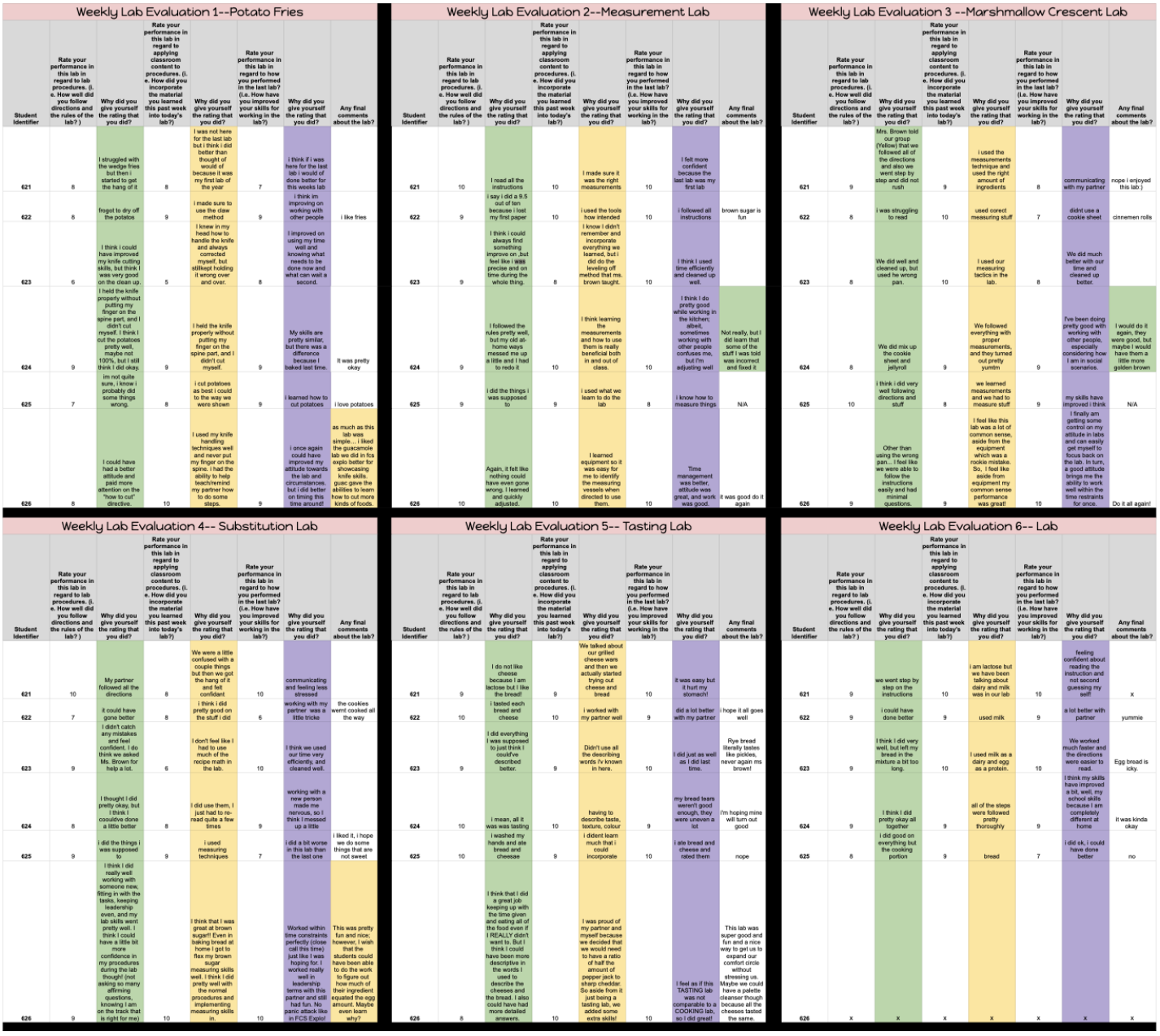
Action Research Data Collection

Week 6 Intervention

Weekly Self-Grading Reflection

Student Identifier	Which assignments did you self-grade this week?	What concepts came easy to you this week?	What concepts did you struggle with this week?	Describe at least one concept that you better understand after grading this week.	How will you/ (have you) apply(applied) what you have learned to your lab this week?	How do you plan to work on your learning progress next week based on this week's results?
621	milk nutrients	figuring out all the nutrients in milk	this week was easy for me	that vitamin D can be a small part of nutrients in milk	you have to have some dairy to keep bones strong	I will use the information that we learned with the self grading
622	milk nutrient paper	knowing which things are in milk	what vitamin B is in milk	that milk has Vitamin B12	use milk more	checking whats all in the dairy products
623	Milk Nutrients Worksheet	Using my palate to pair cheeses together	Knowing what vitamins are in milk.	I better understand what the vitamins in milk do.	I used my knowledge of dairy when putting the milk in the french toast.	I'll look deeper into my answers so i know they're correct.
624	milk nutrient WS	googling the purpose :D	I got a lil confused is all	the purpose of the vitamins and minerals	knowing the various supplements in dairy	I'll not get confused and make mistakes (aka check thoroughly)
625	milk nutrient worksheet	finding our what the nutrients do	knowing what nutrients milk has	what calcium does	i will know how milk affects the body i guess	i will try to slow down and answer thoroughly
626	Nutrients in milk worksheet	This week some of the Dairy vocabulary had come easy to me while we were doing the matching. I also had a nice time catching up on what I missed and being self-sufficient.	I struggled the slightest on the worksheet with Vitamin K and it made me a wee upset. Other than that I had a moment in my Self-Grading where I was unsure if an answer was correct or not.	I better understand how cows are milked its so cute I love cows. I also feel good about SRG and knowing that checking over my work is really important.	I will apply my knowledge of textures in cheese in my next lab. I was not there for this weeks lab, so I couldn't really apply.	I hope to improve on "Self Grading" in other classes. Though I won't always have a rubric in front of me I usually have a general idea of what a teacher wants, so I aim to apply that knowledge and check over my work. It will help me to get more out of my work, which often feels too "busy work" for me.

