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Cultivating Confidence: The Impact of Goal Setting and Self Assessment on Self- Efficacy Among At-Risk Secondary Students in English Language Arts

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CULTIVATING CONFIDENCE: THE IMPACT OF GOAL SETTING AND SELF ASSESSMENT ON SELF-EFFICACY AMONG AT-RISK SECONDARY STUDENTS IN ENGLISH LANGUAGE ARTS

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DEDICATION

Dedicated to my wonderful family and husband without whom I could not have succeeded and never would have dared to try.

To my adviser for her patience, guidance, and support which has been a source of inspiration and motivation since I began my journey as an educator.

And finally, to the student participants who were funny, insightful, empathetic, clever, patient, daring, and so many more spectacular things besides simply “at-risk”.

ABSTRACT

Cultivating Confidence: The Impact of Goal Setting and Self Assessment on Self-Efficacy Among At-Risk Secondary Students in English Language Arts

by
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If students perceive themselves as successful readers and communicators, then their self-efficacy in the academic arena will shift, increasing motivation and achievement in turn. Interventions established to support self-efficacy among at-risk students may improve their chances of secondary completion and this will have a positive impact not only for students currently in our schools, but also for their future success and the success of our wider communities. This quantitative two group study was designed to examine whether individual goal setting when paired with self assessment could positively impact at-risk secondary students' self-efficacy in ELA for grade 10. Self-efficacy was measured using The Student Self-Efficacy Scale as a pre and post test. The treatment group was introduced to goal setting and self assessment as a mini unit with three days of training lessons followed by four weeks where students set a weekly academic SMART goal and assessed their progress using a self assessment rubric. The results of this study support the hypothesis. Findings herein show that individual goal setting combined with self assessment did positively impact the self-efficacy of at-risk 10th grade ELA students in a statistically significant way. Students identified as at-risk in the treatment group significantly increased their mean scores on the SSE scale, while at-risk students in the control group showed no significant change.

Key Words: self-efficacy, goal setting, self assessment, at-risk, English Language Arts, secondary school completion, attrition.

Literature Review

High school graduation, or successful completion of secondary school, is the ultimate goal of all students engaged in public education. It is known that successful completion can provide students with a multitude of opportunities, such as gainful employment, post-secondary education eligibility, and financial aid options for continued education. Public education implements community service as a requirement for high school completion in hopes that graduates will be more actively and responsibly engaged citizens. Furthering this notion, high schools require four years of English Language Arts (ELA) to ensure students have the necessary literacy skills to effectively engage as productive citizens within the real world. ELA is the only subject that all students are required to take for all four years of high school. ELA teaches literacy, critical analysis, writing, and speaking, and is essential to the development of communication skills that will propel students through the adult world. Because of the consistent presence of this subject in each secondary student's schedule, as well as the significance of the course material, ELA success is critical to successful secondary completion.

Statistically, students who feel "pushed" out of school, that is, students who drop out due to low grades, disciplinary measures, or simply not liking or feeling successful in school, are much more likely to face challenges in the labor market or even criminal outcomes. Keeping students in school for even a few extra months has been shown to have long lasting effects on behavior and future adult outcomes (Bjerk, 2012). It follows that interventions established to support all students, particularly at-risk students, in achieving secondary completion will have a positive impact not only for students currently in our schools, but also for their future success and the success of our wider communities. To support students in their ELA classes specifically, it is first necessary to elevate their belief in their abilities to succeed in this area of study. This

can be accomplished by simply increasing opportunities to experience mastery in the classroom, an objective achievable through individual goal setting paired with self assessment. This serves to benefit all students, but particularly those students who have been identified as at-risk.

At-risk Students and Attrition

Secondary students considered at-risk are students who have been identified as less likely to achieve academic success and/or completion. There is a wide range of indicators that could result in any student being identified as at-risk. Language proficiency, disabilities, pregnancy and/or parenthood, education level of parents, violent behavioral tendencies, history of drug or alcohol use, socioeconomic status, safe, consistent housing and/or healthy living situations, and even at-risk peer groups are all factors that can threaten a student's potential completion of secondary school (Hammond et al., 2007). These students make up a considerable proportion of the population, and their success is just as valuable as their peers. Recent data shows that in California, attrition rates are on the rise.

According to the California Department of Education (2023), state graduation rates have gone down, from 87% in 2021-2022, to 86.2% in 2022-2023. Considering the disparity of potential successes or challenges between secondary completion and attrition, these numbers are concerning and something in need of further research. Although many factors contributing to at-risk student attrition are unrelated to the school environment, a variety of classroom interventions have been proven to directly impact key indicators such as academic performance, behavior, motivation, and self-efficacy (Pajares, 2003). Each of these indicators of successful completion can be positively or negatively impacted by the classroom environment and activities. Educators are, therefore, not only among the primary stakeholders in the success of their students, they are also optimally positioned for primary impact on at-risk students. By curating opportunities for

students to experience and celebrate successes in the classroom, educators can target student self-efficacy in essential subjects like ELA. If students perceive themselves as successful readers and communicators, then their self-efficacy in the academic arena will also shift, increasing motivation and achievement in turn.

Self-Efficacy & Perceptions of Success

Many studies have been conducted on the potential impact of interventions in support of academic performance, behavior, motivation, and self-efficacy (Chung et al., 2021; Logan, 2015; Schunk, 1985). However, research has shown self-efficacy impacts each of the aforementioned areas (Bandura, 1977); therefore, this study will focus on self-efficacy and its impact on attrition. Students are more likely to try and remain motivated regardless of discomfort or challenges when they believe that the outcome will be success (i.e., higher self-efficacy). According to Bandura (1977), an individual's outcome expectancy can influence their willingness to engage and remain engaged with a task. Elevated self-efficacy, or a heightened belief in one's personal capacity for success, is essential to a student's willingness to engage in activities within their zone of proximal development, that is, at the edge of their capabilities and where they are most likely to learn (Vygotsky, 1989). A student's willingness to engage in these tasks is an important indicator of whether they will be successful in their studies, which directly impacts the likelihood of their overall success in and completion of high school (Hammond et al., 2007; van der Stouwe et al., 2014). Although extensive research shows that motivation and achievement positively contribute to successful completion in public education, both factors are closely tied to individual tasks. Self-efficacy is the only clear target linked to the individual themself, and thus a potentially sustainable and transferable belief for continuous support extended beyond a particular task or task structure (Schunk, 1985).