Appendix H



Weekly Lab Evaluation 1--Potato Fries

Student Identifier	Rate your performance in this lab in regard to lab procedures. (i. e. How well did you follow directions and the rules of the lab?)	Why did you give yourself the rating that you did?	Rate your performance in this lab in regard to applying classroom content to procedures. (i. e. How did you incorporate the material you learned this past week into today's lab?)	Why did you give yourself the rating that you did?	Rate your performance in this lab in regard to how you performed in the last lab? (i.e. How have you improved your skills for working in the lab?)	Why did you give yourself the rating that you did?	Any final comments about the lab?
621	8	I struggled with the wedge fries but then i started to get the hang of it	8	I was not here for the last lab but i think i did better than thought of would of because it was my first lab of the year	7	i think if i was here for the last lab i would of done better for this weeks lab	
622	8	frogot to dry off the potatos	9	i made sure to use the claw method	9	i think im improving on working with other people	i like fries
623	6	I think i could have improved my knife cutting skills, but think I was very good on the clean up.	5	I knew in my head how to handle the knife and always corrected myself, but stillkept holding it wrong over and over.	8	I improved on using my time well and knowing what needs to be done now and what can wait a second.	
624	9	I held the knife properly without putting my finger on the spine part, and I didn't cut myself. I think I cut the potatoes pretty well, maybe not 100%, but I still think I did okay.	9	I held the knife properly without putting my finger on the spine part, and I didn't cut myself.	9	My skills are pretty similar, but there was a difference because I baked last time.	It was pretty okay
625	7	im not quite sure, i know i probably did some things wrong.	8	i cut potatoes as best i could to the way we were shown	9	i learned how to cut potatoes	I love potatoes
626	8	I could have had a better attitude and paid more attention on the "how to cut" directive.	10	I used my knife handling techniques well and never put my finger on the spine. i had the ability to help teach/remind my partner how to do some steps.	9	i once again could have improved my attitude towards the lab and circumstances, but i did better on timing this time around!	as much as this lab was simple… i liked the guacamole lab we did in fcs explo better for showcasing knife skills. guac gave the abilities to learn how to cut more kinds of foods.

Weekly Lab Evaluation 2--Measurement Lab

Student Identifier	Rate your performance in this lab in regard to lab procedures. (i. e. How well did you follow directions and the rules of the lab?)	Why did you give yourself the rating that you did?	Rate your performance in this lab in regard to applying classroom content to procedures. (i. e. How did you incorporate the material you learned this past week into today's lab?)	Why did you give yourself the rating that you did?	Rate your performance in this lab in regard to how you performed in the last lab? (i.e. How have you improved your skills for working in the lab?)	Why did you give yourself the rating that you did?	Any final comments about the lab?
621	10	I read all the instructions	10	I made sure it was the right measurements	10	I felt more confident because the last lab was my first lab	
622	9	i say i did a 9.5 out of ten because i lost my first paper	10	i used the tools how intended	10	i followed all instructions	brown sugar is fun
623	9	I think i could always find something improve on ,but feel like i was precise and on time during the whole thing.	8	I know I didn't remember and incorporate everything we learned, but i did do the leveling off method that ms. brown taught.	10	I think I used time efficiently and cleaned up well.	
624	9	I followed the rules pretty well, but my old at-home ways messed me up a little and I had to redo it	10	I think learning the measurements and how to use them is really beneficial both in and out of class.	10	I think I do pretty good while working in the kitchen; albeit, sometimes working with other people confuses me, but I'm adjusting well	Not really, but I did learn that some of the stuff I was told was incorrect and fixed it.
625	9	i did the things i was supposed to	9	i used what we learn to do the lab	8	i know how to measure things	N/A
626	10	Again, it felt like nothing could have even gone wrong. I learned and quickly adjusted.	10	I learned equipment so it was easy for me to identify the measuring vessels when directed to use them.	10	Time management was better, attitude was great, and work was good.	it was good do it again

Weekly Lab Evaluation 3 --Marshmallow Crescent Lab

Student Identifier	Rate your performance in this lab in regard to lab procedures. (i. e. How well did you follow directions and the rules of the lab?)	Why did you give yourself the rating that you did?	Rate your performance in this lab in regard to applying classroom content to procedures. (i. e. How did you incorporate the material you learned this past week into today's lab?)	Why did you give yourself the rating that you did?	Rate your performance in this lab in regard to how you performed in the last lab? (i.e. How have you improved your skills for working in the lab?)	Why did you give yourself the rating that you did?	Any final comments about the lab?
621	9	Mrs. Brown told our group (Yellow) that we followed all of the directions and also we went step by step and did not rush	9	i used the measurements technique and used the right amount of ingredients	8	communicating with my partner	nope i enjoyed this lab:)
622	8	i was struggling to read	10	used corect measuring stuff	7	didnt use a cookie sheet	cinnemon rolls
623	8	We did well and cleaned up, but used he wrong pan.	10	I used our measuring tactics in the lab.	8	We did much better with our time and cleaned up better.	
624	8	We did mix up the cookie sheet and jellyroll	9	We followed everything with proper measurments, and they turned out pretty yumtm	9	I've been doing pretty good with working with other people, especially considering how I am in social scenarios.	I would do it again, they were good, but maybe I would have them a little more golden brown
625	10	i think i did very well following directions and stuff	8	we learned measurements and we had to measure stuff	9	my skills have improved i think	N/A
626	9	Other than using the wrong pan… I feel like we were able to follow the instructions easily and had minimal questions.	9	I feel like this lab was a lot of common sense, aside from the equipment which was a rookie mistake. So, I feel like aside from equipment my common sense performance was great!	10	I finally am getting some control on my attitude in labs and can easily get myself to focus back on the lab. In turn, a good attitude brings me the ability to work well within the time restraints for once.	Do it all again!