When one perceives themself as successful, they are more motivated to engage in a task. Students with higher self-efficacy will be more engaged in their studies, and high engagement leads to increased achievement (Pajares, 2003; Schunk, 1985). Therefore, self-efficacy is a critical component as students seek achievement. There are four sources of self-efficacy: physiological arousal, verbal persuasion, vicarious experiences, and mastery experiences (Bandura, 1977). Each source impacts one's personal perception of efficacy in a different way. When faced with a challenge or threat, the individual often experiences some level of emotional or physiological arousal. This arousal response impacts the belief of necessity for success and can result in an elevated efficacy belief derived from that necessity. However, not all individuals experience or respond to this physiological arousal in a productive way, and not all challenges produce this state readily. One may also be persuaded verbally to engage in a challenging or threatening activity despite their concerns for the outcome. However, in the face of confirmed failures, the power of verbal persuasion can be diminished or eliminated (Bandura, 1977).

Vicarious experiences also impact individual efficacy expectations, that is, the act of observing others engage with a challenge without adverse consequences. These observations can inspire individual expectations to a degree in social learning settings. It is, however, autonomous experiences of mastery that have shown the most direct and profound impact on one's perceptions of their own efficacy (Bandura, 1977). Mastery experiences occur when an individual engages in a challenging activity and ultimately experiences success. These experiences provide immediate positive reinforcement for engaging in the challenge, while simultaneously confirming one's capacity for success (Bandura, 1977).

All learners benefit from mastery experiences, as an individual's self-efficacy directly impacts their willingness to engage in challenging activities. This engagement is essential to both

achievement and completion (Vygotsky, 1989). Students who believe that they have the capacity for success in their educational endeavors are more likely to remain engaged, and students who are engaged are more likely to improve their understanding, skills, and levels of achievement overall (Chung et al., 2021; Logan, 2015; Schunk, 1985).

For at-risk students, these types of mastery experiences may be relatively uncommon. For a variety of reasons, many of these students have already encountered perceived failures which have eroded their efficacy beliefs (Schunk, 1985). Perceived failures in ELA, in particular, will impact student self-efficacy, as reading comprehension and writing are the building blocks of academic study. Compounded, these struggles can decrease student motivation and hinder potential achievement as students believe themselves incapable of mastery and become disengaged. These perceptions simultaneously create a deficit and an opportunity for impactful self-efficacy interventions (Chung et al., 2021; Logan, 2015; Schunk, 1985). By introducing and scaffolding repeated engagement with challenging activities in a safe environment, educators can support mastery experiences and potentially overcome this deficiency.

Goal Setting and Mastery Experiences

One way to provide students mastery experiences is through goal setting. Research has demonstrated that individual goal setting is a key motivational variable that directly positively impacts writing self-efficacy (Pajares, 2003). Self-efficacy, motivation, and achievement are all intrinsically linked. Motivation, or the willingness or enthusiasm with which individuals approach a task, can have a profound impact on achievement. If mastery experiences are the most effective way to influence self-efficacy, and increasing student self-efficacy can elevate motivation, then elevated self-efficacy can, in turn, increase achievement (Schunk, 1985). Therefore, educators must find ways to increase positive mastery experiences for at-risk students.

Goals, or objectives, are the ways in which individuals establish a measure of success for tasks and mastery. A goal is simply the desired end result of one's endeavor. Educators employ goals in their lessons every day as learning objectives. These goals help students to better understand when and whether they have achieved success or mastery in a lesson. Meeting one's goal is, in itself, a mastery experience. Therefore, having students set short term goals and providing them a means to monitor and evaluate their progress toward those goals is a simple and effective way to increase students' access to mastery experiences. However, this mastery experience is only positive if the individual perceives themself as successful in achieving their goal. To maximize success, student goals should be Specific, Measurable, Attainable, Relevant, and Timely (SMART; Doran, 1981). One way to further enhance goals is with self monitoring and reflection as a means of self assessment.

Self Assessment

If the desired result is to elevate their perception of success, then students will also benefit from practicing self-evaluation, or self assessment (Chung et al., 2021; LeFever, 2022). Self assessment is individual monitoring and reflection upon progress toward an objective or goal. The intention is that these two processes combined, individual SMART goal setting and self assessment checkpoints, will maximize the impact of a mastery experience by amplifying student comprehension of the process as well as their personal investment.

Students in the public education system are, of course, well accustomed to submitting work for evaluation. Assessment is employed in the classroom at regular intervals for all grade levels. An educator can easily evaluate achievement; however, it can be time consuming and challenging to provide each student with timely feedback. It is known that timely feedback directly impacts motivation and achievement (Wiggins, 2012). There are a variety of obstacles

that can interfere with student reception and comprehension of teacher feedback. Delays due to teacher workload, language accessibility, or even student engagement are all challenges that can disrupt the feedback process (Davies, 2000). All too often, students are left uncertain of their own skills or successes due to an absence of feedback. By educating and engaging students in their own self assessment process, it is possible to further increase access to mastery experiences. Students who are successfully engaged in self assessment are able to evaluate their own progress toward goals, alleviating the burden of timely individual feedback on the educator, and improving student understanding of their own opportunities or successes (Chung et al., 2021; Wiggins, 2012).

Teaching students to rely on assessments, grades, or feedback as their only source of validation can limit their opportunities for positive mastery experiences. When students are taught to assess their own work, they are empowered to grant themselves mastery, and these experiences can multiply exponentially. In the same way that educators employ rubrics to set clear standards, and provide consistent clear feedback, students can be taught to use rubrics as a means for self assessment. Effective self assessment should consist of self-reflection regarding affective and motivational self-beliefs around these specific goals (Pajares, 2003).

Goal Setting, Self Assessment, and Self-Efficacy

Although many studies have been conducted regarding the impact of goal setting and/or self assessment on student self-efficacy, there is minimal data available on interventions that positively impact the self-efficacy of the broader demographic of at-risk students. Researchers have studied student self-efficacy in students with disabilities, severe behavioral disorders, drug or alcohol addictions, as well as students with anger management issues, or self-regulation issues (Chung et al., 2021; Logan, 2015; Schunk, 1985). While many studies have targeted a variety of high-risk demographics, there is a deficit in the data regarding successful interventions to increase the self-efficacy of all students and those at-risk students with consideration to the full

panel of indicators known: language proficiency, disabilities, pregnancy and/or parenthood, education level of parents, violent behavioral tendencies, history of drug or alcohol use, socioeconomic status, safe consistent housing and/or healthy living situations, and at-risk peer groups (Hammond et al., 2007). Secondary completion is essential to post-secondary successes, whether that be educational or gainful pursuits. Student achievement in ELA is crucial, not only to secondary completion but to the successful navigation of the world beyond through meaningful communication. Fulfillment of ELA requirements for secondary completion cannot be attained without the presence of student motivation and student belief; belief in their own capacity for success and mastery in the ELA classroom. Therefore, to approach the goal of secondary completion for all students engaged in public education, for the benefit of each individual student as well as the communities to which they belong, it is critical to gain a clearer understanding of the potential impact of individual goal setting and self assessment on at-risk students' self-efficacy in ELA.