Weekly Lab Evaluation 4-- Substitution Lab

Student Identifier	Rate your performance in this lab in regard to lab procedures. (i. e. How well did you follow directions and the rules of the lab?)	Why did you give yourself the rating that you did?	Rate your performance in this lab in regard to applying classroom content to procedures. (i. e. How did you incorporate the material you learned this past week into today's lab?)	Why did you give yourself the rating that you did?	Rate your performance in this lab in regard to how you performed in the last lab? (i.e. How have you improved your skills for working in the lab?)	Why did you give yourself the rating that you did?	Any final comments about the lab?
621	10	My partner followed all the directions	8	We were a little confused with a couple things but then we got the hang of it and felt confident	10	communicating and feeling less stressed	
622	7	it could have gone better	8	I think i did pretty good on the stuff i did	6	working with my partner was a little tricke	the cookies went cooked all the way
623	9	I didn't catch any mistakes and feel confident. I do think we asked Ms. Brown for help a lot.	6	I don't feel like I had to use much of the recipe math in the lab.	10	I think we used our time very efficiently, and cleaned well.	
624	8	I thought I did pretty okay, but I think I coouldve done a little better	8	I did use them, I just had to re-read quite a few times	9	working with a new person made me nervous, so I think I messed up a little	
625	9	i did the things i was supposed to	9	i used measuring techniques	7	i did a bit worse in this lab than the last one	I liked it, i hope we do some things that are not sweet
626	9	I think I did really well working with someone new, fitting in with the tasks, keeping leadership oven, and my lab skills went pretty well. I think I could have a little bit more confidence in my procedures during the lab though! (not asking so many affirming questions, knowing I am on the track that is right for me)	10	I think that I was great at brown sugar!! Even in baking bread at home I got to flex my brown sugar measuring skills well. I think I did pretty well with the normal procedures and implementing measuring skills in.	10	Worked within time constraints perfectly (close call this time) just like I was hoping for. I worked really well in leadership terms with this partner and still had fun. No panic attack like in FCS Explo!	This was pretty fun and nice; however, I wish that the students could have been able to do the work to figure out how much of their ingredient equalled the egg amount. Maybe even learn why?

Weekly Lab Evaluation 5-- Tasting Lab

Student Identifier	Rate your performance in this lab in regard to lab procedures. (i. e. How well did you follow directions and the rules of the lab?)	Why did you give yourself the rating that you did?	Rate your performance in this lab in regard to applying classroom content to procedures. (i. e. How did you incorporate the material you learned this past week into today's lab?)	Why did you give yourself the rating that you did?	Rate your performance in this lab in regard to how you performed in the last lab? (i.e. How have you improved your skills for working in the lab?)	Why did you give yourself the rating that you did?	Any final comments about the lab?
621	9	I do not like cheese because I am lactose but I like the brand	9	We talked about our grilled cheese wars and then we actually started trying out cheese and bread	10	it was easy but it hurt my stomach!	
622	10	i tasted each bread and cheese	10	i worked with my partner well	9	did a lot better with my partner	i hope it all goes well
623	9	I did everything I was supposed to just think I could've described better.	9	Didn't use all the describing words i'v known in here.	10	I did just as well as I did last time.	Rye bread literally tastes like pickles, never again ms brown!
624	10	i mean, all it was was tasting	10	having to describe taste, texture, colour	9	my bread tears weren't good enough, they were uneven a lot	i'm hoping mine will turn out good
625	10	i washed my hands and ate bread and cheesee	9	i dident learn much that i could incorporate	10	i ate bread and cheese and rated them	nope
626	8	I think that I did a great job keeping up with the time given and eating all of the food even if I REALLY didn't want to. But I think I could have been more descriptive in the words I used to describe the cheeses and the bread. I also could have had more detailed answers.	10	I was proud of my partner and myself because we decided that we would need to have a ratio of half the amount of pepper jack to sharp cheddar. So aside from it just being a tasting lab, we added some extra skills!	10	I feel as if this TASTING lab was not comparable to a COOKING lab, so I did great!	This lab was super good and fun and a nice way to get us to expand our comfort circle without stressing us. Maybe we could have a palette cleanser though because all the cheeses tasted the same.