Method

Purpose

All students can benefit from improved self-efficacy. Student self-efficacy, or their belief in their own abilities to successfully accomplish academic tasks, is clearly linked to student motivation, and thus, achievement (Pajares, 2003). Research shows that at-risk students often leave the education system due to low grades, or simply not liking or feeling successful in school (Bjerk, 2012). Improving student self-efficacy targets these key challenges, and could reduce attrition. Research has shown that individual goal setting and self assessment positively impacts student self-efficacy (Chung et al., 2021; Logan, 2015; Schunk, 1985). Although there have been

a variety of studies in this area, there is less data regarding the impact of these interventions on a wider demographic, including all indicators discussed herein of at-risk secondary students. This study was designed to better understand the impact that individual goal setting combined with self assessment has on student self-efficacy in ELA for both general education students, as well as students considered at-risk.

Research Question

Two research questions drove this study:

RQ 1: Does individual goal setting combined with self assessment impact the self-efficacy of 10th grade ELA students, as measured by the Student Self-efficacy Scale?

RQ 2: Does individual goal setting combined with self assessment impact the self-efficacy of at-risk 10th grade ELA students, as measured by the Student Self-efficacy Scale?

Hypothesis

There was one hypothesis for each research question in this study:

H1: Individual goal setting combined with self assessment ***might*** impact the self-efficacy of 10th grade ELA students (Chung et al., 2021; Schunk, 1985).

H2: Individual goal setting combined with self assessment ***will*** positively impact the self-efficacy of at-risk 10th grade ELA students (Chung et al., 2021; Schunk, 1985).

Research Design

This study utilized a quantitative quasi-experimental two group design using a pre-test and post-test to measure growth and difference in self-efficacy. There were two groups: a treatment group that received the intervention, and a control group that received unaltered instruction. At the study's onset, the pre-test was given to both the treatment and control groups. Next, the treatment group received the intervention, whereas the control group received normal

instruction. Upon the study's completion, the post-test was given to both the treatment and control groups. Finally, data were analyzed to determine growth and differences across and between the two groups.

Independent Variable

The independent variable in this study was individual SMART goals (Doran, 1981) self-set by ELA secondary students combined with self assessment checkpoints (LeFever, 2022). SMART goals are defined as a desired outcome that is Specific, Measurable, Achievable, Relevant, and Timely (Doran, 1981). The SMART goals were designed within ELA categories: academic language, literacy, and vocabulary. Students received three days of training, brainstorming, and pre-write support prior to setting their first goal. Self assessment consisted of self-reflection regarding affective and motivational self-beliefs around these specific goals (Pajares, 2003). Checkpoints consisted of a daily color-coded self assessment of goal progress, based on a goal self assessment rubric, see Appendix A. This checkpoint form had space for notes and a reflection each Friday before subsequent goals were set. See Appendices D and E for a model of student self assessment rubric and form respectively (LeFever, 2022).

Dependent Variable

In this study, self-efficacy was the dependent variable. Self-efficacy is defined by Bandura as an individual's judgment of their unique capacity to execute a specific task or meet a particular objective (Bandura, 1977). Self-efficacy was operationalized using the Student Self-efficacy Scale, see Appendix B (SSE; Rowbotham & Schmitz, 2013).

Setting & Participants

This study was conducted at a high school in Central California with a faculty of 120 teachers and approximately 2,271 students enrolled. According to the 2020-2021 School

Accountability Report, the population is comprised of 88% Hispanic or Latinx students, 4.5% white students, 3% Filipino students, 2.2% Asian students, 1.2% Black or African American students, and 0.2 Native Hawaiian or Pacific Islander students (2022). Of these students, 14.8% are students with disabilities, 13.5% are English Learners yet to reclassify, 7.5% are known to be socioeconomically disadvantaged, and 2.2% are houseless.

The total number of participants in this study was 197. There were 117 in the control group and 80 students in the treatment group. This study utilized purposeful convenient sampling. It was purposeful in that both the control and treatment groups had comparable population distribution insofar as the ratio of students identified as at-risk students to students identified as general education. The sampling was convenient in that the researcher had access to the participants. The control group consisted of six classes, all taught by the same ELA 10 teacher delivering instruction as usual for the duration of the study; while the treatment group consisted of three classes all taught by another teacher administering the intervention. Both teachers were from the same Professional Learning Community (PLC) and teach the same curriculum. Moreover, to ensure fidelity to the intervention and internal validity of the study, the researcher administered the intervention in her own classes.

Treatment Group

The treatment group comprised three 10th grade sections of ELA, totaling 80 students. Upon data cleaning it was determined that only 72 students in the treatment group had accurate data available for the pre and post test. Of the 72 students who had complete data, 7 were ELLs yet to re-classify; 2 had school safe alerts; 1 was special education; 2 were unhoused; and 5 were some combination of two or more factors. Thus, 17 of the 72 students were identified as ‘at-risk.’ (Hammond et al., 2007). All students in this group received treatment and were administered the

pre-test and post-test.

Control Group

The control group was made up of six 10th grade sections of ELA, totaling 117 students. Upon data cleaning it was determined that only 110 students in the control group had accurate data available for the pre and post test. Of the 110 students who had complete data, 11 were ELLs yet to re-classify; 4 had school safe alerts; 16 were special education; 2 were unhoused; and 5 were some combination of two or more factors. Thus, 38 of the 110 students were identified as 'at-risk' (Hammond et al., 2007). All students in this group received normal instruction and were administered the pre- test and post-test.

Measures

The pre-test and post-test survey questions were taken from the SSE (Rowbotham & Schmitz, 2013). The SSE is a 10-item survey that measures student self-efficacy by asking participants to rate their personal capabilities for each task category on a Likert scale ranging from 1-4, where: (1) *not at all true;* (2) *hardly true;* (3) *moderately true;* (4) *exactly true*. The scale was administered as a Google form. Scores can range from 10-40, with higher scores representing higher self-efficacy. The SSE assesses four main areas of self-efficacy: course accomplishment, skill development, social interactions with peers, and coping with course stress (Rowbotham & Schmitz, 2013). See Appendix B for scale questions.

Validity

Validity is determined by the extent to which a scale or measure has demonstrated its accuracy in measuring the intended construct. Researchers have established validity for the SSE in a variety of ways. First, face and content validity were established by expert educators and researchers providing feedback that the SSE was clear and addressed the skills needed to

measure student self-efficacy in the classroom (Rowbotham & Schmitz, 2013). Additionally, the SSE has established convergent validity, in that it is closely modeled after extensively validated scales (Rowbotham & Schmitz, 2013). The authors of the SSE used the Teachers Self-efficacy scale (TSE; Schmitz & Schwarzer 2000) and the General Self-efficacy scale (GSE; Schwarzer & Jerusalem 1995) as comparative criterions by which to measure the validity of the SSE (i.e., further convergent validity). The GSE is the most widely tested and validated self-efficacy scale. The SSE also has concurrent criterion-related validity with a highly significant correlation with the GSE (r = .70). It was therefore determined that the SSE is an appropriate and valid measure for this study (Rowbotham & Schmitz, 2013).

Reliability

Reliability is determined by the extent to which a scale is found to produce consistent results over time. The SSE is considered highly reliable. It is based on the TSE, which has an established Cronbach's alpha of between $\alpha = 0.76$ and $\alpha = 0.82$ across various samples (Rowbotham & Schmitz 2013). Further, the SSE has high internal consistency ($\alpha = 0.84$) and can therefore be used to assess self-efficacy in this study (Rowbotham & Schmitz, 2013).

Intervention

For this study, the intervention was individual goal setting with paced checkpoints and student self assessment (Logan, 2015). Goal setting was implemented through SMART goal setting activities conducted over the course of a mini unit. SMART is an acronym for Specific, Measurable, Achievable, Relevant, and Timely (Doran, 1981). SMART goal setting and self assessment as an intervention was introduced to students as a mini-unit. This was prefaced with three lessons at the start of the mini unit designed to employ Gradual Release of Responsibility (GRR; "I do", "we do", "you do") and train students on SMART goal setting

and self assessment. The first lesson introduced and defined SMART goals. The second provided an opportunity to practice adapting SMART goals from prompts written as a 'want' or a 'wish' and sentence frames (i.e., a fill in the blank sentence created in order to provide scaffolding for the goal setting process, see Appendix C) were provided to ensure adequate support for English Learners. The third lesson focused on the self assessment piece, and how to use the provided rubric. See Appendix D for sample slides from these preliminary lessons. When setting their own goals students were given prompts within ELA categories to anchor their goals in the same 'want' or 'wish' format used in practice. They were encouraged to craft their SMART goals with these target areas in mind: academic language, literacy, and vocabulary. The same sentence frames with which students had practiced previously were again provided. Students were permitted to work in partners or small groups as they prepared their first week's SMART goals. The treatment group teacher signed off on all goals each Friday, and then crafted lessons which specifically targeted opportunities to progress toward student goals for each day the following week.

Using their individual goal as a guide, each school day throughout the next week, student's self assessed their own progress towards achieving their goal with an Individual Goal Tracker sheet, see Appendix E. Students were asked to complete these reflections during the last five to ten minutes of class each day. In the first week, students were encouraged to discuss these assessments in pairs or small groups for extra support; in the later weeks, this support naturally fell away. These reflections consisted of color-coded progress checks, where students indicated their perceived progress toward their SMART goal by level (i.e., self assessment). Green represented a completed goal, blue was nearly complete, yellow was approaching completion, and orange was no progress yet; see appendices D and E. On

Friday, students determined whether they achieved their goal or not, and reflected on their progress and outcomes by writing a 3-6 sentence reflection on their progress over the course of the week (LeFever, 2022). If they were unsuccessful, some chose to roll the goal over to the following week. Those who were successful set a new goal for the following week. This was repeated for four weeks, for a total of five weeks in treatment, see Appendix F. Finally, at the end of the final week of goal setting and self assessment students completed a 3, 2, 1 reflection graphic organizer to think more about their personal engagement and progress throughout the mini unit.

Procedures

The study began by administering a pre-test of the SSE survey as a Google form to all students in both treatment and control groups (Rowbotham & Schmitz, 2013). The treatment group received the goal setting and self assessment intervention, which consisted of one week of training and brainstorming, followed by three weeks of individual goal setting and self assessment. The control group received normal instruction for the duration of the five-week study. At the end of the intervention period, students in both the treatment and control group completed the SSE survey post-test as a Google form to determine whether the intervention successfully increased students' self-efficacy in ELA (Rowbotham & Schmitz, 2013). This was the only data collected for this study.

Fidelity

Fidelity to intervention is a key component of quasi-experimental research as it ensures that no diffusion of treatment occurs and upholds internal validity. Fidelity of the treatment was ensured by an independent observer; in this study a third English teacher on site who is familiar with SMART goals, self assessment, and the current curriculum served as

the independent observer. The independent observer came into the treatment classrooms one day a week for five weeks to observe the intervention being administered (i.e., using individual setting and monitoring of goals). The independent observer observed the control classes one day a week for five weeks to ensure that the intervention was not being used (i.e., normal instruction). The independent observer attended 5 of the 25 class periods for the treatment group and control group respectively. This amounted to 20 percent of the intervention to ensure that there was 100 percent fidelity to intervention throughout the study, see Appendix G.

Ethical Considerations

The ethical considerations the researcher considered included respect for persons, beneficence, and justice. Respect for persons is a consideration intended to protect participants' individual autonomy and ensure that participation in this study is voluntary (McMillan, 2015). To ensure respect for persons, the researcher followed the informed consent process. The researcher obtained written consent from all participants prior to beginning the study.

Beneficence is a consideration intended to both prevent harm of any participant and to maximize the beneficial impact for all participants (McMillan, 2015). To establish beneficence, the researcher protected the confidentiality of all participant information collected during the study. Finally, justice is a consideration intended to ensure that those involved, or burdened, by the study are of the same population that is anticipated to benefit most from the study (McMillan, 2015). To indicate the presence of justice in the study the researcher utilized all collected data to improve instruction for the benefit of all participants at the conclusion of the study.

Validity threats

Threats to validity are always a concern when conducting research with human subjects (MacMillan, 2015). Threats to the validity of this study include experimenter effects and the potential for treatment diffusion. To combat these threats, the SSE scale was employed as a pre- test and post-test, and fidelity checks were performed by another teacher who was not involved with either the treatment nor control group. The teacher served as an independent observer 20% of the time in order to ensure that the intervention was proceeding as planned within the treatment group, and business as usual did not include any intervention strategies within the control group. This study took place over five weeks so this teacher observed five times.