Weekly Lab Evaluation 6-- Lab

Student Identifier	Rate your performance in this lab in regard to lab procedures. (i. e. How well did you follow directions and the rules of the lab?)	Why did you give yourself the rating that you did?	Rate your performance in this lab in regard to applying classroom content to procedures. (i. e. How did you incorporate the material you learned this past week into today's lab?)	Why did you give yourself the rating that you did?	Rate your performance in this lab in regard to how you performed in the last lab? (i.e. How have you improved your skills for working in the lab?)	Why did you give yourself the rating that you did?	Any final comments about the lab?
621	9	we went step by step on the instructions	10	i am lactose but we have been talking about dairy and milk was in our lab	10	feeling confident about reading the instruction and not second guessing my self!	x
622	9	i could have done better	9	used milk	9	a lot better with partner	yummie
623	9	I think I did very well, but left my bread in the mixture a bit too long.	10	I used milk as a dairy and egg as a protein.	10	We worked much faster and the directions were easier to read.	Egg bread is icky.
624	9	I think i did pretty okay all together	9	all of the steps were followed pretty thoroughly	9	I think my skills have improved a bit, well, my school skills because I am completely different at home	It was kinda okay
625	8	I did good on everything but the cooking portion	9	bread	7	I did ok, i could have done better	no
626	x	x	x	x	x	x	x

Appendix I

MOTIVATION

	How do you plan to work on your learning progress next week based on this week's results?						Rate your performance in this lab in regard to how you performed in the last lab? (i.e. How have you improved your skills for working in the lab?) Why did you give yourself the rating you did?						
Identifier	**SRGR Wk 1**	**SRGR Wk 2**	**SRGR Wk 3**	**SRGR Wk 4**	**SRGR Wk 5**	**SRGR Wk 6**	**WLE Wk 1**	**WLE Wk 2**	**WLE Wk 3**	**WLE Wk 4**	**WLE Wk 5**	**WLE Wk 6**	**Extra Comments**
621	to stay positive and not be negative	to remember measurements for my next lab so I do not use extras	learning ounce, pounds, and pints = to something	its okay to get questioned off a assignments and not over do myself	if we have to measure anything during the grilled cheese wars	I will use the information that we learned with the self grading	i think if i was here for the last lab i would of done better for this weeks lab	I felt more confident because the last lab was my first lab	communicating with my partner	communicating and feeling less stressed	it was easy but it hurt my stomach!	feeling confident about reading the instruction and not second guessing my self!	
622	x	making sure ti sift flower	read things fully	x	being able to change a resipe	checking whats all in the dairy products	i think im improving on working with other people	i followed all instructions	didnt use a cookie sheet	working with my partner was a little tricke	did a lot better with my partner	a lot better with partner	