Data Analyses

Data analysis was nearly identical to answer each research question, with only the participants involved in the analyses changing. First, all data were entered into the Statistical Package for the Social Sciences® (SPSS®) for Windows, version 28.0.0 (SPSS, 2021). No names or identifying information were included in the data analysis. Before analyses were conducted, all data were cleaned to ensure no outliers were present (Dimitrov, 2012). After cleaning the data, data were coded to adequately answer both research questions (i.e., students were coded as “at-risk” or “not at-risk”). To analyze data for RQ 1, the entire sample was used, and independent samples t-tests (control and treatment groups) and dependent samples t-tests (pretest and posttest) were conducted to determine the significant difference in self-efficacy between the two mean scores on the SSE (Rowbotham & Schmitz, 2013). To analyze data for RQ 2, the sample of at-risk students were used, and independent samples t-tests (control and treatment groups) and dependent samples t-tests (pretest and posttest) were

conducted to determine the significant difference in self-efficacy between the two mean scores on the SES for at-risk 10th grade students. Further, before interpreting the analytical output, Levene's Homogeneity of Variance was examined to see if the assumption of equivalence had been violated (Levene, 1960). If Levene's Homogeneity of Variance was not violated (i.e., the variances were equal across groups), data was interpreted for the assumption of equivalence; however, if the variances were not equal across groups the corrected output was used for interpretation.

Results

Once the intervention was complete and all t-tests had been administered, the data was cleaned to ensure there was a pre and post test for each participant. Once these were matched the final sample size was 187 total participants. There were an additional five participants removed as they were determined outliers putting the same response for all questions. After all data were cleaned the final sample for analysis totaled 182 (treatment = 72; control = 110). In order to stay parsimonious, results will be presented by research questions followed by a short summary.

RQ 1: Does individual goal setting combined with self assessment impact the self-efficacy of 10th grade ELA students, as measured by the Student Self-efficacy Scale?

Two independent samples t-tests were conducted on the whole sample (n = 182) for both the pre and post assessment scores. Results for the pre-test were: Levene's Homogeneity of Variance was not violated ($p > .05$), meaning the variance between groups was not statistically different, and the t-test showed non-significant differences between the mean scores on the pre-tests between the two groups $t(180) = .42$, $p > .05$. Therefore, when the study began both control and treatment groups were similar enough to provide an adequate

comparison (see Table 1). Results for the post-test were: Levene's Homogeneity of Variance was not violated ($p > .05$), and the t-test showed non-significant differences between the mean scores on the post-tests between the two groups $t(180) = -.62$, $p > .05$. While there was not a significant difference, one can see that the treatment group did increase, whereas the control group remained mostly the same (see Table 1).

Table 1

Results of Independent Samples T-Tests for Entire Sample

	Mean	SD
Pre Test		
Treatment	30.13	4.08
Control	30.40	4.43
Post Test		
Treatment	31.21	4.74
Control	30.76	4.72

Note. SD = Standard Deviation.

After determining the differences between pre and post assessment scores between groups, two paired t-tests were conducted for both groups (i.e., treatment and control) to determine if participants' mean scores from pre to post were significantly different within each group (See Table 2). Results for each group were as follows: treatment group, $t(71) = -1.41$, $p > .05$; control group, $t(109) = -.56$, $p > .05$. Additionally, the negative t-value for each group indicates an increase in scores from pre to post assessment. This indicates that while there was decipherable growth within the treatment group, the control group remained mostly the same and there was not a statistically significant difference.

Table 2

Results of Paired T-Tests for Entire Sample

	Mean	SD
Treatment Group		
Pre	30.13	4.08
Post	31.21	4.74
Control Group		
Pre	30.40	4.43
Post	30.76	4.72

Note. SD = Standard Deviation.

RQ 2: Does individual goal setting combined with self assessment impact the self-efficacy of at-risk 10th grade ELA students, as measured by the Student Self-efficacy Scale?

Two independent samples t-tests were conducted on the whole sample of at-risk 10th grade students (n = 55) for both the pre and post assessment scores. Results for the pre-test were: Levene's Homogeneity of Variance was not violated ($p > .05$) and the t-test showed non-significant differences between the mean scores on the pre-tests between the two groups $t(53) = -.46$, $p > .05$. Therefore, both control and treatment groups were similar enough at the onset of the study to provide an adequate comparison (see Table 3). Results for the post-test were: Levene's Homogeneity of Variance was not violated ($p > .05$) and the t-test showed/non-significant differences between the mean scores on the post-tests between the two groups $t(53) = -1.97$, $p = .05$. The difference was not statistically significantly different; however, the researcher did find that it was almost statistically significant with a p value of exactly .05 (see Table 3).

Table 3

Results of Independent Samples T-Tests for At-Risk Students

	Mean	SD
Pre Test		
Treatment	29.88	3.72
Control	29.26	3.72
Post Test*		
Treatment	33.29	3.97
Control	30.53	5.15

Note. SD = Standard Deviation. * = p =.05.

After determining the differences between pre and post assessment scores between groups, two paired t-tests were conducted for both groups (i.e., treatment and control) to determine if at-risk participants mean scores from pre to post were significantly different within each group (i.e., growth; See Table 4). Results for each group were as follows: treatment group, $t(16) = -2.34$, $p < .05$, $d = .89$; control group, $t(37) = -1.07$, $p > .05$. Meaning that there was a statistically significant increase in self-efficacy within the treatment group for students who had been identified as at-risk, and not for the control group. Whereas the at-risk students in the control group increased 1.07 points; at-risk students in the treatment group increased their self-efficacy by 2.34 points. Not only was the at-risk treatment group's growth statistically significant ($p < .05$), but it was also practically significant as well with a Cohen's D of .89. Cohen's D is a measure of effect size that demonstrates the meaningfulness of growth, and at .89 is considered a large effect size (Sullivan & Feinn, 2012).

Table 4

Results of Paired T-Tests for At-Risk Students

	Mean	SD
Treatment Group*		
Pre	29.88	3.72
Post	33.29	3.97
Control Group		
Pre	29.26	4.92
Post	30.53	5.15

Note. SD = Standard Deviation. * = $p < .05$.

Discussion

The purpose of this study was to determine whether individual goal setting when paired with self assessment could positively impact at-risk secondary students' self-efficacy in ELA for grade 10. While there are many popular interventions for achievement, there is significantly less data on interventions targeting self-efficacy. However, it is known that student self-efficacy is one of many integral factors that contribute to successful completion of secondary school (Pajares, 2003). This is a critical area of focus because research indicates that graduating or simply remaining in school longer, has been shown to have an enduring impact on both behavior and future outcomes in adulthood (Bjerk, 2012).