623	I want to better evaluate what I struggle with and learn how to teach myself to remember the things i struggle with.	I plan to continue doing what I did this week because it seemed to work very well for me.	I plan to continue doing well and reassuring myself by continuing to do good on my work.	Continue to apply what I'm learning every week in my labs.	I want to be more thorough and check my answers more carefully.	I'll look deeper into my answers so i know they're correct.	I improved on using my time well and knowing what needs to be done now and what can wait a second.	I think I used time efficiently and cleaned up well.	We did much better with our time and cleaned up better.	I think we used our time very efficiently, and cleaned well.	I did just as well as I did last time.	We worked much faster and the directions were easier to read.	
624	Even though I focus pretty good in class, I could maybe be a little better.	I think I will have more precise amounts in the recipes.	I will have gotten back into math again	measuring properly	I'll be better at math :D	i'll not get confused and make mistakes (aka check thoroughly)	My skills are pretty similar, but there was a difference because I baked last time.	I think I do pretty good while working in the kitchen; albeit, sometimes working with other people confuses me, but I'm adjusting well	I've been doing pretty good with working with other people, especially considering how I am in social scenarios.	working with a new person made me nervous, so I think I messed up a little	my bread tears weren't good enough, they were uneven a lot	I think my skills have improved a bit, well, my school skills because I am completely different at home	
625	ask more questions	pay mmore attention	Making it all second nature	i will take more time	i will focus on the assignment in greater detail	i will try to slow down and answer thoroughly	i learned how to cut potatoes	i know how to measure things	my skills have improved i think	i did a bit worse in this lab than the last one	i ate bread and cheese and rated them	i did ok, i could have done better	
626	I plan to try to keep my attitude at bay in the kitchen. I will try to do this by reminding myself that I can step back and breathe and regain politeness before jumping back into cooking.	I will try not to tap the cup when measuring soft powdery ingredients!	I hope to keep up the good work and motivation.	I don't feel like there is much to change to that effect! I guess I will show up to school!	We will continue to halve the amount of pepper jack to sharp cheddar as we cook and taste!	I hope to improve on "Self Grading" in other classes. Though I won't always have a rubric in front of me I usually have a general idea of what a teacher wants, so I aim to apply that knowledge and check over my work. It will help me to get more out of my work, which often feels too "busy work" for me.	i once again could have improved my attitude towards the lab and circumstances. but i did better on timing this time around!	Time management was better, attitude was great, and work was good.	I finally am getting some control on my attitude in labs and can easily get myself to focus back on the lab. In turn, a good attitude brings me the ability to work well within the time restraints for once.	Worked within time constraints perfectly (close call this time) just like I was hoping for. I worked really well in leadership terms with this partner and still had fun. No panic attack like in FCS Explo!	I feel as if this TASTING lab was not comparable to a COOKING lab, so I did great!	x	
Themes	Attitude	Follow through with proper actions		Focus	Practice/Maintain Skills		Timing/Skills	Working with others	Attitude	Confidence			