The results of this study support the researcher's hypothesis; individual goal setting combined with self assessment did positively impact the self-efficacy of at-risk 10th grade ELA students in a statistically significant way. Students identified as at-risk in the treatment group significantly increased their mean scores on the SSE scale, while at-risk students in the control group showed no significant change. The large effect size shows that there was a practical significance as well for at-risk students in the treatment group. Furthermore, while the standard deviation (SD) for the treatment group remained consistently low throughout the study, there was

a notable increase in the SD of the control group. This increase in SD implies the control group's results were less consistent (i.e., there scores were more spread out around the mean). The positive and consistent results for the treatment group are a strong indication that goal setting, when paired with self assessment, is an effective intervention to increase student self-efficacy among students who have been identified as at-risk for a wide variety of reasons. Due to the significant consequences of attrition many studies have been conducted regarding interventions supporting achievement or motivation among students considered at-risk for specific indicators such as anti-social behavior, anger management or self-regulation challenges, or substance abuse and addiction (Chung et al., 2021; Logan, 2015; Schunk, 1985). This study is unique in its focus on self-efficacy as a key support (Pajares, 2003) for students who had been identified as at-risk for a broader spectrum of factors including late reclassifying ELLs, special education students, students with drug or alcohol campus alerts, and safe consistent housing (Hammond et al., 2007), as well as its focus on ELA as a target area for that support.

In addition to administering the SSE as a pre and post test to gather quantitative data for this study, there were a variety of ways for students to share observations and feedback on their experiences and progress throughout the goal setting process. As seen in Appendix E, students reflected on their work throughout the four weeks in order to support their self assessment on an Individual Goal Tracker. These worksheets, along with an extended 3, 2, 1 Reflection completed on the final day of the intervention support the study's findings that at-risk students experienced an elevated sense of self-efficacy. As one student wrote, "I learned that I can achieve my goal and not at first day, it take me days [sic]." Another student writes, "I was surprised that I had the courage to speak up and excel my academic language in this class [sic]." At the outset of this study, the goal of combining individual goal setting and self

assessment was to empower students to choose their own academic area of focus in ELA as well as evaluate their own progress in that target area, and thereby increase student access to positive mastery experiences as a means of increasing self-efficacy. The intervention did just that and more, providing students with a sense of pride in their own capabilities that will leave a lasting impression. Student feedback implies a perceived increase in motivation and achievement for many students as well. One student responded to positive feedback regarding her progress in sentence parsing dismissively, explaining vehemently that she had not yet achieved her own goal.

While there was no quantitative data collected on achievement, many students attributed their learning successes during this mini unit to the goal setting process. When asked what they learned that they did not know before our goal setting unit a student writes, "I learned how to parse a full sentence when I didn't even know what a adjective was before [sic]." The same student responds to a prompt asking what they are proud of accomplishing during the goal setting unit with a nod to their academic achievement, "I got a 4 out of 4 on my sentence parsing test," which is reflective of their week 3 goal, "I will get a 3 or better on the sentence parsing test on Tuesday by practicing my parsing at home with my notes." This anecdotal data combined with the quantitative data collected over the course of the intervention is indicative of extensive and varied opportunities to further expand upon the direction of this intervention and its potential impacts in future studies.

Future Studies

Future researchers should take into consideration the perceived impact on other critical factors to successful completion, including motivation and achievement. Throughout the intervention, there was a tangible shift in student engagement. The competitive nature of goal

setting, both individually and socially, seemed to increase student motivation in classroom tasks and skill development. Two students who collaborated to write their goals in week 1 competed to see who could achieve their goal first. This strategy adds a potential element of physiological arousal and vicarious mastery experience, which would further elevate the impact on self-efficacy (Bandura, 1977). Each week thereafter these two students chose similar goals and competed for academic mastery. While this study did not measure academic achievement, student observations and testimonials show a clear motivational response. As self- efficacy, motivation, and achievement are mutually supportive, further investigation into the impact of goal setting and self assessment on these additional factors would be a worthy contribution to data on supporting at-risk secondary students (Pajares, 2003).

Another consideration for future research is the breadth of at-risk students who were included in this study. Research shows that an extremely wide range of indicators may relegate students to being identified as at-risk. In this study those indicators included language proficiency, disabilities, violent behavioral tendencies, history of drug or alcohol use, and safe, consistent housing. While this scope is broader than most studies regarding at-risk students, there are still additional factors that could be considered, such as pregnancy and/or parenthood, education level of parents, socioeconomic status, healthy living situations, or at-risk peer groups, all of which can impact a student's successful completion of secondary school (Hammond et al., 2007). In addition to expanding at-risk indicators for consideration, future studies may benefit from isolating any number of the aforementioned items of interest in order to take a closer look at a more specific target population.

Finally, students in the treatment group of this study were required to focus their goal setting on ELA because this was determined to be an area of great consequence both due to

its four-year requirement for successful completion, and the critical communication skills supported by the course content. However, research shows that success in mathematics is also an indicator of potential for successful completion (Hammond et al., 2007). Future studies that target math would therefore greatly enhance available data regarding at-risk students and the impact of goal setting and self assessment on self-efficacy or other target outcomes. The success of this intervention in ELA suggests that it may impact self-efficacy for at-risk students in any variety of other subjects, potentially supporting this critical demographic as they strive for that ultimate goal, a high school diploma. The discussion of self-efficacy goes hand in hand with that of positive mastery experiences (Bandura, 1977). Employing individual goal setting and self assessment as an opportunity for such an experience can support student self-efficacy for at-risk students thereby improving their chances of success not only in graduating high school, but in future successes both within their communities and the wider adult world.

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Appendix A

Goal Self Assessment Rubric for Student Use

Goal Self Assessment Rubric

INSTRUCTIONS: Each day you will assess your progress toward your goal and rank that progress with a color corresponding to the level you have achieved. Read the descriptions below to help you assess your progress and determine the next steps you might take.	
No Progress	Think about where you began when you first set this goal last Friday. Have you taken any steps to progress yourself toward your goal since then? If you have not made any intentional moves to get closer to your goal then color your checkpoint orange today. *It's time to start making a plan and taking some risks! How many days do you have left to accomplish your goal? What can you do to get closer to your goal?*
Approaching Completion	Think about where you began when you first set this goal last Friday. Have you taken some preliminary steps to progress yourself toward your goal since then? If you have made some intentional moves to get closer to your goal, such as making an action plan, or even an initial unsuccessful attempt, then color your checkpoint yellow today. *You are on your way! Keep yourself motivated. What else can you do to get closer to your goal?*
Nearly Complete	Think about where you began when you first set this goal last Friday. Have you taken essential steps to progress yourself toward your goal since then? If you have made significant moves to get closer to your goal, such as preparing work to support your successful completion, or repeated attempts that seem to be getting closer and closer to success, then color your checkpoint blue today. *You are nearly there! Think about what will give you the extra edge to achieve your goal.*
Goal Achieved	Think about where you began when you first set this goal last Friday. Have you accomplished the goal that you set out to achieve? Reread your original goal carefully. If you are satisfied that you have been successful then color your checkpoint green today! *Well done! Now that you have achieved your goal, how can you challenge yourself to get to the next level? Can you push yourself further in this category, or should you explore another aspect of ELA?*