Appendix J

Comprehension

	Describe at least one concept that you better understand after grading this week.							Rate your performance in this lab in regard to lab procedures. (i.e. How well did you follow directions and the rules of the lab? Why did you give yourself the rating that you did?							
Identifier	**SRGR Wk 1**	**SRGR Wk 2**	**SRGR Wk 3**	**SRGR Wk 4**	**SRGR Wk 5**	**SRGR Wk 6**		**WLE Wk 1**	**WLE Wk 2**	**WLE Wk 3**	**WLE Wk 4**	**WLE Wk 5**	**WLE Wk 6**	**Extra Comments**	
621	the cutting method	to make sure to pack down only certain ingredients	measuring	do not be afraid to tell ms. brown how I feel	When it comes to fraction and it like 3/1 its going to come out to just 3	that vitamin D can be a small part of nutrients in milk		I struggled with the wedge fries but then i started to get the hang of it	I read all the instructions	Mrs. Brown told our group (Yellow) that we followed all of the directions and also we went step by step and did not rush	My partner followed all the directions	I do not like cheese because I am lactose but I like the bread!	we went step by step on the instructions		
622	x	sifting	counting	x	how to work with fractions	that milk has Vitamin B12		frogot to dry off the potatos	i say i did a 9.5 out of ten because i lost my first paper	i was struggling to read	it could have gone better	i tasted each bread and cheese	i could have done better		
623	I better understand how to grasp the knife, just not good at remembering to keep my hand like tat.	I better understand why I shouldn't tap flour when measuring it.	I did everything well on the worksheets and it showed me that I know what I'm doing.	After self grading it made me feel more confident on the entire thing.	I better understand where my error in the math was.	I better understand what the vitamins in milk do.		I think i could have improved my knife cutting skills, but think I was very good on the clean up.	I think i could always find something improve on ,but feel like i was precise and on time during the whole thing.	We did well and cleaned up, but used he wrong pan.	I didn't catch any mistakes and feel confident. I do think we asked Ms. Brown for help a lot.	I did everything I was supposed to just think I could've described better.	I think I did very well, but left my bread in the mixture a bit too long.		
624	Remembering the different types of equipment and some of their uses	The reasons behind why we take measurements the way we do	I got back into the habit of basic math, so I can get it right later on.	measuring	I'm finally getting back into math after not having a math class.	the purpose of the vitamins and minerals		I held the knife properly without putting my finger on the spine part, and I didn't cut myself. I think I cut the potatoes pretty well, maybe not 100%, but I still think I did okay.	I followed the rules pretty well, but my old at-home ways messed me up a little and I had to redo it	We did mix up the cookie sheet and jellyroll	I thought I did pretty okay, but I think I coouldve done a little better	i mean, all it was was tasting	I think I did pretty okay all together	Not really, but I did learn that some of the stuff I was told was incorrect and fixed it	I would do it again, they were good, but maybe I would have them a little more golden brown
625	how to cut a potato	why to not pack flour	I'm not too sure, but I suppose relearning the equivalents; how many cups pints Quarts in a gallon and how to add fractions	how to math measure	how to increase and decrease ingerdients	what calcium does		im not quite sure, i know i probably did some things wrong.	i did the things i was supposed to	i think i did very well following directions and stuff	i did the things i was supposed to	i washed my hands and ate bread and cheesae	i did good on everything but the cooking portion		
626	Knife cutting skills, particularly measuring with my eyes when cutting.	Knowing why ingredients are measured in a certain way.	I feel like there was nothing to better understand! I feel reassured.	I feel like self-grading this week didn't bring me much since I only reflected on my lab and everything went well.	I better understand how to read the instructions to find out how much/what to modify.	I better understand how cows are milked its so cute I love cows. I also feel good about SRG and knowing that checking over my work is really important.		I could have had a better attitude and paid more attention on the "how to cut" directive.	Again, it felt like nothing could have even gone wrong. I learned and quickly adjusted.	Other than using the wrong pan... I feel like we were able to follow the instructions easily and had minimal questions.	I think I did really well working with someone new, fitting in with the tasks, keeping leadership even, and my lab skills went pretty well. I think I could have a little bit more confidence in my procedures during the lab though! (not asking so many affirming questions, knowing I am on the track that is right for me)	I think that I did a great job keeping up with the time given and eating all of the food even if I REALLY didn't want to. But I think I could have been more descriptive in the words I used to describe the cheeses and the bread. I also could have had more detailed answers.	x		
Themes	Knife Skills	Measurement Skills	Recipe Math	Confident	Learned Knowledge			Not Confident	Confident	Fixing Skills					