Appendix B

SSE Survey (Rowbotham & Schmitz, 2013)

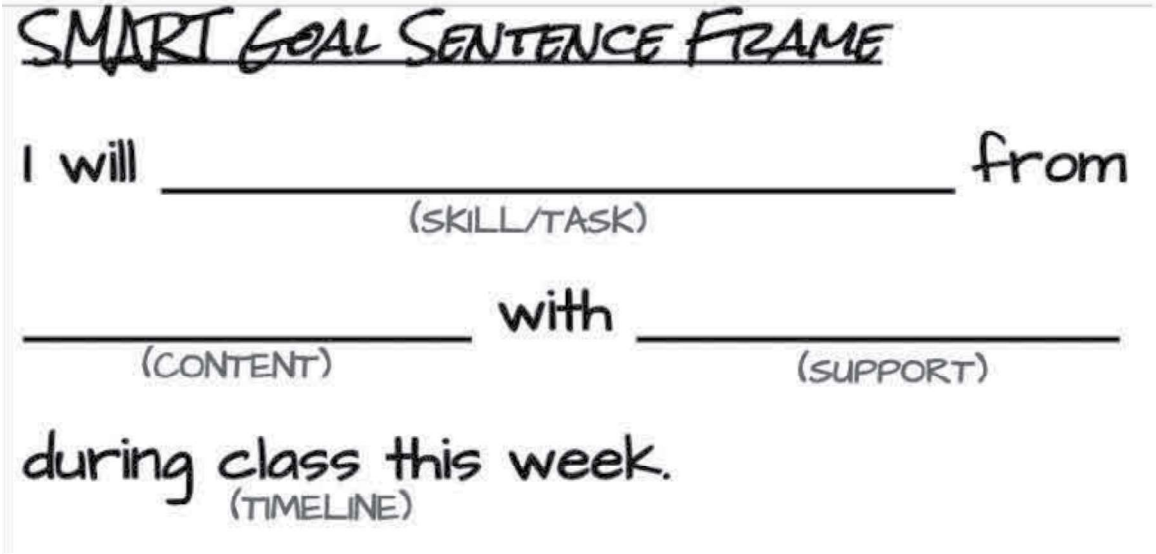
	Items
1.	I am convinced that I am able to successfully learn all relevant subject content even if it is difficult.
2.	I know that I can maintain a positive attitude toward this course even when tensions arise.
3.	When I try really hard, I am able to learn even the most difficult content.
4.	I am convinced that, as time goes by, I will continue to become more and more capable of learning the content of this course.
5.	Even if I get distracted in class, I am confident that I can continue to learn well.
6.	I am confident in my ability to learn, even if I am having a bad day.
7.	If I try hard enough, I can obtain the academic goals I desire.
8.	I am convinced that I can develop creative ways to cope with the stress that may occur while taking this course.
9.	I know that I can stay motivated to participate in the course.
10.	I know that I can finish the assigned projects and earn the grade I want, even when others think I can't.

Appendix C

SMART Goal Sentence Frame for Student Use

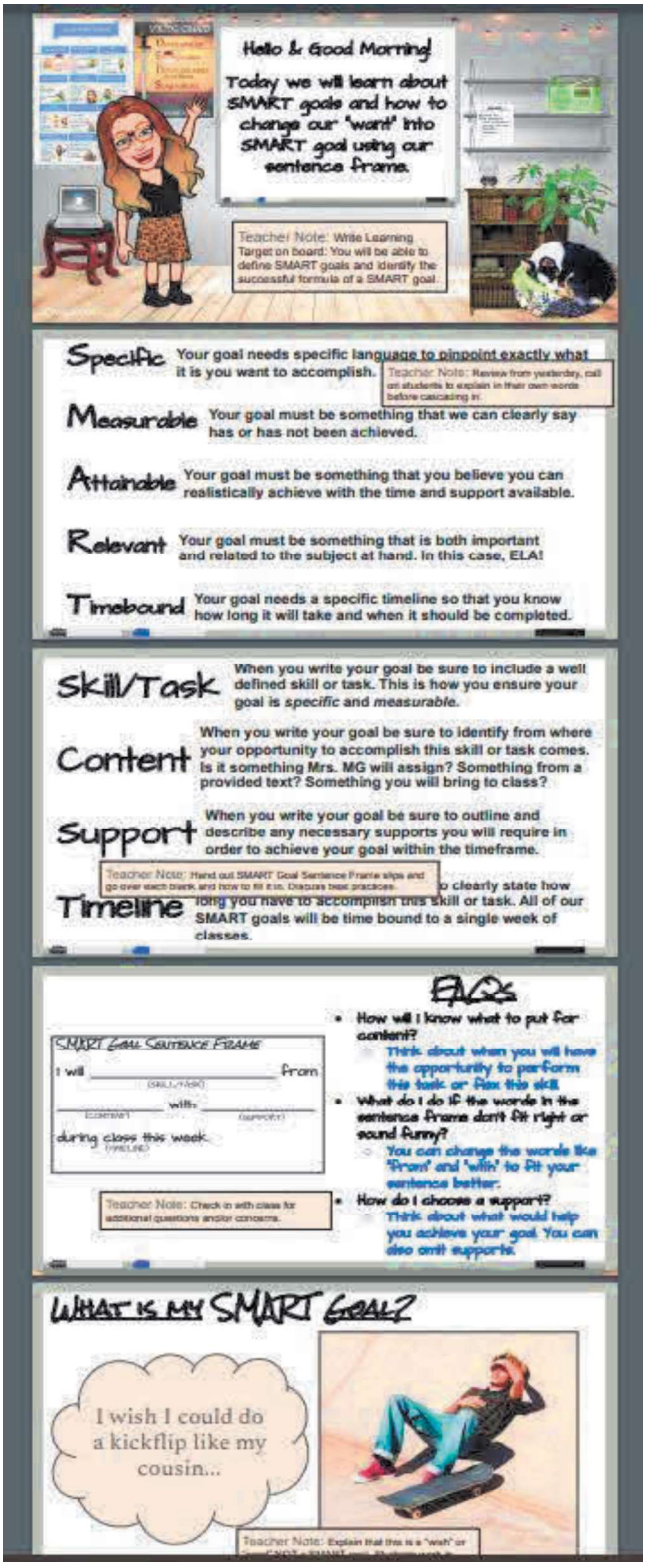
Name(s): _____

Use the sentence frame below to write a Specific Measurable Attainable Relevant and Timely goal.