Appendix K

Application

	How will you/(have you) apply(applied) what you have learned to your lab this week?							Rate your performance in this lab in regard to applying classroom content to procedures. (i.e. How did you incorporate the material you learned this past week into today's lab?) Why did you give yourself the rating that you did?							
Identifier	SRGR Wk 1	SRGR Wk 2	SRGR Wk 3	SRGR Wk 4	SRGR Wk 5	SRGR Wk 6		WLE Wk 1	WLE Wk 2	WLE Wk 3	WLE Wk 4	WLE Wk 5	WLE Wk 6	Extra Comments	
621	yes i know the difference with cutting	how much of butter to use in measuring	yes a little i struggled with somethings	do not stress out before a lab	when we measure something you do not have the certain measuring cup	you have to have some dairy to keep bones strong		I was not here for the last lab but i think i did better than thought of would of because it was my first lab of the year	I made sure it was the right measurements	i used the measurements technique and used the right amount of ingredients	We were a little confused with a couple things but then we got the hang of it and felt confidant	We talked about our grilled cheese wars and then we actually started trying out cheese and bread	i am lactose but we have been talking about dairy and milk was in our lab		
622	x	measuing stuff in the soon to be	when i read a resipe	x	knowing how to add fractions	use milk more		i made sure to use the claw method	i used the tools how intended	used corect measuring stuff	i think i did pretty good on the stuff i did	i worked with my partner well	used milk		
623	Knowing how to safely hold my food in place while cutting it, i can now add this to my home while cooking to be more safe.	I applied my knowledge of what measuring tools to use for what ingredients in he lab.	I learned what measuring devices to use for what ingredients and I used that for the cinnamon and the sugar.	I learned that you can substitute foods for another food and used that in the lab.	I used it to fill out the worksheet we self graded.	I used my knowledge of dairy when putting the milk in the french toast.		I knew in my head how to handle the knife and always corrected myself, but stillkept holding it wrong over and over.	I know I didn't remember and incorporate everything we learned, but i did do the leveling off method that ms. brown taught.	I used our measuring tactics in the lab.	I don't feel like I had to use much of the recipe math in the lab.	Didn't use all the describing words i'v known in here.	I used milk as a dairy and egg as a protein.		
624	Well., the equipment is needed to cook and bake, so anything in the kitchen really.	I will use the methods more often and properly at home	I have during measurements and buying things at the store.	I used it in measuring the ingredients	I have, and will continue to use what I have learned.	knowing the various supplements in dairy		I held the knife properly without putting my finger on the spine part, and I didn't cut myself.	I think learning the measurements and how to use them is really beneficial both in and out of class.	We followed everything with proper measurements, and they turned out pretty yumtm	I did use them, I just had to re-read quite a few times	having to describe taste, texture, colour	all of the steps were followed pretty thoroughly		
625	how to hold a knife and how to cut potato	why to not pack flour	being able to measure and tell how much of a liquid is what; i will measure things	i will measure things like flour and stuff	i will know how to adust recipies	i will know how milk affects the body i guess		i cut potatoes as best i could to the way we were shown	i used what we learn to do the lab	we learned measurements and we had to measure stuff	i used measuring techniques	i dident learn much that i could incorporate	bread		
626	I will know how to effectively help a partner on procedures in the kitchen if necessary and I can cut back on asking so many questions in the kitchen.	In the future I will be able to instantly apply measuring skills in labs instead of asking for specific directions each time I must measure.	I can do recipe math without having to double check with/ask Ms. Brown before I do something.	I will apply my "delegating" skill in future labs. I sharpened my skill of teamwork this week and found how much delegating tasks evenly helps me to not take over control, especially when control is not needed.	This week the lab was just tasting, but my partner and I figured out that we want half of the amount of pepper jack to the amount of sharp cheddar. This was a mental version of halving the ingredients and doing some ratios.	I will apply my knowledge of textures in cheese in my next lab. I was not there for this weeks lab, so I couldn't really apply.		I used my knife handling techniques well and never put my finger on the spine. i had the ability to help teach/remind my partner how to do some steps.	I learned equipment so it was easy for me to identify the measuring vessels when directed to use them.	I feel like this lab was a lot of common sense, aside from the equipment which was a rookie mistake. So, I feel like aside from equipment my common sense performance was great!	I think that I was great at brown sugar!! Even in baking bread at home I got to flex my brown sugar measuring skills well. I think I did pretty well with the normal procedures and implementing measuring skills in.	I was proud of my partner and myself because we decided that we would need to have a ratio of half the amount of pepper jack to sharp cheddar. So aside from it just being a tasting lab, we added some extra skills!	x	as much as this lab was simple. . . i liked the guacamole lab we did in fcs explo better for showcasing knife skills. guac gave the abilities to learn how to cut more kinds of foods.	This was pretty fun and nice; however, I wish that the students could have been able to do the work to figure out how much of their ingredient equated the egg amount. Maybe even learn why?
Themes	Using Skills	Helping Partners	Confidence	Focus	Maintain Skills			Using techniques	Confidence	Attitude	Improve learning				