Appendix D

Sample Slides from Mini Unit



Appendix E

Individual Goal Tracker for Students

Individual Goal Tracker

WEEK 1:			
Monday	Tuesday	Wednesday	Thursday
Notes:	Notes:	Notes:	Notes:

Friday	Reflection & Next Steps:

Appendix F

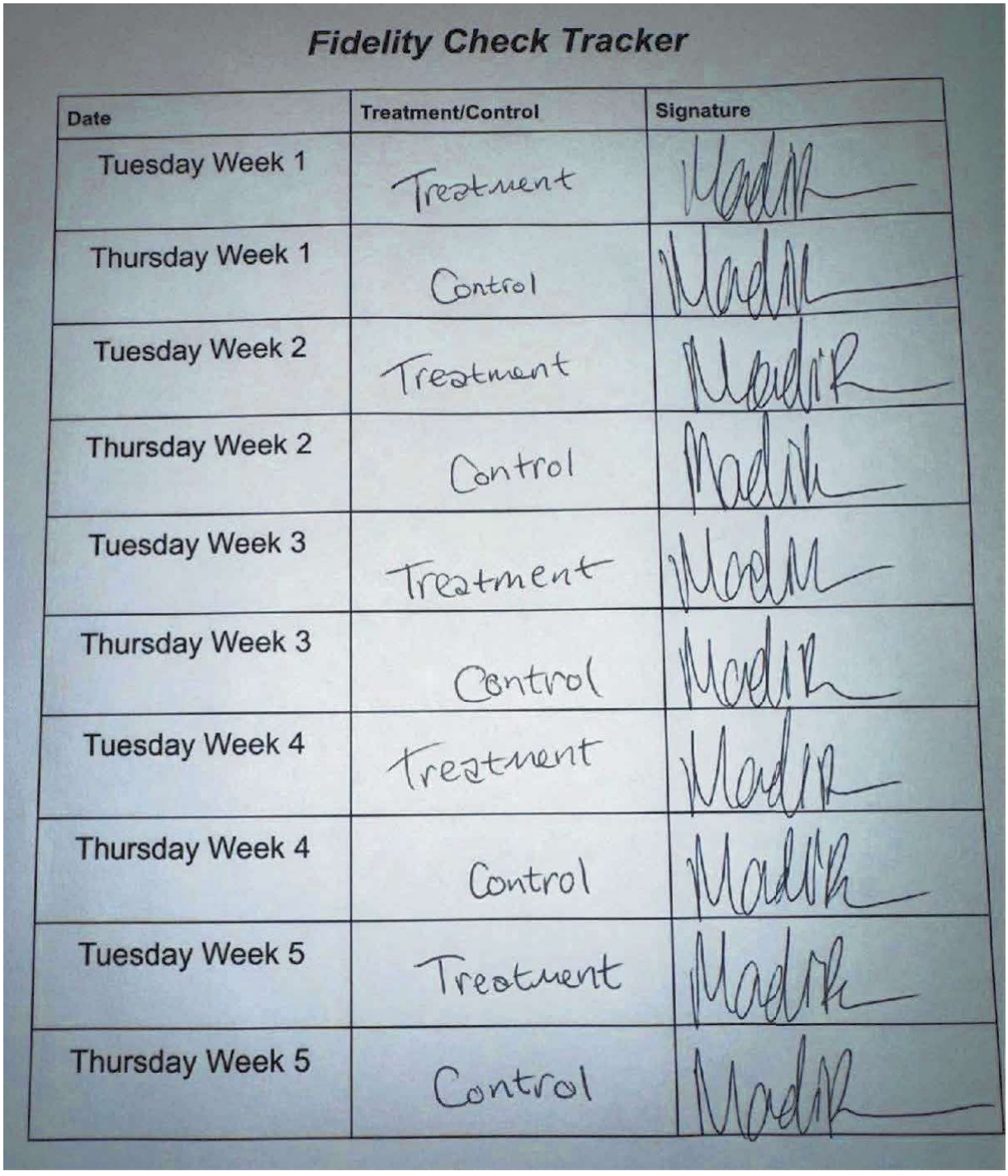
Research Timeline

Week 1	
Tuesday - 2/20/24	Baseline Data Collection - SSE Survey
Wednesday -2/21/24	SMART Goal Setting Lesson
Thursday - 2/22/24	SMART Goal Setting Practice
Friday - 2/23/24	Self Assessment Lesson & Individual Goal Setting I
Week 2	
Monday - 2/26/24	self assessment Checkpoint 1
Tuesday - 2/27/24	self assessment Checkpoint 2
Wednesday - 2/28/24	self assessment Checkpoint 3
Thursday - 2/29/24	self assessment Checkpoint 4
Friday - 3/1/24	Self-Reflection I & Individual Goal Setting II
Week 3	
Monday - 3/4/24	self assessment Checkpoint 1
Tuesday - 3/5/24	self assessment Checkpoint 2
Wednesday - 3/6/24	self assessment Checkpoint 3
Thursday - 3/7/24	self assessment Checkpoint 4
Friday - 3/8/24	Self-Reflection II & Individual Goal Setting III
Week 4	
Monday - 3/11/24	self assessment Checkpoint 1
Tuesday - 3/12/24	self assessment Checkpoint 2
Wednesday - 3/13/24	self assessment Checkpoint 3
Thursday - 3/14/24	self assessment Checkpoint 4

Friday - 3/15/24	Self-Reflection III & Individual Goal Setting IV
Week 5	
Monday - 3/18/24	self assessment Checkpoint 1
Tuesday - 3/19/24	self assessment Checkpoint 2
Wednesday - 3/20/24	self assessment Checkpoint 3
Thursday - 3/21/24	self assessment Checkpoint 4
Friday - 3/22/24	Extended Reflection Google Form & Data Collection SSE Survey

Appendix G

Fidelity Check Tracker



Fidelity Check Tracker

Date	Treatment/Control	Signature
Tuesday Week 1	Treatment	
Thursday Week 1	Control	
Tuesday Week 2	Treatment	
Thursday Week 2	Control	
Tuesday Week 3	Treatment	
Thursday Week 3	Control	
Tuesday Week 4	Treatment	
Thursday Week 4	Control	
Tuesday Week 5	Treatment	
Thursday Week 5	Control	

STEVIE FULL THESIS_4.24.24_SIGNED

Final Audit Report 2024-05-09

Created:	2024-05-09
By:	Amy McClintock (amcclintock@csumb.edu)
Status:	Signed
Transaction ID:	CBJCHBCAABAAwwJvn_7UBc3bLEVCoUGggtchAq5meAUi

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